

**CHARTER TOWNSHIP OF ORION
PLANNING COMMISSION REGULAR MEETING AGENDA
WEDNESDAY, OCTOBER 5, 2022 - 7:00 PM
ORION TOWNSHIP MUNICIPAL COMPLEX BOARD ROOM
2323 JOSLYN ROAD
LAKE ORION, MI 48360**

- | | |
|---|-----------------|
| 1. <u>OPEN MEETING</u> | <u>2</u> |
| 2. <u>ROLL CALL</u> | |
| 3. <u>MINUTES</u> | |
| A. 09-07-2022, Planning Commission Regular Meeting Minutes | 3 |
| 4. <u>AGENDA REVIEW AND APPROVAL</u> | |
| 5. <u>BRIEF PUBLIC COMMENT - NON AGENDA ITEMS ONLY</u> | |
| 6. <u>CONSENT AGENDA</u> | |
| 7. <u>NEW BUSINESS</u> | |
| A. PC-2019-06, Silverbell Pointe, PUD Amendment, amendment to the final PUD plan, located on 4 vacant parcels south of Silverbell Rd. on the east side of Joslyn Rd. (Sidwell #s 09-33-201-001, 09-33-128-001, 09-28-379-001, 09-28-451-001). | 7 |
| B. Discussion on possible test amendment. | |
| 8. <u>UNFINISHED BUSINESS</u> | |
| 9. <u>PUBLIC COMMENTS</u> | |
| 10. <u>COMMUNICATIONS</u> | |
| 11. <u>PLANNERS REPORT/EDUCATION</u> | |
| 12. <u>COMMITTEE REPORTS</u> | |
| 13. <u>FUTURE PUBLIC HEARINGS</u> | |
| 14. <u>CHAIRMAN COMMENTS</u> | |
| 15. <u>COMMISSIONERS' COMMENTS</u> | |
| 16. <u>ADJOURNMENT</u> | |

In the spirit of compliance with the Americans with Disabilities Act, individuals with a disability should feel free to contact Penny S. Shults, Clerk, at (248) 391-0304, ext. 4001, at least seventy-two hours in advance of the meeting to request accommodations.

CHARTER TOWNSHIP OF ORION PLANNING COMMISSION
******* A G E N D A *******
REGULAR MEETING – WEDNESDAY, OCTOBER 5, 2022 - 7:00 P.M.
ORION TOWNSHIP MUNICIPAL COMPLEX BOARD ROOM
2323 JOSLYN ROAD, LAKE ORION, MI 48360

1. OPEN MEETING

2. ROLL CALL

3. MINUTES

- A. 9-7-22, Planning Commission Regular Meeting Minutes

4. AGENDA REVIEW AND APPROVAL

5. BRIEF PUBLIC COMMENT – NON-AGENDA ITEMS ONLY

6. CONSENT AGENDA

7. NEW BUSINESS

- A. PC-2019-06, Silverbell Pointe, amendment to the final PUD plan, located on 4 vacant parcels south of Silverbell Rd. on the east side of Joslyn Rd. (Sidwell #s 09-33-201-001, 09-33-128-001, 09-28-379-001, 09-28-451-001).
- B. Discussion on possible text amendment.

8. UNFINISHED BUSINESS

9. PUBLIC COMMENTS

10. COMMUNICATIONS

11. PLANNERS REPORT/EDUCATION

12. COMMITTEE REPORTS

13. FUTURE PUBLIC HEARINGS

14. CHAIRMAN’S COMMENTS

15. COMMISSIONERS’ COMMENTS

16. ADJOURNMENT

.....
In the spirit of compliance with the Americans with Disabilities Act, individuals with a disability should feel free to contact the Township at least seventy-two hours in advance of the meeting when requesting accommodations.

CHARTER TOWNSHIP OF ORION PLANNING COMMISSION

***** MINUTES *****

REGULAR MEETING, WEDNESDAY, SEPTEMBER 7, 2022

The Charter Township of Orion Planning Commission held a regular meeting on Wednesday, September 7, 2022, at 7:00 p.m. at the Orion Township Municipality Complex Board Room, 2323 Joslyn Road, Lake Orion, Michigan 48360.

PLANNING COMMISSION MEMBERS PRESENT:

Scott Reynolds, Chairman
Don Gross, Vice Chairman
Kim Urbanowski, BOT Rep to PC
Derek Brackon, Commissioner

Don Walker, PC Rep to ZBA
Joe St. Henry, Secretary
Jessica Gingell, Commissioner

PLANNING COMMISSION MEMBERS ABSENT:

None.

1. OPEN MEETING

Chairman Reynolds opened the meeting at 7:00 p.m.

2. ROLL CALL

As noted

CONSULTANTS PRESENT:

Tammy Girling, Township Planning & Zoning Director

OTHERS PRESENT:

None.

3. MINUTES

- A. 8-17-22, Planning Commission Regular Meeting Minutes
- B. 8-17-22, Planning Commission Public Hearing Meeting Minutes for PC-22-31, 1112-1128
Lapeer Road Rezone Meeting Minutes

Moved by Vice-Chairman Gross, seconded by Commissioner Gingell to **approve** both sets of minutes as presented. **Motion carried**

4. AGENDA REVIEW AND APPROVAL

Moved by Vice-Chairman Gross, seconded by Trustee Urbanowski, to **approve** the agenda as presented. **Motion carried**

5. BRIEF PUBLIC COMMENT – NON-AGENDA ITEMS ONLY

None.

6. CONSENT AGENDA

None.

7. NEW BUSINESS

- A. PC-22-33, Peninsula Agriculture LLC., Ord. 154 Class C Grower Application, location 210 W. Silverbell Rd., (parcel 09-26-300-012).

Chairman Reynolds said that he wanted to disclose that Peninsula Agriculture has been a client of his employer AKA Architects, but he had no involvement in this application. He asked if anyone had an issue with that. No one had any issues.

Chairman Reynolds asked if anyone had any questions regarding the #154 application. There were not.

Moved by Trustee Urbanowski, seconded by Secretary St. Henry, that the Planning Commission grants **approval** of the application, as required per Ord. #154, for PC-22-33, Peninsula Agriculture LLC, for a Class "C" growing facility, located at 210 W. Silverbell Rd. (parcel 09-26-300-012) based on the following findings of fact that the operation does meet the following requirements: it is located in an IP zoning district; it is located in a building that meets all the distance requirements shown in Ord. 154; the location received a waiver from the Board of Trustees to be located in a building that has an ingress/egress road with greater than 6,000 vehicles/day; is located in a building that has an ingress/egress road that does not serve as a road that also serves for residential zoning. The motion is conditioned upon the applicant meeting all applicable Township Ordinances and promulgated standards of the Township and, prior to opening, shall demonstrate to the Township that it meets the rules and regulations promulgated by the State Marihuana Licensing Board.

Roll call vote was as follows Gingell, yes; Brackon, yes; St. Henry, yes; Gross, yes; Urbanowski, yes; Walker, yes; Reynolds, yes. **Motion carried 7-0**

B. PC-22-34, Peninsula Agriculture LLC., Ord. 154 Class C Grower Application, located at 210 W. Silverbell Rd. (parcel 09-26-300-012).

Chairman Reynolds said he wanted to disclose a potential conflict of interest. He asked if anyone had an issue with something different with this one, please speak up. No one had an issue.

Moved by Secretary St. Henry, seconded by Vice-Chairman Gross, that the Planning Commission grant **approval** of the application, as required per Ord. #154, for PC-22-34, Peninsula Agriculture LLC, for a Class "C" growing facility, located at 210 W. Silverbell Rd. (parcel #09-26-300-012) based on the findings of fact that the operation does meet the following location requirements: it is located in an IP zoning district; it is located in a building that meets all the distance requirements shown in Ord. 154; the location received a waiver from the Board of Trustees to be located in a building that has an ingress/egress road with greater than 6,000 vehicles/day; it is located in a building that has an ingress/egress road that does not serve as a road that also serves for residential zoning. This motion is based on the conditions: the applicant meets all applicable Township Ordinances and promulgated standards of the Township and, prior to opening, shall demonstrate to the Township that it meets the rules and regulations promulgated by the State Marihuana Licensing Board.

Roll call vote was as follows: Brackon, yes; Urbanowski, yes; St. Henry, yes; Walker, yes; Gross, yes; Gingell, yes; Reynolds, yes. **Motion carried 7-0**

C. PC-22-35, Township Initiated Text Amendment to Zoning Ord. #78, Article XXX, Section 30.09, Performance Guarantees.

Chairman Reynolds said if everyone recalls in their Joint Meeting last year, they formulated a handful of committees and one of which was to explore Performance Guarantees. He added that Performance Guarantees are provided on all projects and currently as the ordinance is written right now is requiring either cash or an irrevocable line of credit. Other communities surrounding them also entertain the idea of a bond. The bond can be called upon to essentially provide the same guarantee, but as another avenue for applicants to provide them the guarantee but not have either cash or a line of credit tied up. They did as a committee take a look at this and they have been working through it for the past eight months. In front of them tonight are the amendments that have been proposed by the committee. For the most part, what they will see is the idea of introducing the bond along with a handful of other amendments

within the bigger picture that just speak to some languages that they have taken from other communities, and their lawyer has reviewed this. There is no action this evening it is more of a heads up because there will be a formal hearing on this, it does need to be advertised because they are modifying their ordinance. He asked if there were any questions. He added that if they don't have an answer, they can bring those answers to their next meeting.

Vice-Chairman Gross asked if there were any developers involved in the committee. Chairman Reynolds replied that they did end up having himself as an architect, and Gary Roberts who does work with them with developments, so he had some input. There was a lot of discussion about what parts is this going to influence, and the bigger picture of it. Their efforts here were they looked at the surrounding neighborhoods and said what languages would be something good to pull into. He was aware and that was probably why it was brought to their attention at the joint meeting was it was a section that they were hearing applicants say that they can't proceed with their project because they are tying up too much of their cash or credit line and if they could do a bond. Technically they did not allow what other communities do. This is a direct result of that, they still have the ability to call on the bond, they are still allowing all of that to occur, and they still have the guarantee. In so many ways they did have their input as they developed this.

Chairman Reynolds stated that there is no action needed just a heads up. He thought in their first meeting in October they would be taking a look at this so look forward to a public hearing publish date in the near future.

8. UNFINISHED BUSINESS

None.

9. PUBLIC COMMENTS

None.

10. COMMUNICATIONS

None.

11. PLANNERS REPORTS

None.

12. COMMITTEE REPORTS

None.

13. PUBLIC HEARINGS

None.

14. CHAIRMAN'S COMMENTS

Chairman Reynolds said he would not be at the next couple of meetings because he is getting married.

15. COMMISSIONERS' COMMENTS

Trustee Urbanowski stated that the Culvers on Brown Rd. across from Costco, there will be a groundbreaking ceremony on September 13th at 11:30 a.m. and everyone is invited to come to that.

16. ADJOURNMENT

Moved by Trustee Urbanowski, seconded by Commissioner Gingell, to adjourn the meeting at 7:10 p.m. **Motion carried.**

Respectfully submitted,

Debra Walton
PC/ZBA Recording Secretary
Charter Township of Orion

Planning Commission Approval Date



Charter Township of Orion

2323 Joslyn Rd., Lake Orion MI 48360
www.oriontownship.org

Planning & Zoning Department

Phone: (248) 391-0304, ext. 5000

TO: The Charter Township of Orion Planning Commission

FROM: Tammy Girling, Zoning/Planning Director

DATE: September 28, 2022

RE: PC-2019-06 Silverbell Point PUD Amendment

This case received conditional Final PUD approval from the Board of Trustees in late 2020. The conditions of approval were that the applicant meet the conditions the PC placed on their recommendation of approval. The PC's conditional approval stated that there had to be resolution to the fire suppression system and or building entrance. The applicant proposed, and the fire department, Planner, and Engineer, approved an emergency road instead of fire suppression. However, when the fire department approved the plan they stated it was with the condition that the railroad sign off on the emergency road. The applicant tried for a great deal of time to get the railroad to approve the emergency road but they to date have not. As a result, the plan was never officially signed off as approved; it remains in a "pending" status.

The applicant has now submitted amended plans to remove the emergency road, add a note about the homes being fire suppressed, and alter the entrance to the proposed development. In that the applicant had offered the off-site improvements to Joslyn Rd. as part of the PUD originally, it required the case to return to the PC to determine if the off-site improvements can be altered.

If you have any questions, please feel free to reach out to me.



Charter Township of Orion

Planning & Zoning Department

2323 Joslyn Rd., Lake Orion MI 48360

P: (248) 391-0304 ext. 5000; Fax (248) 391-1454

TO: The Charter Township of Orion Planning Commission
FROM: Tammy Girling, Planning & Zoning Director
DATE: September 28, 2022
RE: PC-2019-06, Silverbell Point PUD Final Plan Amendment

As requested, I am providing suggested motions for the abovementioned project. Please feel free to modify the language. The verbiage below could substantially change based upon the Planning Commissions' findings of facts for the project. Any additional findings of facts should be added to the motion below.

PUD Minor Amendment/Amendment to conditionally approved plans – (Ord. No. 78, Section 30.03)

I move that the Planning Commission **approves/denies** the amendment to the previously presented and conditionally approved final PUD plan for PC-2019-06, Silverbell Point located on 4 vacant parcels south of Silverbell Rd. on the east side of Joslyn Rd. (Sidwell #s 09-33-201-001, 09-33-128-001, 09-28-379-001, 09-28-451-001) for plans date stamped received September 14, 2022. This approval/denial is based on the following findings of fact:

- a. How will the revisions be a benefit to the future users of the project and community (insert findings of facts),
- b. How will the revisions result in a material increase in the use of public services, facilities and utilities as compared to the existing PUD (insert findings of facts),
- c. Will the revisions place an unreasonable burden upon the existing PUD or the surrounding property owners and/or the natural environment (insert findings of facts),
- d. Will the revisions keep the existing PUD within the intent and spirit of the Master Plan (insert findings of facts),
- e. Will the revisions result in an unreasonable negative economic impact upon the surrounding properties (insert findings of facts),
- f. Does the revisions maintain the existing approved open space requirement for the PUD (insert findings of facts),
- g. Does the revisions require any waivers from the design standards of this PUD (insert findings of facts),
- h. Will the revisions allow the PUD to continue to promote the preservation of any natural resources and features that were in the original PUD (insert findings of facts).

If motion is to approve:

*Motion maker to add any additional conditions.

Or

Motion 2: I move that the Planning Commission **postpones** action on PC-2019-06, Silverbell Point, an amendment to the previously presented and conditionally approved final PUD plan, located on 4 vacant parcels south of Silverbell Rd. on the east side of Joslyn Rd. (Sidwell #s 09-33-201-001, 09-33-128-001, 09-28-379-001, 09-28-451-001) for plans date stamped received September 14, 2022 for the following reasons (insert findings of facts).



September 28, 2022

Scott Reynolds, Planning Commission Chairperson
CHARTER TOWNSHIP OF ORION
2323 Joslyn Road
Lake Orion, MI 48360

RECEIVED

SEP 28 2022

RE: Silverbell Pointe, PC-2019-06
Final PUD Review #3

Orion Township
Planning & Zoning

Received: September 14, 2022, by Orion Township

Dear Mr. Reynolds:

We have completed our review of Silverbell Pointe Final PUD plan set. The plans were prepared by PEA, Inc. and were reviewed with respect to the Township's Zoning Ordinance, No. 78, Stormwater Management and Soil Erosion & Sedimentation Control Ordinance, No. 139, and the Township's Engineering Standards.

EXISTING SITE CONDITIONS:

The site is located east of Joslyn Rd., south of W. Silver Bell Rd. within Sections 28 and 33 of the Charter Township of Orion. The site is zoned Suburban Estates (SE), and bound to the west by CN North America Railroad and Restricted Business (RB) with Single Family Residential (R-1) to the south, and Suburban Estates (SE) to the north and east.

The proposed site is approximately 74 acres with 28 acres of developable uplands. The site is currently heavily wooded with trees and wetlands. The applicant is proposing a single-family community with 46 single family home sites with many of them steeply sloping toward wetlands. A proposed lake access route, for the interior lots, is provided between Lots 12 & 13. Additionally, the site plan includes a four (4) acre park at the northeast corner of Silverbell Rd. and Joslyn to be donated to the Township. The elevations on site range from 1024 at the crest of a hill at the sites southwest side, to 994 in the wetland areas.

WATER MAIN AND SANITARY SEWER:

There is an existing 16-inch water main along the east side of Joslyn Road. The applicant is proposing to extend 8-inch ductile iron water main into the site from two locations, looping along Panorama Circle. The northern connection is located between Units 26 and 27. The southern connection is north of the boulevard approach at Joslyn Rd. A gate valve is proposed at the tee at the southern connection, and on the extension into the site at the northern connection. Gate valve and hydrant spacing throughout the rest of the site appears acceptable. A Landscape Plan has been provided and it appears that several proposed trees will need to be relocated outside the influence of the proposed water main. A 12-foot-wide easement is proposed around the water main in areas outside of ROW.

8-inch sanitary sewer is proposed to be extended from existing 18-inch sanitary sewer along the east side of Joslyn Road into the site. It appears that the existing sanitary sewer along Joslyn has adequate depth and capacity to service the site. The Basis of Design was included for the sanitary sewer and appears acceptable. The sanitary sewer is shown



within an exclusive 20 foot. wide public easement for all locations not within public right-of-way. A 10-foot minimum horizontal separation is required between sanitary sewer and other utilities where feasible.

A note has been added to the plans stating all units will be fire suppressed and provided with automatic sprinkler systems.

STORMWATER MANAGEMENT:

Currently, the site's stormwater generally drains toward the wetlands and southeasterly toward Mud Lake. Stormwater in the proposed development will be collected and transported via onsite swales or underground storm pipe network and generally match the existing drainage patterns. A rough drainage district area map has been included for the site.

The proposed system will include two detention basins with forebays. The site is within the Brown Drain drainage district, which restricts stormwater discharges to pre-development rate of 0.1 cfs/acre. Preliminary detention calculations were provided in the plan set and appear acceptable. Further review will be required at engineering.

CIRCULATION & PAVING:

A single boulevard entrance is proposed as the site access point to Joslyn Road. It should be noted the applicant has made changes to the PUD plans. Those changes include the removal of the emergency vehicle access at the north end of the site since the units will be suppressed. In addition, the changes include the removal of the proposed center left turn lane in Joslyn Road, and the addition of a restrictive island in the boulevard entrance to prohibit left turns into the site. By eliminating the center left turn lane, it is our understanding that RCOC has informed the applicant that left turns into the site will be prohibited. As such, the applicant has added a restrictive island to the boulevard entrance in an effort to prohibit those turns. We have concerns that this scenario will be difficult to enforce leading to traffic and safety concerns, extreme inconvenience to residents and deliveries will lead to non-compliance and additional traffic in neighboring subdivisions, and will severely impair emergency services. Since this is a PUD, it is our recommendation the applicant prepare the necessary modifications for full access into the site.

The applicant is proposing private roads which will be subject to the geometric requirements of the Road Commission for Oakland County (RCOC). It appears that throughout the development a 60 foot. wide public right-of-way with 27 feet. wide public streets are proposed with 5-foot-wide concrete sidewalks both sides of the street. Road slopes are provided with contours and road profile and appear to be between 1%-6% which is acceptable. An 8-foot-wide safety path is shown south of the CN Railway right-of-way along the site's frontage along Joslyn Road. The approach and right-of-way work will be subject to review and approval from RCOC.

Pavement sections were included for the asphalt safety path, the concrete sidewalk, the RCOC approach, and the private roads which appear acceptable.

An emergency vehicle route has been provided in the plan set. Should a train be crossing Joslyn Rd, emergency vehicles will be able to gain access to the site by heading north on Jamm Road, left onto Hopefield Dr, right onto Joslyn Rd to the main entrance.

NATURAL FEATURES:

WETLANDS:

Based on the National Wetlands Inventory Maps, there are approximately 49 acres of wetlands on site that are tributary to Mud Lake and Judah Lake within the Brown Drain watershed. The applicant is proposing minor disruption to the wetlands. A wetland permit has already been obtained by the applicant for these impacts. The applicant has also obtained a permit from the EGLE for the proposed wetland impacts.



WOODLANDS:

A substantial portion of the site is covered with mature vegetation, which is native to the site and exists near the wetland area. A tree survey has been provided and appears to include the sum of Landmark Trees removed. Approximately 899 trees are proposed for removal.

GRADING:

Existing contours are provided to indicate the on-site slopes within the upland buildable area. Proposed grades are provided via contours, spot grades, and structure rim grades. It appears, the applicant is proposing to generally follow the site's existing drainage patterns. Finished floor and walk-out grades were provided for each unit, along with an anticipated driveway slope. More grading detail will be required at engineering for the safety path and sidewalks. Proposed slopes interior to the site appear to meet the recommended 1-foot vertical to 4-foot horizontal abutting the existing the wetland. Side yard slopes between the homes are proposed to be 1:3. Minor disturbances to the twenty-five (25) foot wetland buffer are shown on the site plan and appear acceptable.

MASTER DEED DOCUMENT REVIEW:

MASTER DEED & BY-LAWS:

Draft Master deed and Bylaw documents were provided for our initial review. The documents indicate a majority of site related responsibilities.

EXHIBIT 'B':

The necessary Exhibit 'B' plan sheets were provided. It appears the Exhibit reflects the current site plan. Changes during engineering plan preparation will need to be reflected prior to recording.

We defer further comment on the Master Deed, By-Laws, and Exhibit B documents to the Township Attorney.

CONCLUSION:

In our opinion, the Final PUD, is not in substantial compliance with the Township's ordinances and engineering standards. We ask that the following items be addressed:

1. Revise the plans to provide an unrestricted full access entrance into the site, as approved by RCOG

Please feel free to contact us with any questions at (248) 751-3108 or joseph.lehman@ohm-advisors.com.

Sincerely,

OHM Advisors

Joe Lehman
Project Engineer

Mark Landis, P.E.
Project Manager

cc: Chris Barnett, Township Supervisor
David Goodloe, Building Official
Bill Basigkow, Director of Public Services
Tammy Girling, Director of Planning and Zoning
Lynn Harrison, Planning and Zoning Coordinator
Jeff Williams, Township Fire Marshal
David Steuer, Franklin Ridge Homes, LLC
John Thompson, PEA, Inc.



Charter Township of Orion

3365 Gregory Rd., Lake Orion MI 48359
www.oriontownship.org

RECEIVED

Fire Department

Phone: (248) 391-0304, ext. 2000
Fax: (248) 309-6993

SEP 21 2022

To: Planning Commission/Planning & Zoning Director
From: Jeff Williams, Fire Marshal
Re: PC-2019-06, Silverbell Pointe Additional Review of Final PUD Plan (3rd Review)
Date: 09/20/2022

Orion Township
Planning & Zoning

The Orion Township Fire Department has completed its review of Application PC-2019-06 for the limited purpose of compliance with Charter Township of Orion Ordinance's, Michigan Building Code, and all applicable Fire Codes.

Based upon the application and documentation provided, the Fire Department has the following recommendation:

Approved
Approved with Comments (See below)
X Not approved

Requirements:

- When approaching the site from Joslyn Road the fire department will require entry access from both the North and South drive isles per IFC 503.1.2. A South only drive isle access approach would cause a significant delay in our response in the event of an emergency.
- The proposed Jamm Road access drive shall be constructed and maintained to meet the requirements of IFC Section 503.

If there are any questions, the Fire Department may be reached at 248-391-0304 ext. 2004.

Sincerely,

Jeffrey Williams

Jeff Williams, Fire Marshal
Orion Township Fire Department

PEA GROUP

■ ■ ■

1849 Pond Run
Auburn Hills, MI 48326

844.813.2949
peagroup.com



RECEIVED

SEP 14 2022

Orion Township
Planning & Zoning

September 13, 2022
PEA Project No: 2018-150

Ms. Tammy Girling
Planning & Zoning Director
Charter Township of Orion
2525 Joslyn Road
Lake Orion, MI 48360

**RE: Silverbell Pointe, PC-2019-06
Final PUD [Amended]**

Dear Ms. Girling,

Please accept our updated Final PUD plans dated September 13, 2022. The attached plans incorporate the following changes:

- The EVA by the detention pond has been removed.
- The center left turn lane in Joslyn Road has been removed.
- A "pork chop" was added to the entrance boulevard to restricted left turns into the site.
- A note was added that all units will be Fire Suppressed.

Respectfully request administrative site plan approval on these plans.

Sincerely,

PEA Group

A handwritten signature in black ink, appearing to read "John B. Thompson".

John B. Thompson, PE
Senior Project Manager

FINAL PLANNED UNIT DEVELOPMENT (PUD) PLANS FOR

SILVERBELL POINTE

PART OF SE AND SW 1/4 OF SECTION 28 TOGETHER WITH PART OF THE NE AND NW 1/4 OF SECTION 33, T. 4N., R. 10E.

ORION TOWNSHIP, OAKLAND COUNTY, MICHIGAN

PROPERTY DESCRIPTION:

(Combined parcel as surveyed by PEA Inc.)

Part of the southeast and southwest 1/4 of Section 28, together with part of the northeast and northwest 1/4 of Section 33, Town 4 North, Range 10 East, Orion Township, Oakland County, Michigan being more particularly described as:

Commencing at the South 1/4 corner of said Section 28, thence N00°54'08"E, 1037.64 feet along the north-south 1/4 line of said section to the south line of Silverbell Road (66' wide) and the Point of Beginning; thence along said south line N81°37'08"E, 336.39 feet; thence S00°54'11"W, 1087.57 feet to the east-west 1/4 line of said section; thence along said line S89°44'45"E, 999.50 feet; thence S00°20'21"E, 1319.24 feet to the north line of "Supervisor's Plat of Lakeview Subdivision" as recorded in Liber 53, Page 21, Oakland County Records; thence along said north line, N89°37'34"W, 293.09 feet; thence N00°10'08"W, 119.60 feet; thence the following four courses along the waters edge of Mud Lake, S64°19'49"W, 74.39 feet and N70°02'23"W, 24.20 feet and S81°31'02"W, 81.02 feet and N81°09'09"W, 121.30 feet to the northerly extension of the west line of Lot 12 of said supervisor's plat; thence along said extension, S00°10'08"E, 100.45 feet to the aforementioned north line of said supervisor's plat; thence along said north line, N89°37'34"W, 768.31 feet to a 3/8" iron in a 4" square concrete monument; thence continuing along said north line, N89°55'57"W, 363.34 feet to the east line of Joslyn Road (66' wide) as recorded in Liber 36264, Page 120, Oakland County Records; thence along said east line, 509.14 feet along the arc of a curve to the left having a radius of 1903.83 feet and a chord that bears N05°17'23"W, 507.63 feet to the east line of the Canadian National Rail Road Right-of-Way (50' wide); thence the following two courses along said east line, 580.44 feet along the arc of a curve to the left having a radius of 3299.18 feet and a chord that bears N03°05'37"W, 579.69 feet and N08°08'02"W, 1187.11 feet to the south line of said Joslyn Road; thence along said south line, N81°37'17"E, 644.53 feet to the Point of Beginning.

Containing 73.419 acres of land, more or less

LEGAL DESCRIPTION – PROPOSED PARK

(Combined parcel as surveyed by PEA Inc.)

Part of the southeast and southwest 1/4 of Section 28, Town 4 North, Range 10 East, Orion Township, Oakland County, Michigan being more particularly described as:

Commencing at the South 1/4 corner of said Section 28, thence N00°54'08"E, 1037.65 feet along the north-south 1/4 line of said section to the south line of Silverbell Road (66' wide); thence along said south line S81°37'14"W, 204.52 feet to the Point of Beginning thence S08°08'02"E, 396.00 feet; thence S81°37'14"W, 440.00 feet to the east line of the Canadian National Rail Road Right-of-Way (50' wide); thence along said east line N08°08'02"W, 396.00 feet to the south line of the aforementioned Silverbell Road; thence along said south line, N81°37'14"E, 440.00 feet to the Point of Beginning.

Containing 4.000 acres of land, more or less

LEGAL DESCRIPTION – OVERALL CONDO

(Combined parcel as surveyed by PEA Inc.)

Part of the southeast and southwest 1/4 of Section 28, together with part of the northeast and northwest 1/4 of Section 33, Town 4 North, Range 10 East, Orion Township, Oakland County, Michigan being more particularly described as:

Commencing at the South 1/4 corner of said Section 28, thence N00°54'08"E, 1037.65 feet along the north-south 1/4 line of said section to the south line of Silverbell Road (66' wide) and the Point of Beginning; thence along said south line N81°37'14"E, 336.39 feet; thence S00°54'10"W, 1088.15 feet to the east-west 1/4 line of said section; thence along said line S89°44'45"E, 999.50 feet; thence S00°20'21"E, 1319.24 feet to the north line of "Supervisor's Plat of Lakeview Subdivision" as recorded in Liber 53, Page 21, Oakland County Records; thence along said north line, N89°37'34"W, 293.09 feet; thence N00°10'08"W, 119.60 feet; thence the following four courses along the waters edge of Mud Lake, S64°19'49"W, 74.39 feet and N70°02'23"W, 24.20 feet and S81°31'02"W, 81.02 feet and N81°09'09"W, 121.30 feet to the northerly extension of the west line of Lot 12 of said supervisor's plat; thence along said extension, S00°10'08"E, 100.45 feet to the aforementioned north line of said supervisor's plat; thence along said north line, N89°37'34"W, 768.31 feet to a 3/8" iron in a 4" square concrete monument; thence continuing along said north line, N89°55'57"W, 363.34 feet to the east line of Joslyn Road (66' wide) as recorded in Liber 36264, Page 120, Oakland County Records; thence along said east line, 509.14 feet along the arc of a curve to the left having a radius of 1903.83 feet and a chord that bears N05°17'23"W, 507.63 feet to the east line of the Canadian National Rail Road Right-of-Way (50' wide); thence the following two courses along said east line, 580.44 feet along the arc of a curve to the left having a radius of 3299.18 feet and a chord that bears N03°05'37"W, 579.69 feet and N08°08'02"W, 791.10 feet; thence N81°37'14"E, 440.00 feet; thence N08°08'02"W, 396.00 feet to the south line of the aforementioned Silverbell Road; thence along said south line, N81°37'14"E, 204.52 feet to the Point of Beginning.

Containing 69.419 acres of land, more or less

NARRATIVE:

THE SILVERBELL POINTE PLANNED UNIT DEVELOPMENT IS PROPOSED AS SINGLE FAMILY RESIDENTIAL COMMUNITY, WHICH COMPRISES OF APPROXIMATELY 28 ACRES OF THE DEVELOPABLE AREA (74-AC FULL SITE AREA). THE PROPOSED USE WILL BE 46 DETACHED SINGLE-FAMILY, FOR SALE HOMES, ON PRIVATE STREETS.

HOMES WILL BE AT A HIGHER ELEVATION THAN MUD LAKE AND THE SURROUNDING AREAS, CREATING HOMES WITH BEAUTIFUL WATER VIEWS AND OPPORTUNITY FOR WALK-OUT LOWER LEVELS. THESE HOMES WILL BE HIGHLY DESIRABLE GIVEN THEIR HIGHLY WOODED AND SCENIC SETTING.

COMPATIBILITY WITH MASTER PLAN & ADJACENT USES:

SILVERBELL POINTE CONFORMS WITH THE TOWNSHIP MASTER PLAN'S FUTURE LAND USE AND FURTHERS THE MASTER PLAN'S IMPLEMENTATION AS THE PROPOSED DENSITY IS IN LINE WITH THE INTENDED FUTURE DENSITY REQUIREMENTS OF UP TO 3 UNITS PER ACRE. AS SILVERBELL POINTE BORDERS MUD LAKE, THE CLUSTER DEVELOPMENT ENCOURAGES THE PRESERVATION OF OPEN SPACE AREAS AND LAKE PRESERVATION.

R.C.O.C. NOTES:

CORRUGATED PLASTIC PIPE MEETING AASHTO M294, TYPE S REQUIREMENTS FOR STORM SEWERS FROM 12" TO 24" DIAMETERS, MAY BE USED IN THIS DEVELOPMENT. HOWEVER, PRIOR TO APPROVAL OF THE STORM SYSTEM OR START OF ROAD PAVING A MANUFACTURER'S CERTIFICATE OF COMPLIANCE WITH THESE REQUIREMENTS SHALL BE SUBMITTED TO THE ROAD COMMISSION OF OAKLAND COUNTY. ALSO AT LEAST FIFTY PERCENT OF THE SEWER CARRYING ROAD DRAINAGE, AS SELECTED BY THE ENGINEER, SHALL BE TESTED FOR DEFORMATION BY THE CONTRACTOR USING A NINEPOINT MANDREL. ENGINEER CERTIFICATION THAT THE PIPE HAS PASSED THESE TESTS SHALL BE SUBMITTED TO THE ROAD COMMISSION FOR OAKLAND COUNTY.

ALL SIDEWALKS, SIDEWALK RAMPS AND CURB OPENINGS SHALL BE IN ACCORDANCE WITH M.D.O.T. STANDARD PLAN R-28 AND A.D.A. REQUIREMENTS. CROSSWALKS SHALL HAVE A TRANSVERSE SLOPE NO GREATER THAN 2% WHERE THEY CROSS STREETS. SIDEWALKS THAT CROSS DRIVEWAYS SHALL MAINTAIN CROSS SLOPES NO GREATER THAN 2% WHERE THEY CROSS A DRIVEWAY IN ADDITION TO OTHER AREAS. SIDEWALK CURB RAMPS, CURB OPENINGS, LANDINGS AND TRUNCATED DOMES (DETECTABLE WARNING STRIPS) WILL BE INSPECTED BY THE R.C.O.C. FACILITIES THAT ARE NOT IN COMPLIANCE WITH A.D.A. REQUIREMENTS SHALL BE REMOVED AND REPLACED.

ANY RIGHT-OF-WAY OR EASEMENTS NEEDED TO INSTALL THE PROPOSED IMPROVEMENTS MUST BE OBTAINED PRIOR TO FINAL PLAN APPROVAL/STREET ACCEPTANCE OR CONSTRUCTION, WHICHEVER OCCURS FIRST.

MDOT COVER "C" (WITH TYPE "K" FRAME), "K", "B", "E" REQUIRED WITHIN ROAD RIGHT-OF-WAY. ALSO ALLOWED ARE EJIW 7065/NEENAH R-3034-B OR APPROVED EQUAL AND EJIW 7300/NEENAH R-3508-A2 OR APPROVED EQUAL.

THE PROPRIETOR SHALL INSURE THAT OPEN DISCHARGE OF SUMP PUMPS INTO THE ROAD RIGHT-OF-WAY DOES NOT OCCUR.

VERIFICATION OF TOWNSHIP APPROVAL FOR SANITARY SEWER AND WATER MAIN TESTS MUST BE SUBMITTED AND FOUND ACCEPTABLE BY THE R.C.O.C., PRIOR TO ANY CONCRETE PAVING OR ASPHALT BEING PLACED.

PROPER SIGNING IS REQUIRED BEFORE ANY WORK IN R.O.W. IS STARTED.

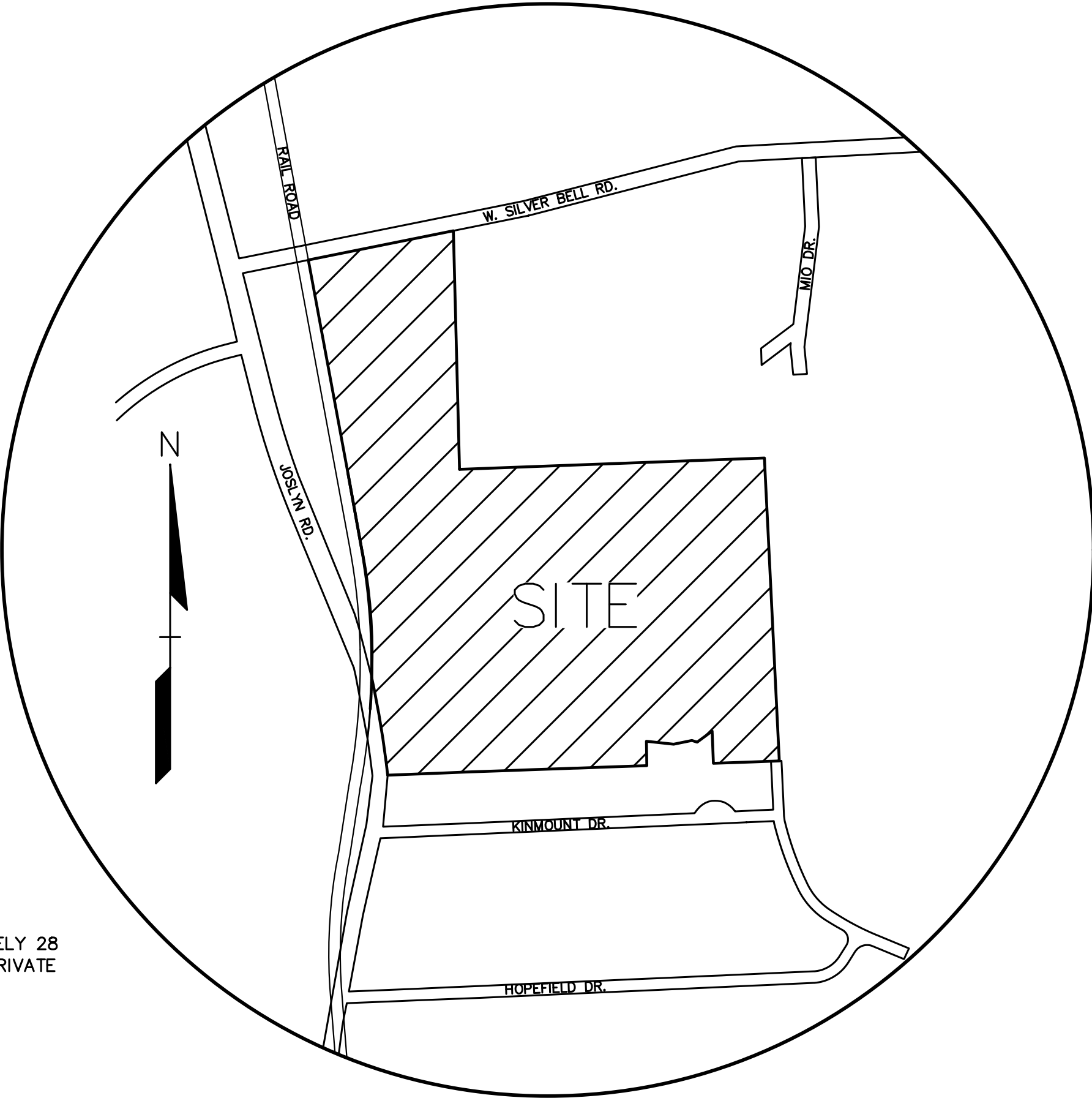
LANE CLOSURES RESTRICTED TO 9-3 MONDAY – FRIDAY.

MAINTAIN TWO-WAY TRAFFIC AT ALL TIMES.

FLAG PERSON REQUIRED FOR TEMPORARY ONE LANE ROADS.

GENERAL NOTES:

- SINGLE FAMILY RESIDENTIAL ROADS SHALL BE PRIVATE.
- ALL WORK WITHIN THE JOSLYN ROAD RIGHT-OF-WAY SHALL BE PERMITTED BY R.C.O.C.



LOCATION MAP

NO SCALE

OWNER/APPLICANT/DEVELOPER:

FRANKLIN RIDGE HOMES, LLC
30180 ORCHARD LAKE ROAD, SUITE 150
FARMINGTON HILLS, MI 48334
CONTACT: DAVID STEUER
PHONE: (248) 790-4481
EMAIL: DAVID@STEUERGROUP.COM

CIVIL ENGINEER:

PEA, INC.
2430 ROCHESTER CT, SUITE 100
TROY, MI 48083
CONTACT: JOHN B. THOMPSON, PE
PHONE: (248) 689-9090 EXT. 1109
FAX: (248) 689-1044
EMAIL: JTHOMPSON@PEAGROUP.COM

LANDSCAPE ARCHITECT:

PEA, INC.
45 W. GRAND RIVER AVE, STE. 501
DETROIT, MI 48226
CONTACT: KIM DIETZEL
PHONE: (313) 769-5755
EMAIL: KDIETZEL@PEAGROUP.COM

INDEX OF DRAWINGS:

- C-0.0 COVER SHEET
- C-1.1 BOUNDARY SURVEY
- C-1.2 TOPOGRAPHIC SURVEY – WEST
- C-1.3 TOPOGRAPHIC SURVEY – EAST
- C-1.4 TOPOGRAPHIC SURVEY – NORTH
- C-1.5 R.O.W. TOPO SURVEY AND DEMO PLAN
- C-2.0 OVERALL SITE PLAN
- C-2.1 DIMENSION AND PAVING PLAN
- C-2.2 FIRE ACCESS ROUTE
- C-3.1 ROAD PROFILES – STA. 0+00 TO 11+00
- C-3.2 ROAD PROFILES – STA. 11+00 TO 21+00
- C-3.3 ROAD PROFILES – STA. 21+00 TO 25+67
- C-4.1 GRADING PLAN – NORTH
- C-4.2 GRADING PLAN – WEST
- C-4.3 GRADING PLAN – SOUTH
- C-4.4 GRADING DETAIL
- C-4.5 R.O.W. GRADING PLAN
- C-4.6 R.O.W. DIMENSION PLAN
- C-5.0 SOIL EROSION CONTROL PLAN
- C-6.0 OVERALL UTILITY PLAN
- C-6.1 R.O.W. UTILITY PLAN
- C-7.1 SANITARY SEWER AND WATER MAIN PLAN – NORTH
- C-7.2 SANITARY SEWER AND WATER MAIN PLAN – WEST
- C-7.3 SANITARY SEWER AND WATER MAIN PLAN – SOUTH
- C-8.1 STORM SEWER PLAN – NORTH
- C-8.2 STORM SEWER PLAN – WEST
- C-8.3 STORM SEWER PLAN – SOUTH
- C-8.4 STORM SEWER PLAN – CENTER
- C-8.5 DETENTION POND CALCULATIONS
- C-8.6 STORM SEWER CALCULATIONS
- C-9.0 DRAINAGE AREA PLAN
- C-10.0 NOTES AND DETAILS

- L-1.0 LANDSCAPE PLAN
- L-1.1 LANDSCAPE PLAN
- L-1.2 LANDSCAPE DETAILS

RECEIVED

September 14, 2022

Orion Township
Planning & Zoning

PERMITS / APPROVAL TABLE:

	DATE OF 1ST SUBMITTAL	APPROVAL DATE	PERMIT NUMBER	EXPIRATION DATE
TOWNSHIP REVIEW – PRELIMINARY PUD	02/15/2019	05/06/2019		
TOWNSHIP REVIEW – FINAL PUD	11/14/2019			
ORION TOWNSHIP – SESC PERMIT	10/20/2020			
ORION TOWNSHIP – ENGINEERING	10/20/2020			
MEGLE – NPDES (NOC)				
MEGLE – WETLAND PART 301 (FILE#HNW-VDM9-BF1G6)	10/14/2020	09/01/2021	WRP030111v.1	
MEGLE – SANITARY PERMIT	01/28/2021	07/26/2021	P41003268 v.1	
MEGLE – WATER PERMIT	01/28/2021	02/26/2021	W214047	
RCOC – UTILITY/GRADING/APPROACH PERMIT	12/15/2020	01/08/2021	AP#21-141, #21-142	

XREF: S:\PROJECTS\2018\2018150\DWG\18150-TOPOBASE.DWG
XREF: S:\PROJECTS\2018\2018150\DWG\FINAL PUD\X-BASE-18150.DWG
XREF: S:\PROJECTS\2018\2018150\DWG\FINAL PUD\X-TBLK-18150.DWG

NO.	BY	CHK	DESCRIPTION	DATE
1	JP	JBT	AMENDED FINAL PUD	09-13-22
2	TMK	JBT	REVISIONS FOR NOVEMBER 13, 2020 TWP REVIEW	12-15-20
3	TMK	JBT	REVISIONS FOR ADDED EVA	10-05-20
4	TMK	JBT	REVISIONS FOR MAY 6, 2020 P.C. MEETING	05-20-20



CAUTION!!
THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

THIS DRAWING AND DESIGN ARE THE PROPERTY OF PEA, INC. THEY ARE SUBMITTED ON THE CONDITION THAT THEY ARE NOT TO BE USED, REPRODUCED, OR COPIED IN WHOLE OR IN PART, OR USED FOR FURNISHING INFORMATION TO OTHERS, WITHOUT THE PRIOR WRITTEN CONSENT OF PEA, INC. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED. © 2020 PEA, INC.

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERAL ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR SHALL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THE REQUIREMENT SHALL BE MADE TO APPLY CONTINGUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFINE, INDENTIFY AND HOLD DESIGN PROFESSIONAL, OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT DESIGNING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

3 FULL WORKING DAYS BEFORE YOU DIG CALL

811
Know what's below
Call before you dig
Miss Dig System, Inc.
1-800-482-7171 www.missdig.net
TOLL FREE



PEA, Inc.

2430 Rochester Ct, Ste 100
Troy, MI 48083-1872
t: 248.689.9090
f: 248.689.1044
www.peainc.com

FRANKLIN RIDGE HOMES, LLC 30180 ORCHARD LAKE ROAD, SUITE 150 FARMINGTON HILLS, MICHIGAN 48334		COVER SHEET SILVERBELL POINTE PART OF THE SE 1/4 OF SECTION 28 & NE 1/4 SECTION 33, TOWN R10E ORION TOWNSHIP, OAKLAND COUNTY, MICHIGAN	
DES.	TMK	DN.	JBT
		TMK	P.M.
		SUR	KTR
		CONDO	HNW\FINAL PUD\X-01 COVER-BRD.dwg

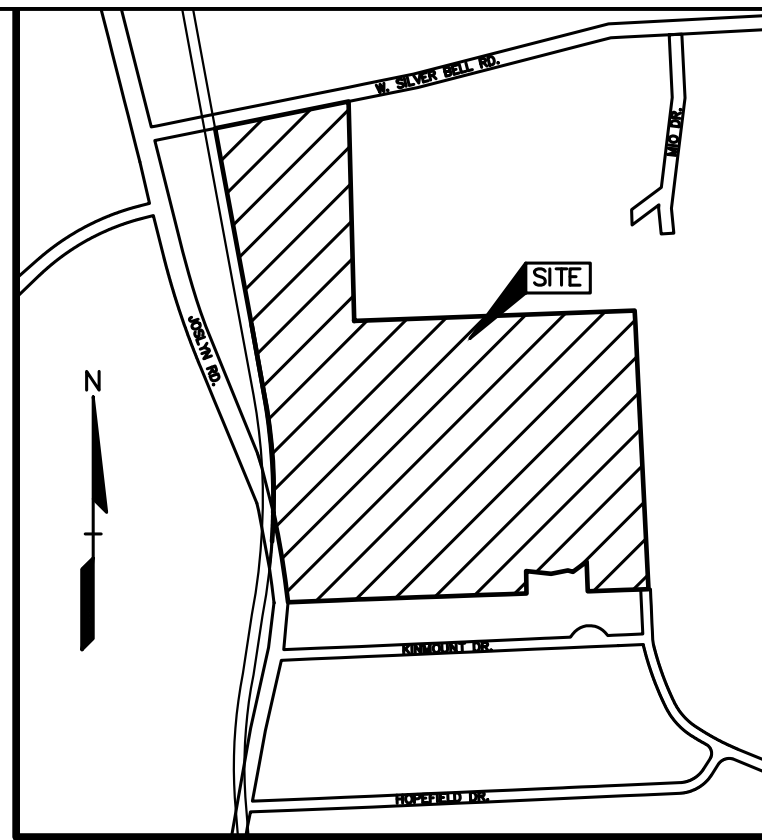
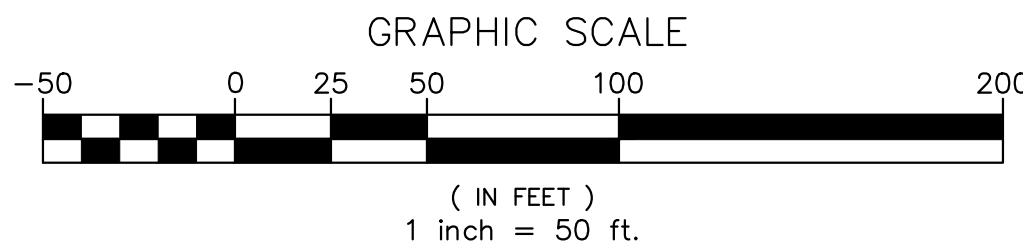
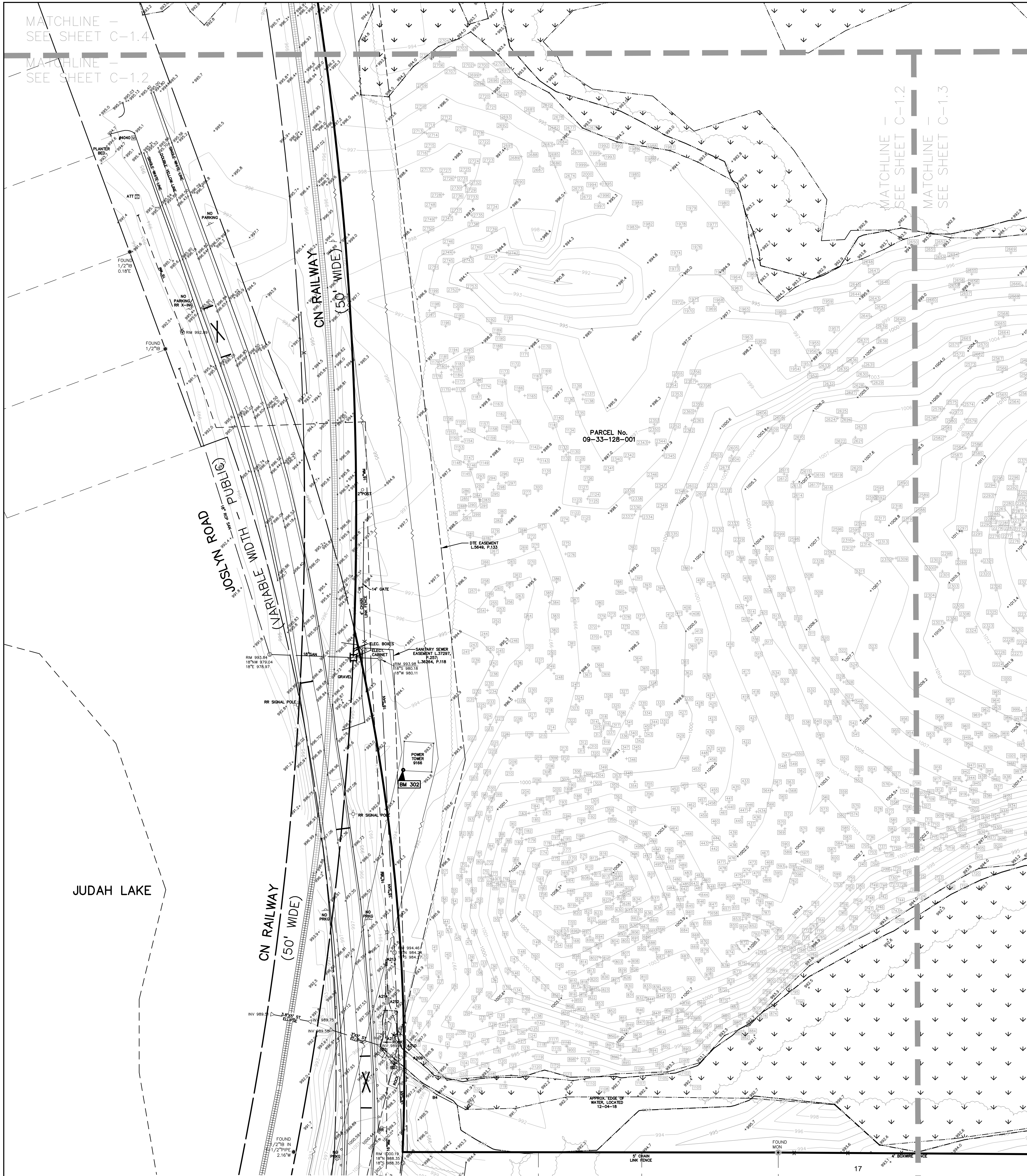
ORIGINAL ISSUE DATE:
MARCH 17, 2020

PEA JOB NO. 2018-150

SCALE: N.T.S.

DRAWING NUMBER:

C-0.0



LOCATION MAP - NOT TO SCALE

LEGEND

- IRON FOUND
 - ⊗ IRON SET
 - NAIL FOUND
 - ⊗ NAIL & CAP SET
 - ⊗ BRASS PLUG SET
 - ⊗ MONUMENT FOUND
 - ⊗ MONUMENT SET
 - ⊗ SEC. CORNER FOUND
 - ⊗ R RECORDED
 - ⊗ M MEASURED
 - ⊗ C CALCULATED
- EXISTING
- OH-ELEC—ELEC. LINE, POLE, & GUY WIRE
 - UG-CATV—UNDERGROUND CABLE TV, CATV PEDESTAL
 - UG-PHONE—TELEPHONE U.G. CABLE, PEDESTAL & MANHOLE
 - UG-ELEC—ELECTRIC U.G. CABLE, MANHOLE, METER & HANDHOLE
 - GAS—GAS MAIN, VALVE & GAS LINE MARKER
 - WATER—WATERMAIN, HYD. GATE VALVE, TAPPING SLEEVE & VALVE
 - SEWER—SANITARY SEWER, CLEANOUT & MANHOLE
 - STORM—STORM SEWER, CLEANOUT & MANHOLE
 - COMBINED—COMBINED SEWER & MANHOLE
 - SQUARE, ROUND & BEHNE CATCH BASIN, YARD DRAIN
 - POST INDICATOR VALVE
 - WATER VALVE BOX/HYDRANT VALVE BOX, SERVICE SHUTOFF
 - MALKBOX, TRANSFORMER, IRRIGATION CONTROL VALVE
 - UNIDENTIFIED STRUCTURE
 - SPOT ELEVATION
 - CONTOUR LINE
 - FENCE
 - GUARD RAIL
 - STREET LIGHT
 - SIGN
 - CONC.—CONCRETE
 - ASPH.—ASPHALT
 - GRAVEL—GRAVEL
 - WETLAND

REFER TO SHEET C-1.1 FOR LEGAL DESCRIPTION.
REFER TO SHEET T-1.0 FOR TREE SURVEY

NO.	DATE	REVISIONS
1	09-13-22	4. KPT. JBT. AMENDED FINAL PUD.
2	12-15-22	3. TMK. JBT. REVISIONS FOR NOVEMBER 13, 2020 TMP REVIEW.
3	10-05-23	2. TMK. JBT. REVISIONS FOR ADDED EVA.
4	08-13-23	1. TMK. JBT. REVISIONS FOR MAY 6, 2023 PC MEETING.
5	08-13-23	NO. 1. JBT. CIVIL DESCRIPTION.

CAUTION!!
THE LOCATION AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

THIS DRAWING AND DESIGN ARE THE PROPERTY OF PEA, INC. THEY ARE SUBMITTED ON THE CONDITION THAT THEY ARE NOT TO BE USED, REPRODUCED, OR COPIED IN WHOLE OR IN PART, OR USED FOR FURNISHING INFORMATION TO OTHERS, WITHOUT THE PRIOR WRITTEN CONSENT OF PEA, INC. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED. © 2023 PEA, INC.

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR SHALL BE RESPONSIBLE FOR ASSESSING SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFINE, INDICATE AND HOLD DESIGN PROFESSIONAL, INDIVIDUALS FROM ANY AND ALL LIABILITY, WHOLLY OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

3 FULL WORKING DAYS BEFORE YOU DIG CALL
811
Know what's below
Call before you dig
MISS Dig System, Inc.
1-800-482-7171 www.missdig.net
(1021-4864)

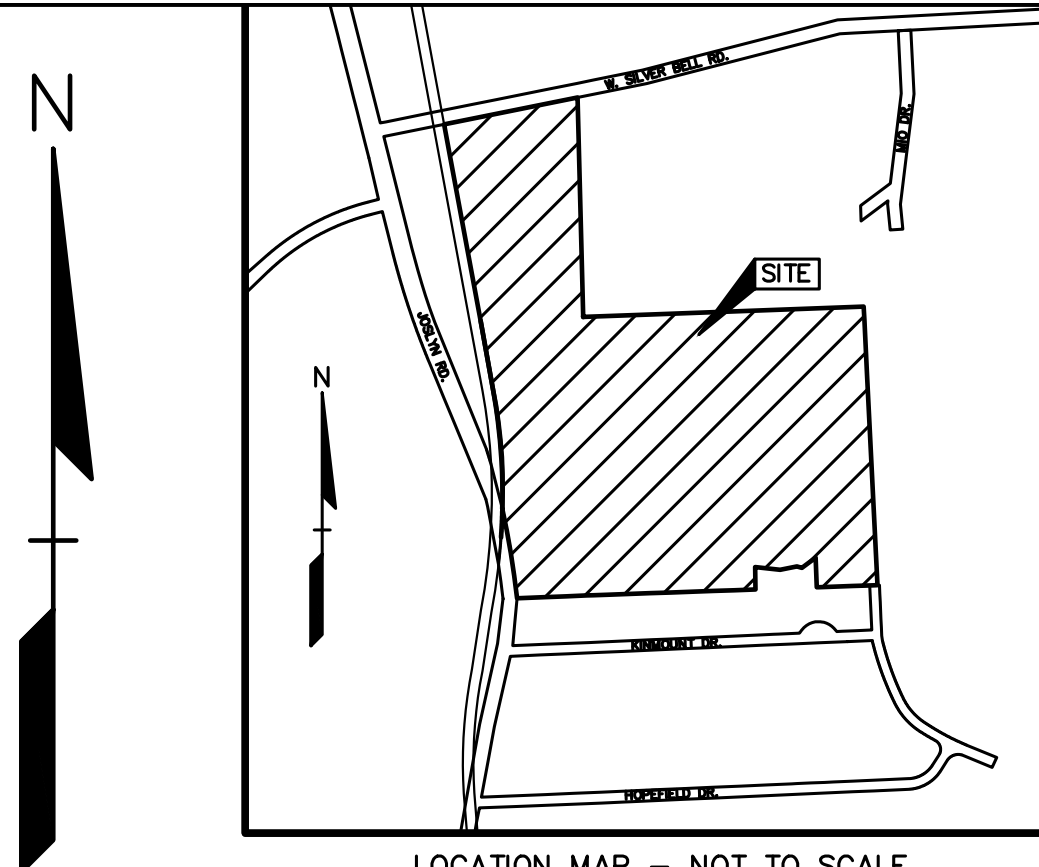
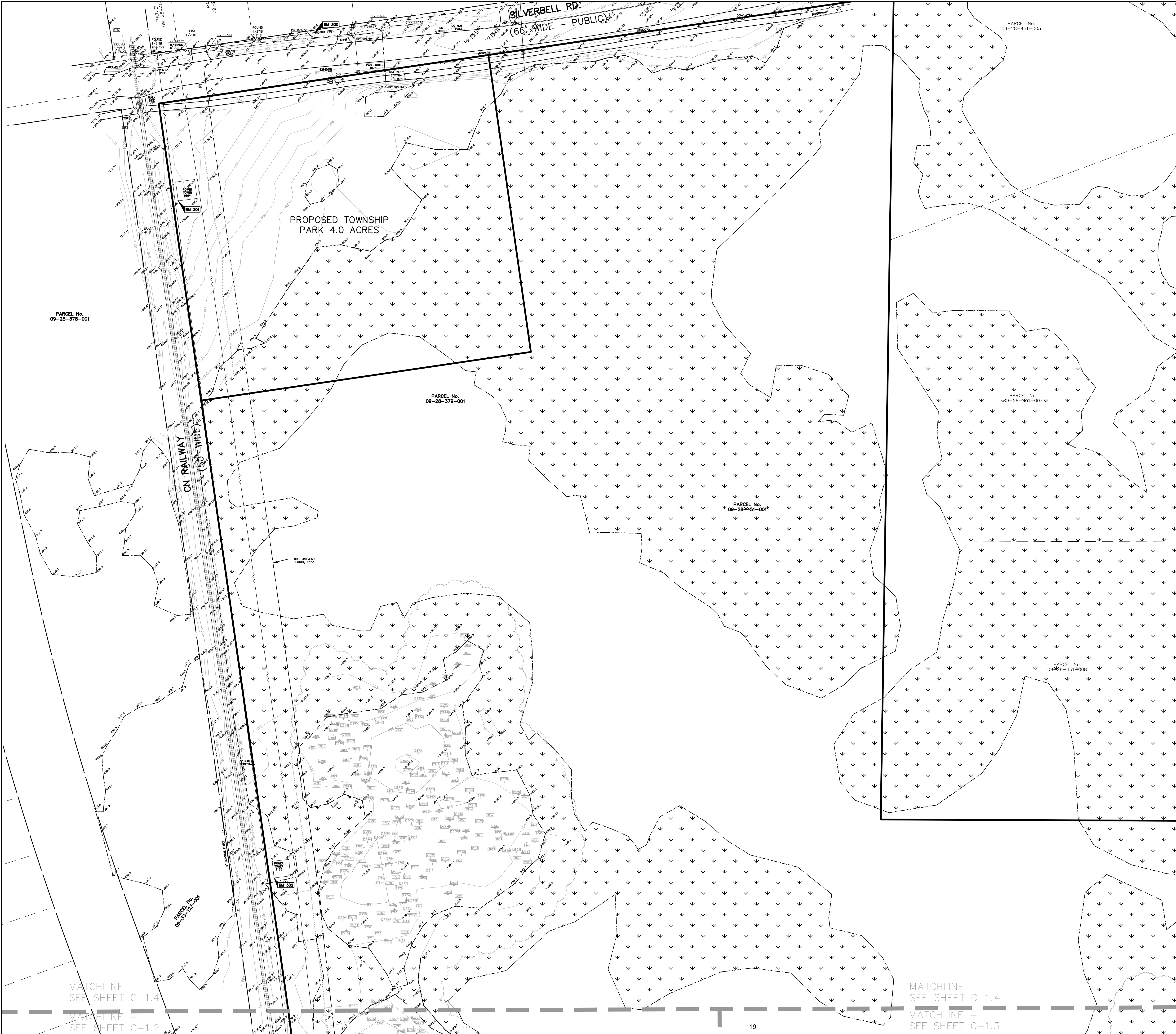


PEA, Inc.
2430 Rochester Ct, Ste 100
Troy, MI 48063-1872
t: 248.689.9090
f: 248.689.1044
www.peainc.com

FRANKLIN RIDGE HOMES, LLC
30180 ORCHARD LAKE ROAD, SUITE 150
FARMINGTON HILLS, MICHIGAN 48334
TOPOGRAPHIC SURVEY - WEST
SILVERBELL POINTE
PART OF THE SE 1/4 OF SECTION 28 & NE 1/4 SECTION 33, T40N, R10E
ORION TOWNSHIP, OAKLAND COUNTY, MICHIGAN

ORIGINAL ISSUE DATE:
MARCH 17, 2020
PEA JOB NO. 2018-150
SCALE: 1" = 50'
DRAWING NUMBER:
C-1.2

XREF: S:\PROJECTS\2018\2018150\DWG\18150-TOPBASE.DWG
XREF: S:\PROJECTS\2018\2018150\DWG\FINAL_PUD\X-BASE-18150.DWG
XREF: S:\PROJECTS\2018\2018150\DWG\FINAL_PUD\X-TBLK-18150.DWG



LEGEND

● IRON FOUND
⊗ IRON SET
⊗ NAIL FOUND
⊗ NAIL & CAP SET

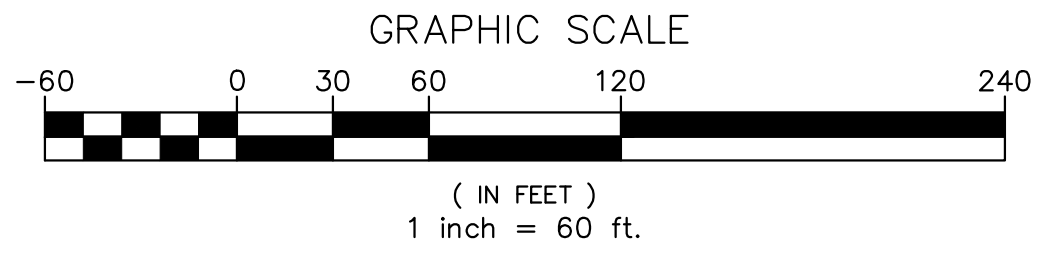
⊗ BRASS PLUG SET
⊗ MONUMENT FOUND
⊗ MONUMENT SET

⊗ SEC. CORNER FOUND
R RECORDED
M MEASURED
C CALCULATED

EXISTING

—OH-ELEC—W— ELEC. PHONE OR CABLE TV O.H. LINE, POLE & GUY WIRE
—UG-CATV— UG-CATV
—UG-PHONE— UG-PHONE
—UG-ELEC—ELEC. U.G. CABLE, MANHOLE, METER & MANHOLE
—GAS MAN, VALVE & GAS LINE MARKER
—WATERMAN, HYD. GATE, VALVE, TAPPING SLEEVE & VALVE
—SANITARY SEWER, CLEANOUT & MANHOLE
—STORM SEWER, CLEANOUT & MANHOLE
—COMBINED SEWER & MANHOLE
—SQUARE, ROUND & BEHNE CATCH BASIN, YARD DRAIN
—POST MONITOR VALVE
—WATER VALVE BOX/HYDRANT VALVE BOX, SERVICE SHUTOFF
—MAILBOX, TRANSFORMER, IRRIGATION CONTROL VALVE
—UNIDENTIFIED STRUCTURE
—SPOT ELEVATION
—CONTOUR LINE
—FENCE
—GUARD RAIL
—STREET LIGHT
—SIGN

CONC. CONCRETE
ASPH. ASPHALT
GRAVEL GRAVEL
WETLAND



NO.	DATE	DESCRIPTION
1	09-13-20	4. KPT JBT AMENDED FINAL PUD
2	12-15-20	3. TMK JBT REVISIONS FOR NOVEMBER 13, 2020 TMP REVIEW
3	10-05-20	2. TMK JBT REVISIONS FOR ADDRESS E.V.A.
4	08-13-20	1. TMK JBT REVISIONS PER MAY 6, 2020 PC MEETING
5	08-13-20	NO. 1 BT DATE DESCRIPTION

LOCATION MAP - NOT TO SCALE

CAUTION!!
THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

THIS DRAWING AND DESIGN ARE THE PROPERTY OF PEA, INC. THEY ARE SUBMITTED ON THE CONDITION THAT THEY ARE NOT TO BE USED, REPRODUCED, OR COPIED IN WHOLE OR IN PART, OR USED FOR FURNISHING INFORMATION TO OTHERS, WITHOUT THE PRIOR WRITTEN CONSENT OF PEA, INC. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED. © 2020 PEA, INC.

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFINE, INDENTIFY AND HOLD DESIGN PROFESSIONAL, AVAILABLE FROM ANY AND ALL LIABILITY, HOLD OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

3 FULL WORKING DAYS BEFORE YOU DIG CALL 811
Know what's below
Call before you dig
MISS DIG System, Inc.
1-800-482-7171 www.missdig.net
(1021-4861)

PEA, Inc.
2430 Rochester Ct, Ste 100
Troy, MI 48063-1872
t: 248.689.9090
f: 248.689.1044
www.peainc.com

PEA, Inc.
2430 Rochester Ct, Ste 100
Troy, MI 48063-1872
t: 248.689.9090
f: 248.689.1044
www.peainc.com

FRANKLIN RIDGE HOMES, LLC
30180 ORCHARD LAKE ROAD, SUITE 150
FARMINGTON HILLS, MICHIGAN 48334
TOPOGRAPHIC SURVEY - NORTH
PART OF THE SE 1/4 OF SECTION 28 & NE 1/4 SECTION 33, T40N, R10E
ORION TOWNSHIP, OAKLAND COUNTY, MICHIGAN

DES.	TMK	DN.	TMK	SUR.	KTR	P.M.	JBT

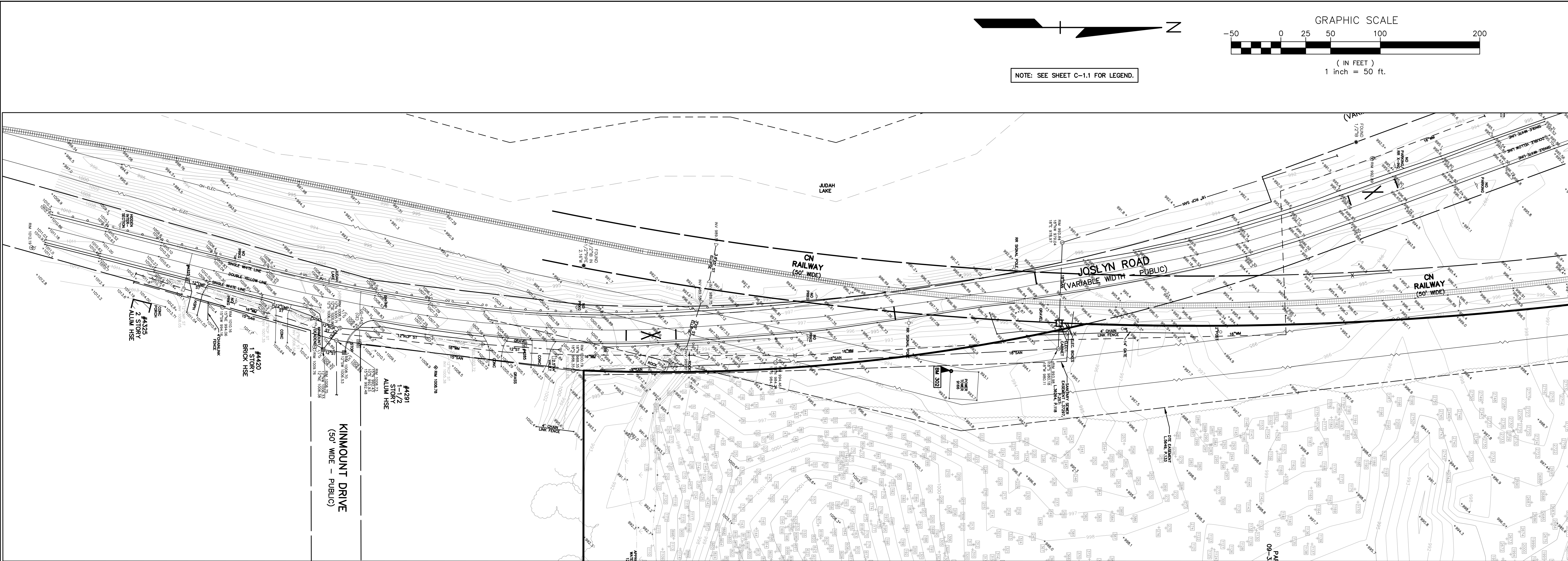
ORIGINAL ISSUE DATE:
MARCH 17, 2020

PEA JOB NO. 2018-150

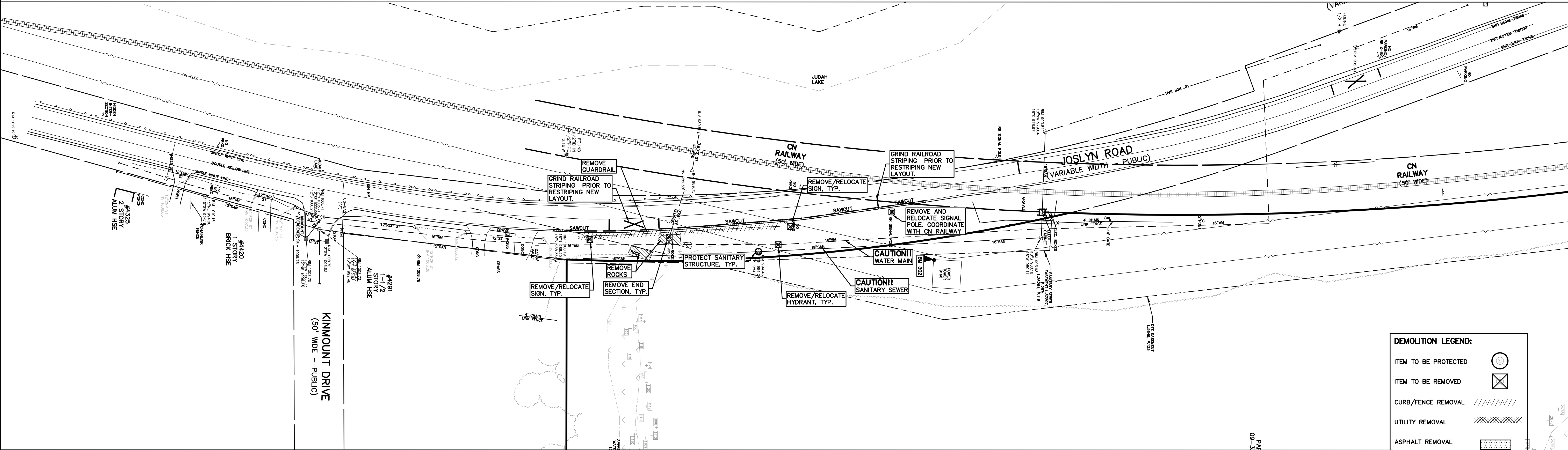
SCALE: 1" = 60'

DRAWING NUMBER:
C-1.4

XREF: S:\PROJECTS\2018\2018150\DWG\18150-TOPBASE.DWG
XREF: S:\PROJECTS\2018\2018150\DWG\FINAL_PUD\X-BASE-18150.DWG
XREF: S:\PROJECTS\2018\2018150\DWG\FINAL_PUD\X-TBLK-18150.DWG



TOPOGRAPHIC SURVEY



DEMOLITION PLAN

NO.	DATE	DESCRIPTION
1	09-13-20	DESIGN
2	10-05-20	REVISED FINAL PUD
3	12-15-20	REVISED FINAL PUD
4	01-13-21	REVISED FINAL PUD
5	01-13-21	REVISED FINAL PUD
6	01-13-21	REVISED FINAL PUD
7	01-13-21	REVISED FINAL PUD
8	01-13-21	REVISED FINAL PUD
9	01-13-21	REVISED FINAL PUD
10	01-13-21	REVISED FINAL PUD
11	01-13-21	REVISED FINAL PUD
12	01-13-21	REVISED FINAL PUD
13	01-13-21	REVISED FINAL PUD
14	01-13-21	REVISED FINAL PUD
15	01-13-21	REVISED FINAL PUD
16	01-13-21	REVISED FINAL PUD
17	01-13-21	REVISED FINAL PUD
18	01-13-21	REVISED FINAL PUD
19	01-13-21	REVISED FINAL PUD
20	01-13-21	REVISED FINAL PUD

NO.	DATE	DESCRIPTION
1	09-13-20	DESIGN
2	10-05-20	REVISED FINAL PUD
3	12-15-20	REVISED FINAL PUD
4	01-13-21	REVISED FINAL PUD
5	01-13-21	REVISED FINAL PUD
6	01-13-21	REVISED FINAL PUD
7	01-13-21	REVISED FINAL PUD
8	01-13-21	REVISED FINAL PUD
9	01-13-21	REVISED FINAL PUD
10	01-13-21	REVISED FINAL PUD
11	01-13-21	REVISED FINAL PUD
12	01-13-21	REVISED FINAL PUD
13	01-13-21	REVISED FINAL PUD
14	01-13-21	REVISED FINAL PUD
15	01-13-21	REVISED FINAL PUD
16	01-13-21	REVISED FINAL PUD
17	01-13-21	REVISED FINAL PUD
18	01-13-21	REVISED FINAL PUD
19	01-13-21	REVISED FINAL PUD
20	01-13-21	REVISED FINAL PUD

CAUTION!!
THE LOCATIONS AND ELEVATIONS OF EXISTING UTILITIES SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS GIVEN FOR THE ACCURACY OF THE INFORMATION. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

THIS DRAWING AND DESIGN ARE THE PROPERTY OF PEA, INC. THEY ARE SUBMITTED ON THE CONDITION THAT THEY ARE NOT TO BE USED, REPRODUCED, OR COPIED IN WHOLE OR IN PART, OR USED FOR FURNISHING INFORMATION TO OTHERS, WITHOUT THE PRIOR WRITTEN CONSENT OF PEA, INC. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED. © 2020 PEA, INC.

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THAT THE REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFINE, INDICATE AND HOLD PERSONAL PROFESSIONAL LIABILITY FROM ANY AND ALL LIABILITY FROM OR ALLEGED IN CONNECTION WITH THE PERFORMANCE OF WORK ON THE PROJECT EXCEPT LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

3 FULL WORKING DAYS BEFORE YOU DIG CALL

811
Know what's below
Call before you dig

MISS Dig System, Inc.
1-800-482-7171 www.missdig.net
1001 4800



PEA, Inc.
2430 Rochester Ct, Ste 100
Troy, MI 48063-1872
t: 248.689.9090
f: 248.689.1044
www.peainc.com

FRANKLIN RIDGE HOMES, LLC
30180 ORCHARD LAKE ROAD, SUITE 150
FARMINGTON HILLS, MICHIGAN 48334
R.O.W. TOPO SURVEY AND DEMO PLAN
PART OF THE SE 1/4 OF SECTION 28 & NE 1/4 SECTION 33, T40N, R10E
ORION TOWNSHIP, OAKLAND COUNTY, MICHIGAN
DES. TMK DN. TMK SUR. KTR P.M. JBT
S:\PROJECTS\2018-150 SILVERBELL POINTE\2018-150 ROW TOPO-18150.dwg

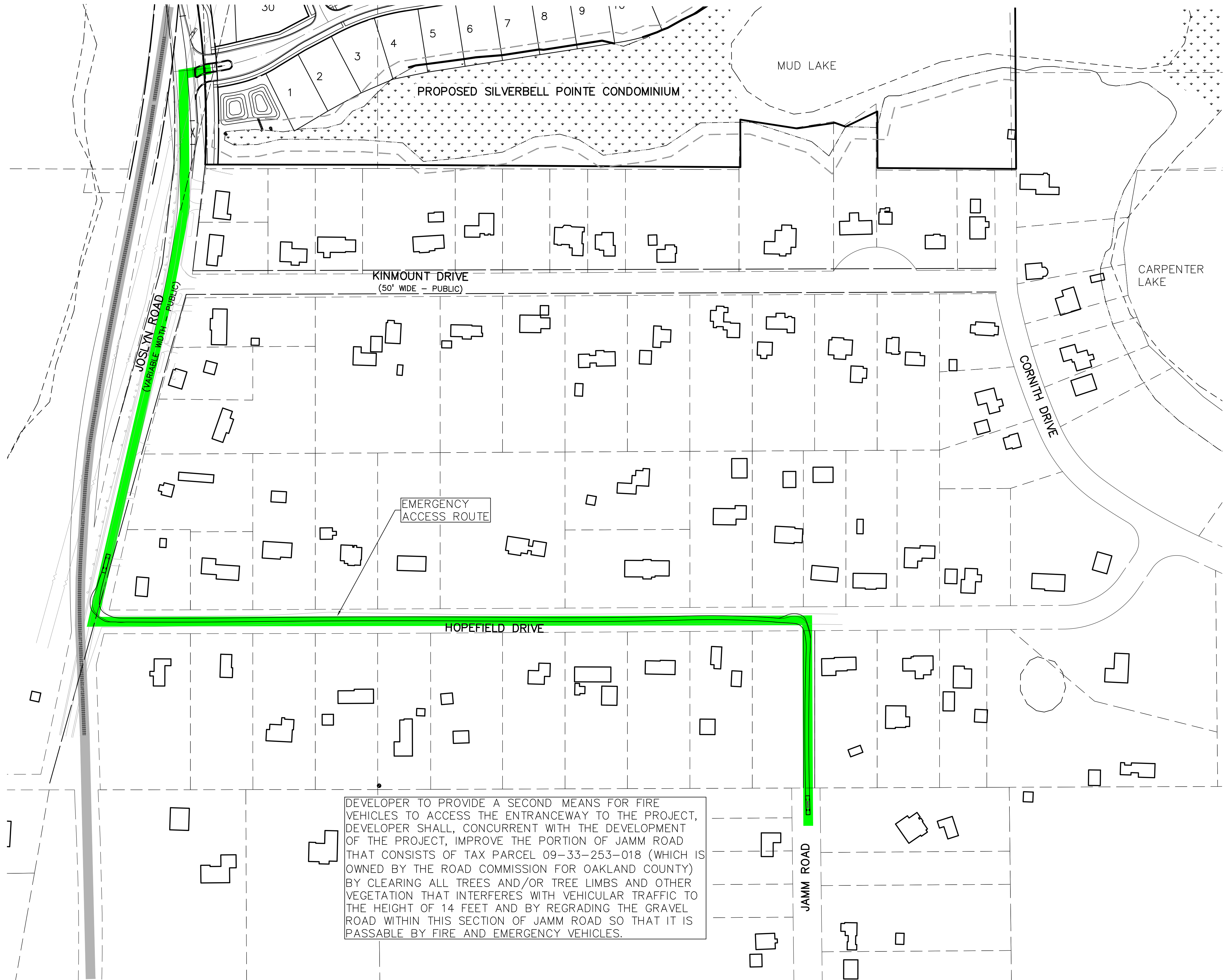
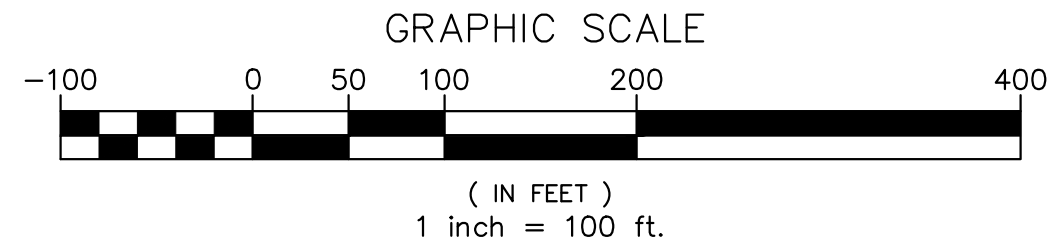
ORIGINAL ISSUE DATE:
MARCH 17, 2020

PEA JOB NO. 2018-150

SCALE: 1" = 50'

DRAWING NUMBER:
C-1.5

XREF: S:\PROJECTS\2018\2018150\DWG\18150-TOPOBASE.DWG
XREF: S:\PROJECTS\2018\2018150\DWG\FINAL_PUD\X-BASE-18150.DWG
XREF: S:\PROJECTS\2018\2018150\DWG\FINAL_PUD\X-TBLK-18150.DWG



DEVELOPER TO PROVIDE A SECOND MEANS FOR FIRE VEHICLES TO ACCESS THE ENTRANCEWAY TO THE PROJECT, DEVELOPER SHALL, CONCURRENT WITH THE DEVELOPMENT OF THE PROJECT, IMPROVE THE PORTION OF JAMM ROAD THAT CONSISTS OF TAX PARCEL 09-33-253-018 (WHICH IS OWNED BY THE ROAD COMMISSION FOR OAKLAND COUNTY) BY CLEARING ALL TREES AND/OR TREE LIMBS AND OTHER VEGETATION THAT INTERFERES WITH VEHICULAR TRAFFIC TO THE HEIGHT OF 14 FEET AND BY REGRADING THE GRAVEL ROAD WITHIN THIS SECTION OF JAMM ROAD SO THAT IT IS PASSABLE BY FIRE AND EMERGENCY VEHICLES.

NO.	DATE	DESCRIPTION
1	09-13-20	REVISED FINAL PUD
2	12-15-20	REVISIONS FOR ADDED EVA
3	10-05-20	REVISIONS FOR ADDED EVA
4	08-13-20	REVISED FINAL PUD

REVISIONS

CAUTION!!
THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS GIVEN BY THE ENGINEER OR ARCHITECT FOR THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

THIS DRAWING AND DESIGN ARE THE PROPERTY OF PEA, INC. THEY ARE SUBMITTED ON THE CONDITION THAT THEY ARE NOT TO BE USED, REPRODUCED, OR COPIED IN WHOLE OR IN PART, OR USED FOR FURNISHING INFORMATION TO OTHERS, WITHOUT THE PRIOR WRITTEN CONSENT OF PEA, INC. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED. © 2020 PEA, INC.

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR SHALL BE RESPONSIBLE TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, LOSS OR ALLEGED IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

3 FULL WORKING DAYS BEFORE YOU DIG CALL

811
Know what's below
Call before you dig
MISS Dig System, Inc.
1-800-482-7171 www.missdig.net
(102) 47661



PEA, Inc.
2430 Rochester Ct, Ste 100
Troy, MI 48063-1872
t: 248.689.9090
f: 248.689.1044
www.peainc.com

FRANKLIN RIDGE HOMES, LLC
30180 ORCHARD LAKE ROAD, SUITE 150
FARMINGTON HILLS, MICHIGAN 48334
FIRE ACCESS ROUTE
SILVERBELL POINTE
PART OF THE SE 1/4 OF SECTION 28 & NE 1/4 SECTION 33, T04N, R10E
ORION TOWNSHIP, OAKLAND COUNTY, MICHIGAN
DES. TMK DN. TMK SUR. KTR P.M. JBT

ORIGINAL ISSUE DATE:
MARCH 17, 2020

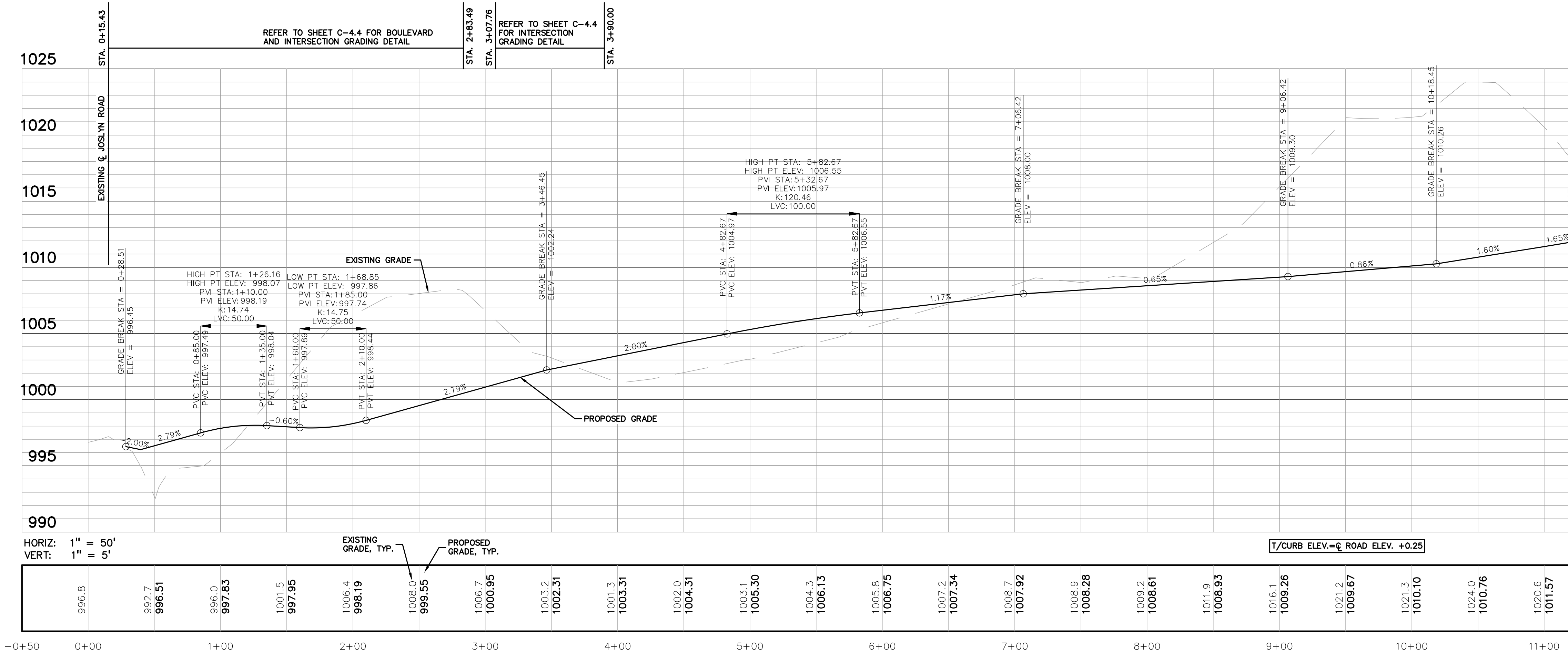
PEA JOB NO. 2018-150

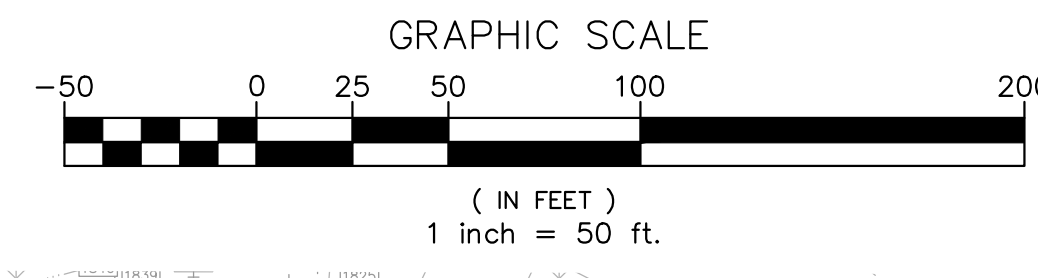
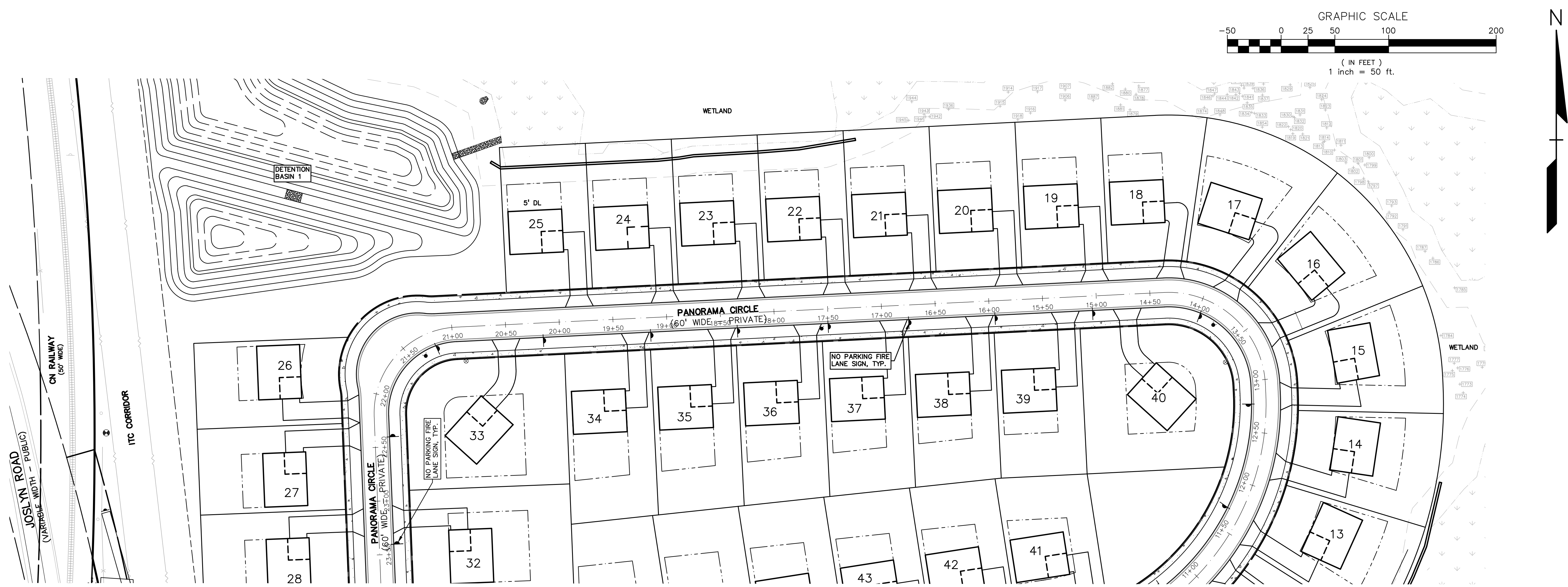
SCALE: 1" = 100'

DRAWING NUMBER:

C-2.2

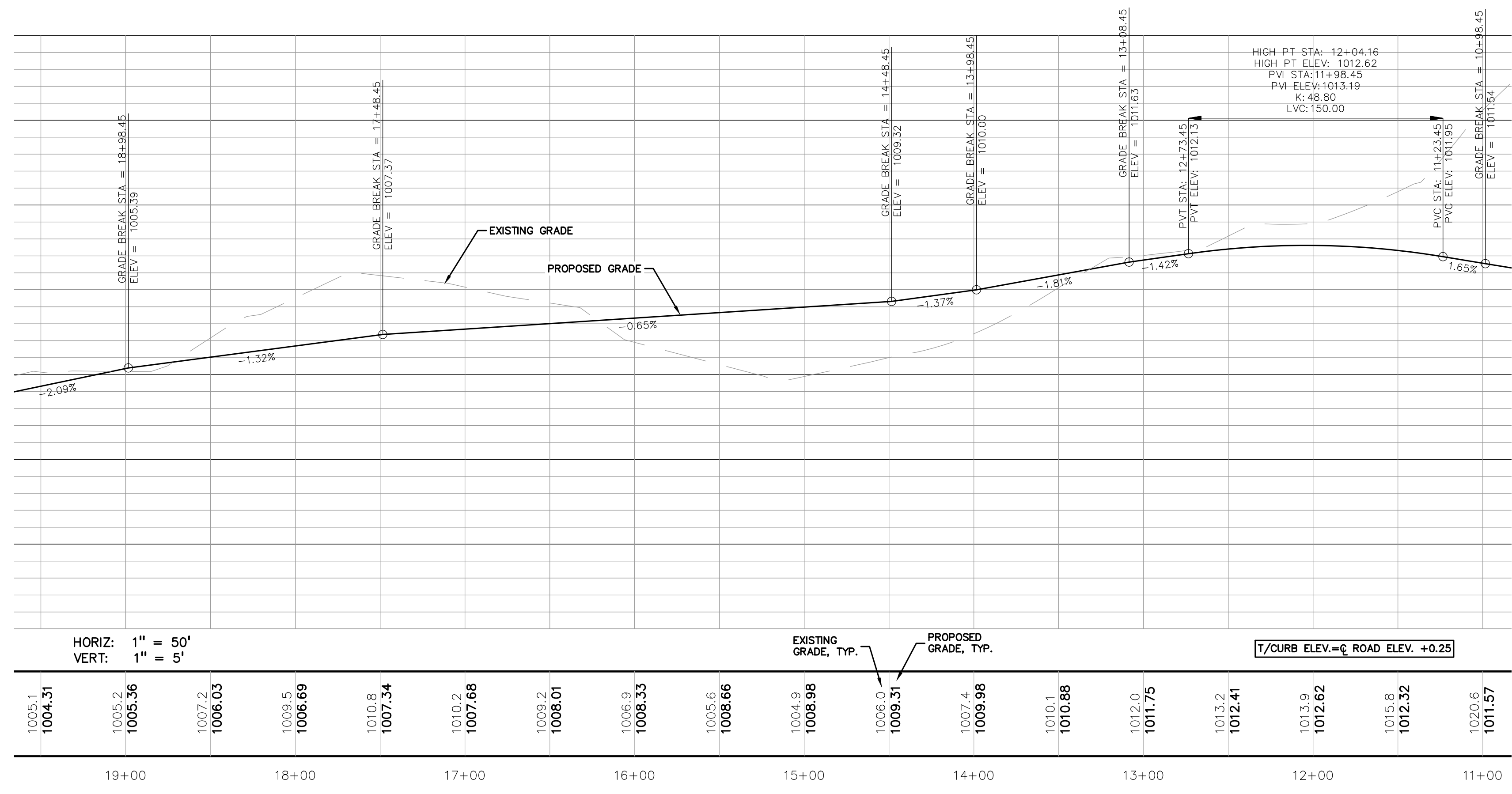
XREF: S:\PROJECTS\2018\2018150\DWG\18150-TOPOBASE.DWG
XREF: S:\PROJECTS\2018\2018150\DWG\FINAL_PUD\X-BASE-18150.DWG
XREF: S:\PROJECTS\2018\2018150\DWG\FINAL_PUD\X-TBLK-18150.DWG





SEE SHEET C-3.3 FOR CONTINUATION

SEE SHEET C-3.1 FOR CONTINUATION



HORIZ: 1" = 50'
VERT: 1" = 5'

EXISTING GRADE, TYP.
PROPOSED GRADE, TYP.

T/CURB ELEV. = ϕ ROAD ELEV. +0.25

REVISIONS									
No.	DATE	DESCRIPTION	BY	CHKD	APP'D				
1	09-13-20	AMENDED FINAL PUD	JBT						
2	12-15-20	REVISIONS FOR NOVEMBER 13, 2020 TWP REVIEW	TMK	JBT					
3	10-05-20	REVISIONS FOR ADDED EVA	TMK	JBT					
4	08-13-20	REVISIONS FOR MAY 6, 2020 PC MEETING	TMK	JBT					
5	01-17-20	FINAL DISCUSSION	JBT						

CAUTION!!
THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS GIVEN BY THE ENGINEER OR THE CONTRACTOR FOR THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

THIS DRAWING AND DESIGN ARE THE PROPERTY OF PEA, INC. THEY ARE LOANED TO THE CONTRACTOR THAT THEY ARE NOT TO BE USED, REPRODUCED, OR COPIED IN WHOLE OR IN PART, OR USED FOR FURNISHING INFORMATION TO OTHERS, WITHOUT THE PRIOR WRITTEN CONSENT OF PEA, INC. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED. © 2020 PEA, INC.

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFINE, INDUSTRY AND HOLD DESIGN PROFESSIONAL, LIABILITY FROM ANY AND ALL LIABILITY, LOSS OR ALLEGED IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

3 FULL WORKING DAYS BEFORE YOU DIG CALL 811
Know what's below
Call before you dig
MISS Dig System, Inc.
1-800-482-7171 www.missdig.net
(1021-4766)

PEA, Inc.
2430 Rochester Ct, Ste 100
Troy, MI 48063-1872
t: 248.689.9090
f: 248.689.1044
www.peainc.com

FRANKLIN RIDGE HOMES, LLC
30180 ORCHARD LAKE ROAD, SUITE 150
PARKMINGTON HILLS, MICHIGAN 48354

ROAD PROFILES - STA. - 11+00 TO 21+00
PART OF THE SE 1/4 OF SECTION 28 & NE 1/4 SECTION 33, T40N, R10E
ORION TOWNSHIP, OAKLAND COUNTY, MICHIGAN

DES.	TMK	DN.	TMK	SUR.	KTR	P.M.	JBT

ORIGINAL ISSUE DATE:
MARCH 17, 2020

PEA JOB NO. 2018-150

SCALE: 1" = 50'

DRAWING NUMBER:
C-3.2

XREF: S:\PROJECTS\2018\2018150\DWG\18150-TOPOBASE.DWG
XREF: S:\PROJECTS\2018\2018150\DWG\FINAL_PUD\X-BASE-18150.DWG
XREF: S:\PROJECTS\2018\2018150\DWG\FINAL_PUD\X-TBLK-18150.DWG

GENERAL GRADING AND EARTHWORK NOTES:

THESE NOTES APPLY TO ALL CONSTRUCTION ACTIVITIES ON THIS PROJECT

1. CONTRACTOR TO FIELD VERIFY ALL EXISTING TREES AND BRUSH AND REMOVE ALL THAT ARE NECESSARY TO GRADE SITE.
2. ALL GRADES ARE TO TOP OF PAVEMENT UNLESS OTHERWISE NOTED.
3. THE STAGING OF CONSTRUCTION ACTIVITIES SHALL OCCUR ONLY WITHIN THE SITE BOUNDARIES. ANY CONSTRUCTION ACTIVITIES OUTSIDE OF THE SITE BOUNDARIES SHALL BE AT THE SOLE RESPONSIBILITY AND RISK OF THE CONTRACTOR.
4. ALL SOIL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL MEET THE REQUIREMENTS OF OAKLAND COUNTY. AN EROSION CONTROL PERMIT MUST BE SECURED FROM THE COUNTY PRIOR TO CONSTRUCTION.
5. SEE ADDITIONAL GRADING AND EARTHWORK NOTES ON DETAIL SHEET C-5.0
6. REFER TO SHEET C-5.0 FOR ALL SOIL EROSION AND SEDIMENTATION CONTROL MEASURES AND NOTES.
7. ALL DISTURBED AREAS SHALL BE SEEDED AND MULCHED OR SODDED IN ACCORDANCE WITH THE LANDSCAPE PLANS. PROVIDE A MINIMUM OF 3" OF TOPSOIL IN THESE AREAS UNLESS OTHERWISE NOTED.
8. THE CONTRACTOR SHALL NOTE EXISTING UNDERGROUND UTILITIES WITHIN AND ADJACENT TO THE SITE. BACKFILL FOR EXISTING UTILITY TRENCHES SHALL BE EXAMINED CRITICALLY. ANY TRENCHES FOUND TO HAVE SOFT, UNSTABLE OR UNSUITABLE BACKFILL MATERIAL, IN THE OPINION OF THE GEOTECHNICAL ENGINEER, THAT ARE TO BE WITHIN THE ZONE OF INFLUENCE OF PROPOSED BUILDINGS OR PAVEMENT SHALL BE COMPLETELY EXCAVATED AND BACKFILLED WITH SUITABLE MATERIAL.

SYMBOLS: GRADING

PROPOSED SPOT GRADE ELEVATION. ALL GRADES INDICATED ARE TOP OF PAVEMENT UNLESS OTHERWISE NOTED.

PROPOSED CONTOUR LINE

EARTHWORK BALANCING NOTE:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPORTING OR EXPORTING ALL MATERIALS AS REQUIRED TO PROPERLY GRADE THIS PROJECT TO THE FINISHED ELEVATIONS SHOWN ON THE APPROVED PLANS. THE CONTRACTOR SHALL MAKE THEIR OWN DETERMINATION OF CUT AND FILL QUANTITIES AND ALLOW FOR REMOVAL OF EXCESS OR IMPORTATION OF ADDITIONAL MATERIAL AT NO ADDITIONAL COST TO THE OWNER.

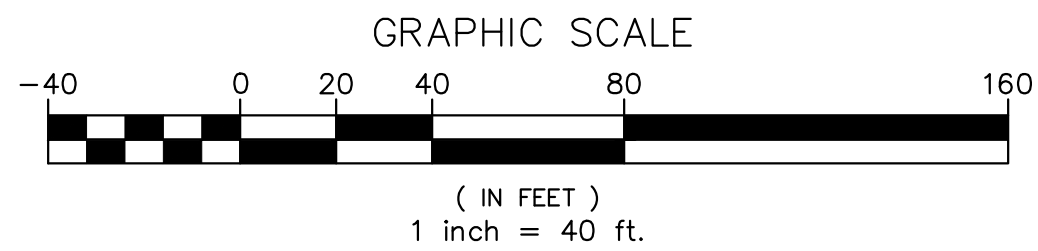
NOTE:

REFER TO SHEETS C-3.1 TO C-3.3 FOR ROAD PROFILES.

NOTE:

DAYLIGHT = DL = 4.5' BELOW FINISH GRADE
WALKOUT = WO = 7' BELOW FINISH GRADE

NOTE: THE LOWEST REAR YARD GRADE SHALL BE 996.90. ALL BASEMENT GRADES SHALL BE 1 FT ABOVE THE LAKE.



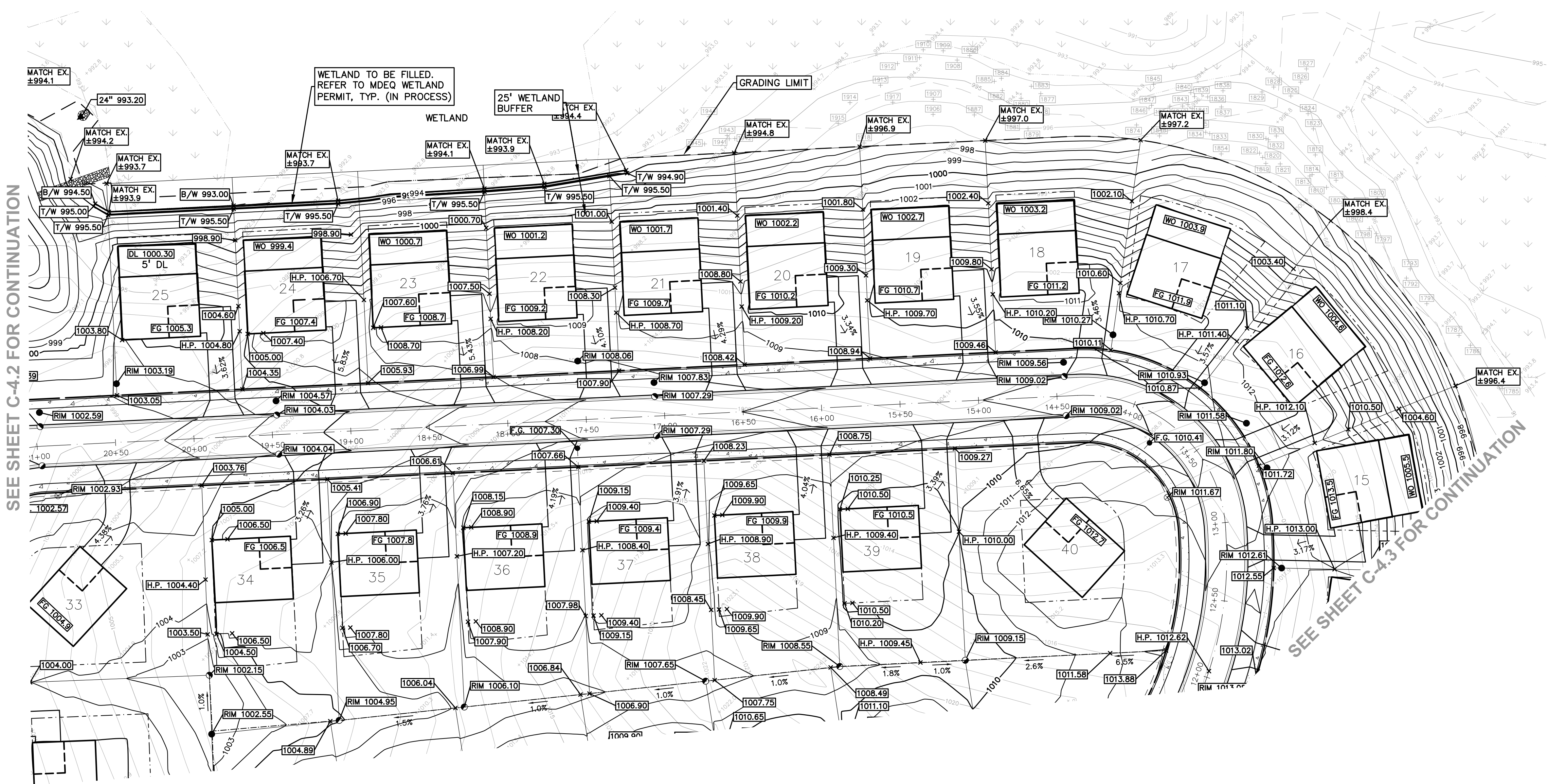
LEGEND

EXISTING

- IRON FOUND
- IRON SET
- NAIL FOUND
- NAIL & CAP SET
- BRASS PLUG SET
- MONUMENT FOUND
- MONUMENT SET
- SEC. CORNER FOUND
- RECORDED
- MEASURED
- CALCULATED

PROPOSED

- ELEC. PHONE OR CABLE TV G.H. LINE, POLE & GUY WIRE
- UNDERGROUND CABLE TV, CABLE PEDESTAL
- TELEPHONE U.G. CABLE, PEDESTAL & MANHOLE
- ELECTRIC U.G. CABLE, MANHOLE, METER & HANDHOLE
- GAS MAIN, VALVE & GAS LINE MARKER
- WATERMAIN, HYD. GATE VALVE, TAPPING SLEEVE & VALVE
- SANITARY SINKER, CLEANOUT & MANHOLE
- STORM SINKER, CLEANOUT & MANHOLE
- COMBINED SINKER & MANHOLE
- SQUARE, ROUND & BEEHIVE CATCH BASIN, YARD DRAIN
- POST INDICATOR VALVE
- WATER VALVE BOX/HYDRANT VALVE BOX, SERVICE SHUTOFF
- MAILBOX, TRANSFORMER, IRRIGATION CONTROL VALVE
- UNIDENTIFIED STRUCTURE
- SPOT ELEVATION
- CONTOUR LINE
- FENCE
- GUARD RAIL
- STREET LIGHT
- SIGN
- CONC. CONCRETE
- ASPH. ASPHALT
- GRAVEL GRAVEL
- WETLAND WETLAND
- STD. DUTY HEAVY DUTY R.O.W. ONLY
- STD. DUTY HEAVY DUTY R.C.O.C. ASPHALT



CAUTION!!

THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS GIVEN FOR THE ACCURACY OF THESE DATA. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

THIS DRAWING AND DESIGN ARE THE PROPERTY OF PEA, INC. THEY ARE SUBMITTED ON THE CONDITION THAT THEY ARE NOT TO BE USED, REPRODUCED, OR COPIED IN WHOLE OR IN PART, OR USED FOR FURNISHING INFORMATION TO OTHERS, WITHOUT THE PRIOR WRITTEN CONSENT OF PEA, INC. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHER RIGHTS ARE HEREBY SPECIFICALLY RESERVED. © 2020 PEA, INC.

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTRACTORS AND NOT BE LIMITED TO NORMAL WORKING HOURS AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFINE, INDENTIFY AND HOLD DESIGN PROFESSIONAL, MANAGER FROM ANY AND ALL LIABILITY, WHOLLY OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

3 FULL WORKING DAYS BEFORE YOU DIG CALL

811

Know what's below
Call before you dig

MISS Dig System, Inc.

1-800-482-7171 www.missdig.net



PEA, Inc.

2430 Rochester Ct. Ste 100
Troy, MI 48063-1872
t: 248.689.9090
f: 248.689.1044
www.peainc.com

FRANKLIN RIDGE HOMES, LLC

30180 ORCHARD LAKE ROAD, SUITE 150
PARKMAN HILLS, MICHIGAN 48364

GRADING PLAN - NORTH

SILVERBELL POINTE

PART OF THE SE 1/4 OF SECTION 28 & NE 1/4 SECTION 33, T40N, R10E
ORION TOWNSHIP, OAKLAND COUNTY, MICHIGAN

DES. TMK DN. TMK SUR. KTR P.M. JBT

ORIGINAL ISSUE DATE:
MARCH 17, 2020

PEA JOB NO. 2018-150

SCALE: 1" = 40'

DRAWING NUMBER:

C-4.1

XREF: S:\PROJECTS\2018\2018150\DWG\18150-TOPBASE.DWG
XREF: S:\PROJECTS\2018\2018150\DWG\FINAL_PUD\X-BASE-18150.DWG
XREF: S:\PROJECTS\2018\2018150\DWG\FINAL_PUD\X-TLK-18150.DWG

NOTE:
REFER TO SHEETS C-3.1 TO C-3.3 FOR ROAD PROFILES.

NOTE:
DAYLIGHT = DL = 4.5' BELOW FINISH GRADE
WALKOUT = WO = 7' BELOW FINISH GRADE

NOTE: THE LOWEST REAR YARD GRADE SHALL BE 996.50. ALL BASEMENT GRADES SHALL BE 1 FT ABOVE THE LAKE

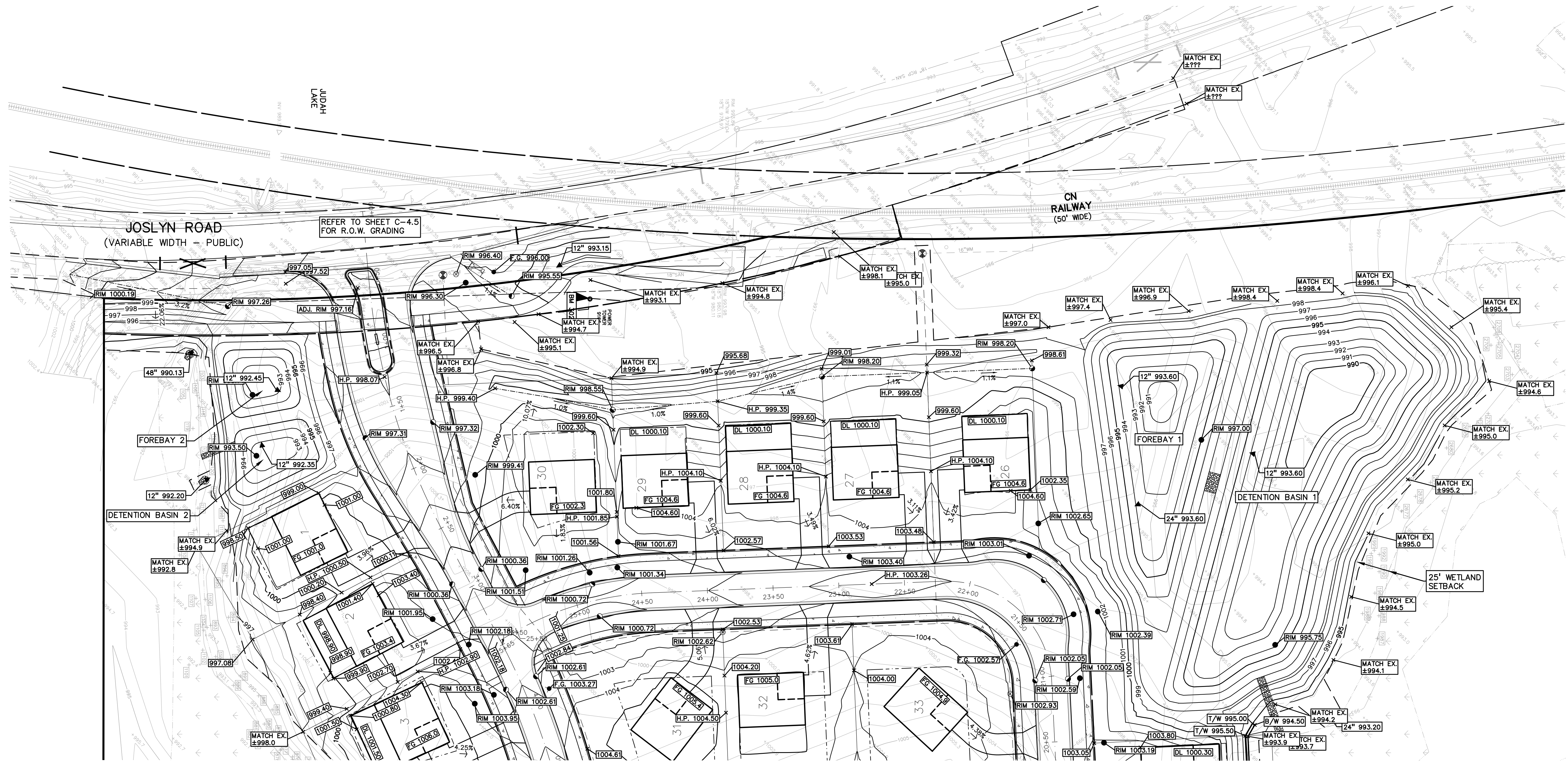
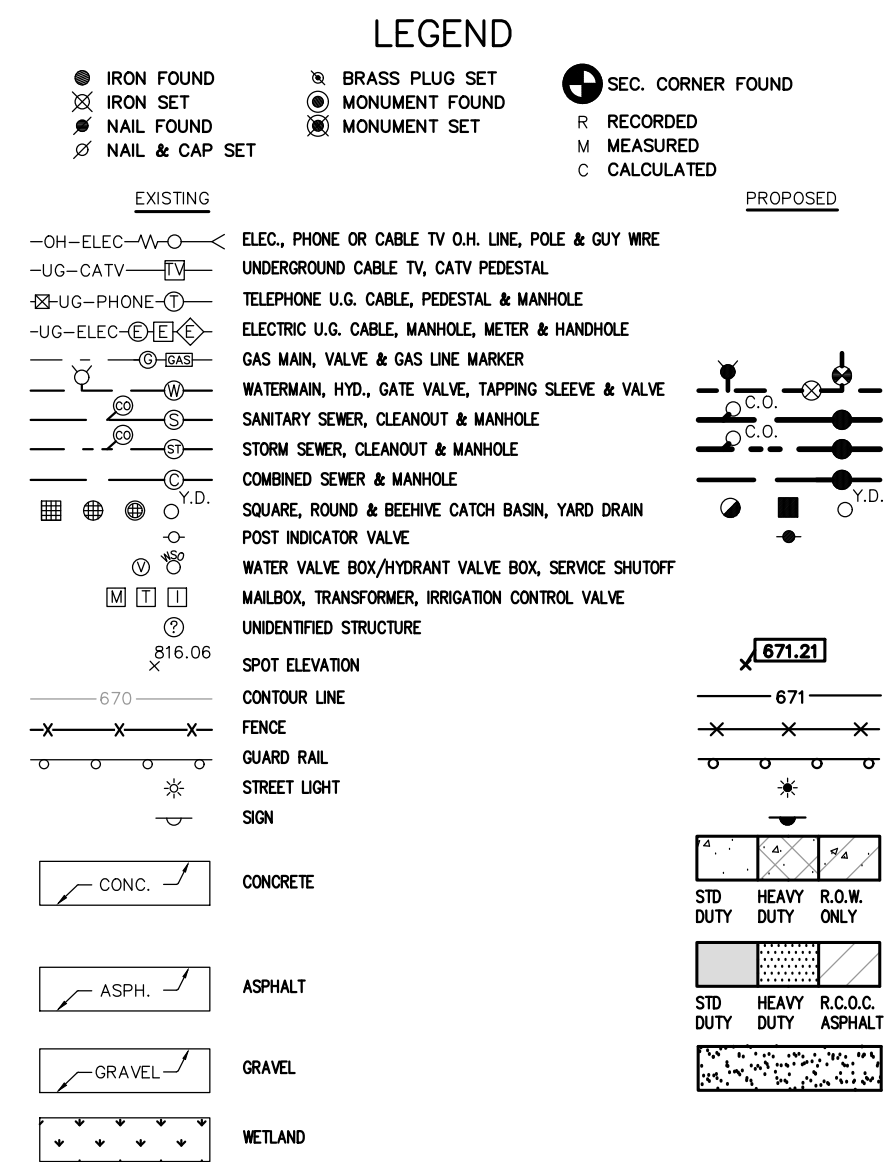
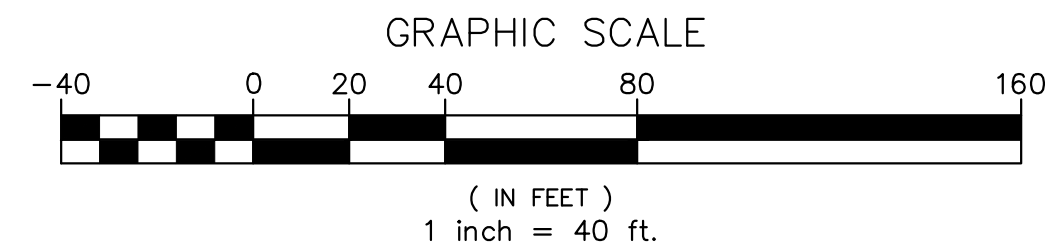
SYMBOLS: GRADING

PROPOSED SPOT GRADE ELEVATION. ALL GRADES INDICATED ARE TOP OF PAVEMENT UNLESS OTHERWISE NOTED.

PROPOSED CONTOUR LINE

EARTHWORK BALANCING NOTE:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPORTING OR EXPORTING ALL MATERIALS AS REQUIRED TO PROPERLY GRADE THIS PROJECT TO THE FINISHED ELEVATIONS SHOWN ON THE APPROVED PLANS. THE CONTRACTOR SHALL MAKE THEIR OWN DETERMINATION OF CUT AND FILL QUANTITIES AND ALLOW FOR REMOVAL OF EXCESS OR IMPORTATION OF ADDITIONAL MATERIAL AT NO ADDITIONAL COST TO THE OWNER.



SEE SHEET C-4.3 FOR CONTINUATION

SEE SHEET C-4.1 FOR CONTINUATION

NO.	DATE	DESCRIPTION
1	09-13-20	1. JBT AMENDED FINAL PUD
2	12-15-20	2. TMM JBT REVISIONS PER NOVEMBER 13, 2020 TWP REVIEW
3	10-05-20	3. TMM JBT REVISIONS FOR ADDED E.V.A.
4	08-13-20	4. TMM JBT REVISIONS PER MAY 6, 2020 P.C. MEETINGS
5	08-13-20	5. TMM JBT CORRECTIONS

CAUTION!!
THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS GIVEN FOR THE ACCURACY OF THE INFORMATION. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

THIS DRAWING AND DESIGN ARE THE PROPERTY OF PEA, INC. THEY ARE SUBMITTED ON THE CONDITION THAT THEY ARE NOT TO BE USED, REPRODUCED, OR COPIED IN WHOLE OR IN PART, OR USED FOR FURNISHING INFORMATION TO OTHERS, WITHOUT THE PRIOR WRITTEN CONSENT OF PEA, INC. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED. © 2020 PEA, INC.

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFINE, INDENTIFY AND HOLD DESIGN PROFESSIONAL, INDENTIFY AND HOLD DESIGN PROFESSIONAL, OR ALLEGED IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

3 FULL WORKING DAYS BEFORE YOU DIG CALL

811
Know what's below
Call before you dig
MISS Dig System, Inc.
1-800-482-7171 www.missdig.net



PEA, Inc.
2430 Rochester Ct, Ste 100
Troy, MI 48063-1872
t: 248.689.9090
f: 248.689.1044
www.peainc.com

FRANKLIN RIDGE HOMES, LLC
30180 ORCHARD LAKE ROAD, SUITE 150
FARMINGTON HILLS, MICHIGAN 48334

GRADING PLAN - WEST
SILVERBELL POINTE

PART OF THE SE 1/4 OF SECTION 28 & NE 1/4 SECTION 33, T40N, R10E
ORION TOWNSHIP, OAKLAND COUNTY, MICHIGAN

DES. TMM DN. TMM SUR. KTR P.M. JBT

ORIGINAL ISSUE DATE:
MARCH 17, 2020

PEA JOB NO. 2018-150

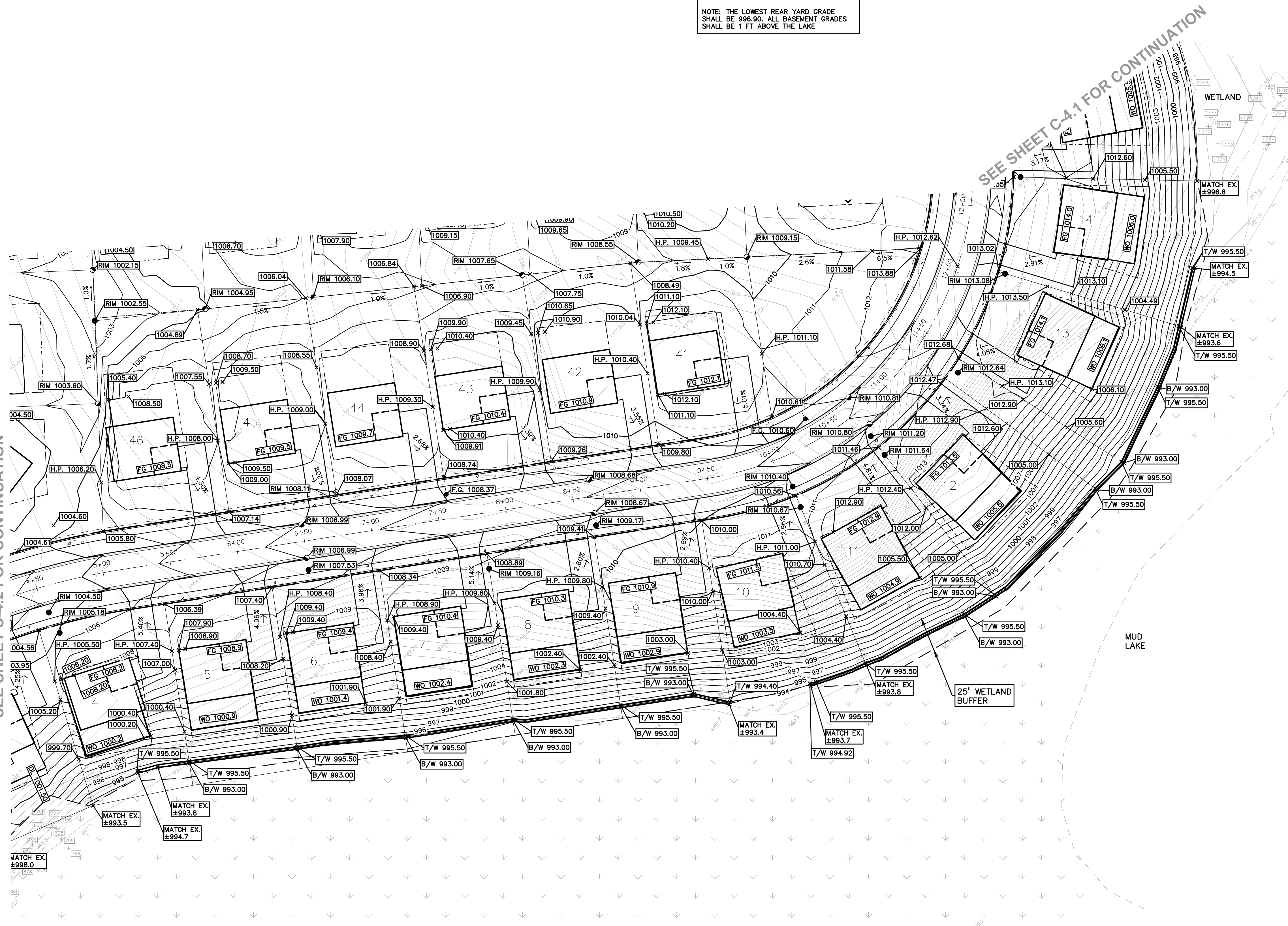
SCALE: 1" = 40'

DRAWING NUMBER:

C-4.2

XREF: S:\PROJECTS\2018\2018150\DWG\18150-1\TOPBASE.DWG
XREF: S:\PROJECTS\2018\2018150\DWG\FINAL_PUD\X-BASE-18150.DWG
XREF: S:\PROJECTS\2018\2018150\DWG\FINAL_PUD\X-TBLK-18150.DWG

SEE SHEET C-4.2 FOR CONTINUATION



SYMBOLS: GRADING

PROPOSED SPOT GRADE ELEVATION. ALL GRADES INDICATED ARE TOP OF PAVEMENT UNLESS OTHERWISE NOTED.

PROPOSED CONTOUR LINE

EARTHWORK BALANCING NOTE:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPORTING OR EXPORTING ALL MATERIALS AS REQUIRED TO PROPERLY GRADE THIS PROJECT TO THE FINISHED ELEVATIONS SHOWN ON THE APPROVED PLANS. THE CONTRACTOR SHALL MAKE THEIR OWN DETERMINATION OF CUT AND FILL QUANTITIES AND ALLOW FOR REMOVAL OF EXCESS OR IMPORTATION OF ADDITIONAL MATERIAL AT NO ADDITIONAL COST TO THE OWNER.

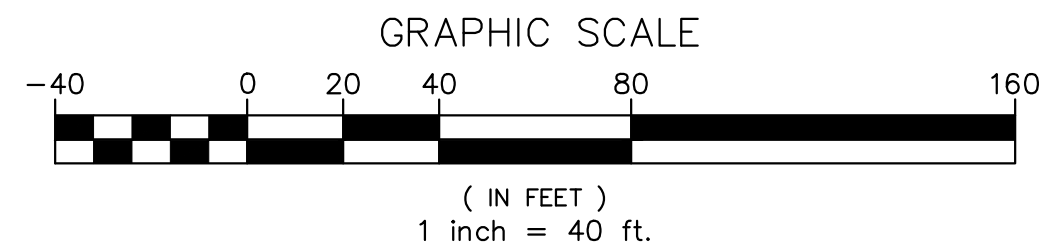
NOTE:

REFER TO SHEETS C-3.1 TO C-3.3 FOR ROAD PROFILES.

NOTE:

DAYLIGHT = DL = 4.5' BELOW FINISH GRADE
WALKOUT = WO = 7' BELOW FINISH GRADE

NOTE: THE LOWEST REAR YARD GRADE SHALL BE 996.90. ALL BASEMENT GRADES SHALL BE 1 FT ABOVE THE LAKE.



LEGEND

EXISTING

- IRON FOUND
- MONUMENT FOUND
- NAIL FOUND
- NAIL & CAP SET

PROPOSED

- ELEC. PHONE OR CABLE TV, G.H. LINE, POLE & DUT WIRE
- UNDERGROUND CABLE TV, CATV PEDESTAL
- TELEPHONE U.G. CABLE, PEDESTAL & MANHOLE
- ELECTRIC U.G. CABLE, MANHOLE, METER & HANDHOLE
- GAS MAIN, VALVE & GAS LINE MARKER
- WATERMAIN, HYD. GATE, VALVE, TAPPING SLEEVE & VALVE
- SANITARY SEWER, CLEANOUT & MANHOLE
- STORM SEWER, CLEANOUT & MANHOLE
- COMBINED SEWER & MANHOLE
- SQUARE, ROAD & BEEHIVE CATCH BASIN, YARD DRAIN
- POST INDICATOR VALVE
- WATER VALVE BOX/HYDRANT VALVE BOX, SERVICE SHUTOFF
- MALBOX, TRANSFORMER, IRRIGATION CONTROL VALVE
- UNIDENTIFIED STRUCTURE

CONC. CONCRETE

ASPH. ASPHALT

GRAVEL GRAVEL

WETLAND WETLAND

SEC. CORNER FOUND

- R RECORDED
- M MEASURED
- C CALCULATED

IRON FOUND

- IRON SET
- NAIL FOUND
- NAIL & CAP SET

MONUMENT FOUND

- MONUMENT SET

CONCRETE

- CONC.

ASPHALT

- ASPH.

GRAVEL

- GRAVEL

WETLAND

- WETLAND

IRON FOUND

- IRON SET
- NAIL FOUND
- NAIL & CAP SET

MONUMENT FOUND

- MONUMENT SET

CONCRETE

- CONC.

ASPHALT

- ASPH.

GRAVEL

- GRAVEL

WETLAND

- WETLAND

CAUTION!!

THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS GIVEN FOR THE ACCURACY OF THESE DATA. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

THIS DRAWING AND DESIGN ARE THE PROPERTY OF PEA, INC. THEY ARE NOT TO BE REPRODUCED, COPIED, REPRODUCED, OR COPIED IN WHOLE OR IN PART, OR USED FOR ANY OTHER PURPOSE WITHOUT THE WRITTEN CONSENT OF PEA, INC. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED. © 2020 PEA, INC.

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFINE, INDENTIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, LOSS OR ALLEGED IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

3 FULL WORKING DAYS BEFORE YOU DIG CALL

811

Know what's below
Call before you dig

MISS Dig System, Inc.
1-800-482-7171 www.missdig.net



PEA, Inc.

2430 Rochester Ct, Ste 100
Troy, MI 48063-1872
t: 248.689.9090
f: 248.689.1044
www.peainc.com

FRANKLIN RIDGE HOMES, LLC

30180 ORCHARD LAKE ROAD, SUITE 150
FARMINGTON HILLS, MICHIGAN 48334

GRADING PLAN - SOUTH

SILVERBELL POINTE

PART OF THE SE 1/4 OF SECTION 28 & NE 1/4 SECTION 33, T40N, R10E
ORION TOWNSHIP, OAKLAND COUNTY, MICHIGAN

DES. T.M.K. DN. T.M.K. SUR. K.T.R. P.M. J.B.T.

ORIGINAL ISSUE DATE:
MARCH 17, 2020

PEA JOB NO. 2018-150

SCALE: 1" = 40'

DRAWING NUMBER:
C-4.3

XREF: S:\PROJECTS\2018\2018150\DWG\18150-TOPBASE.DWG
XREF: S:\PROJECTS\2018\2018150\DWG\FINAL_PUD\X-BASE-18150.DWG
XREF: S:\PROJECTS\2018\2018150\DWG\FINAL_PUD\X-TBLK-18150.DWG



NOTE:
REFER TO SHEETS C-3.1 TO C-3.3 FOR ROAD PROFILES.

[illegible]

CAUTION!!

THE LOCATIONS AND ELEVATIONS OF EXISTING UTILITIES ARE SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS MADE FOR THE LOCATION OR DEPTH OF ANY UTILITIES. THE CONTRACTOR'S RESPONSIBILITY FOR THE COMPLETENESS OR ACCURACY THEREOF, AND THE CONTRACTOR'S EXCLUSIVE RESPONSIBILITY FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE CONSTRUCTION.

THIS DRAWING AND DESIGN IS THE PROPERTY OF THE SUBMITTER. THE SUBMITTER AGREES THAT THEY ARE NOT TO BE USED, REPRODUCED OR COPIED IN ANY MANNER, OR IN PART OR IN WHOLE, FOR THE PURPOSE OF FURNISHING INFORMATION TO OTHERS, WITHOUT THE WRITTEN CONSENT OF THE SUBMITTER. ANY VIOLATION OF THESE TERMS OF USE, OR ANY VIOLATION OF ANY LAWS OR COPYRIGHTS AND OTHERS, WILL BE CONSIDERED A VIOLATION OF THE SUBMITTER'S RIGHTS AND WILL BE PROSECUTED TO THE FULL EXTENT OF THE LAW.

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE SAFETY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROJECT, INCLUDING SAFETY OF ALL PERSONS ON THE PROJECT. THE CONTRACTOR SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO ANY SPECIFIC SCHEDULING. THE CONTRACTOR HEREBY AGREES TO DEFEND, INDEMNIFY AND HOLD THE SUBMITTER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR LEGAL, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPTING LIABILITY FOR NEGLIGENCE.

**3 FULL WORKING DAYS
BEFORE YOU DIG CALL**

811



Know what's below
Call before you dig

MISS DIG System, Inc.

1-800-482-7171 www.missdig.net



PEA, Inc.
2430 Rochester Ct, Ste 100
Troy, MI 48083-1872
t: 248.689.9090
f: 248.689.1044
www.peainc.com

FRANKLIN RIDGE HOMES, LLC
 30180 ORCHARD LAKE ROAD, SUITE 150
 FARMINGTON HILLS, MICHIGAN 48334

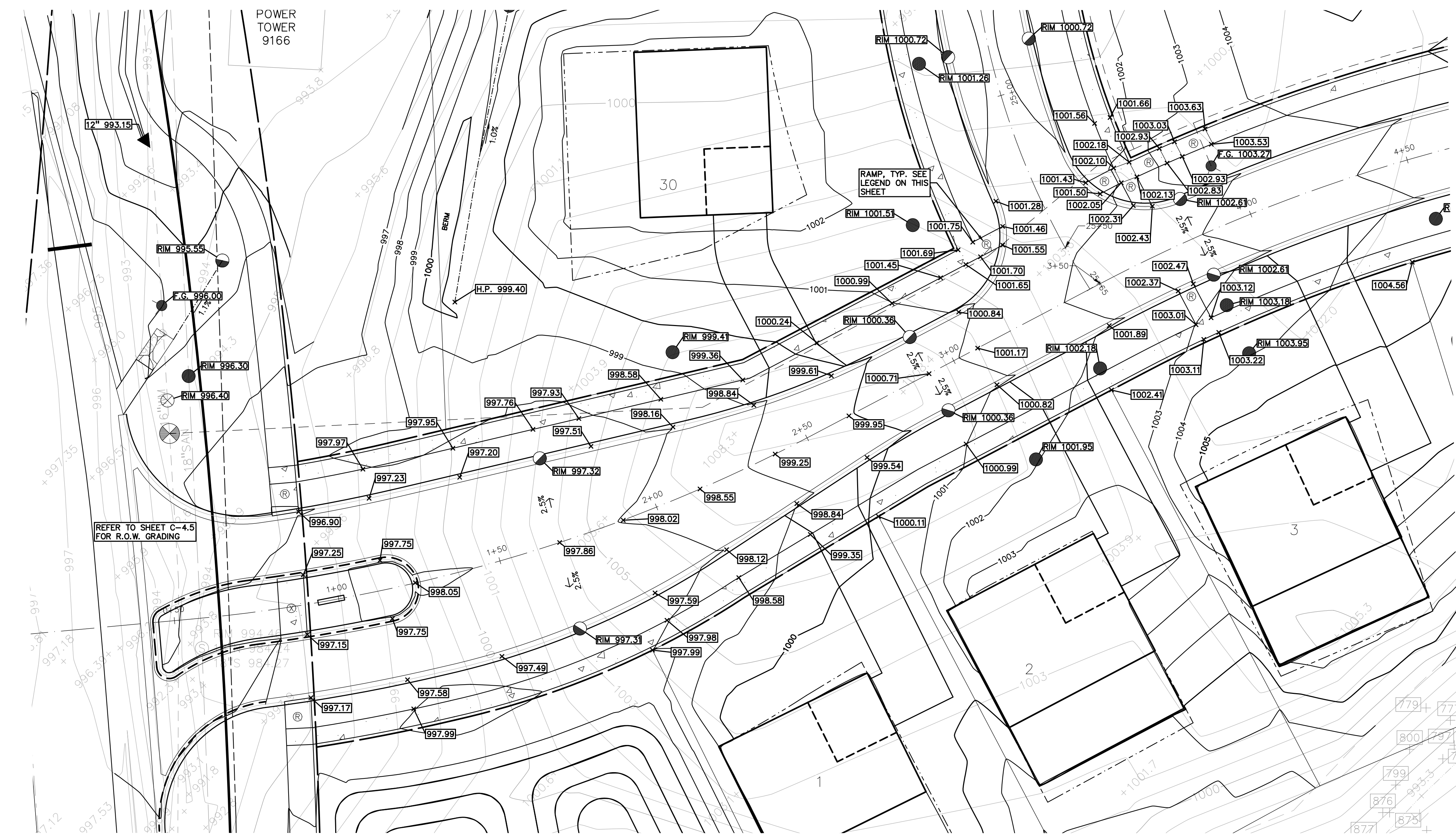
GRADING DETAIL

SILVERBELL POINTE

PART OF THE SE 1/4 OF SECTION 28 & NE 1/4 SECTION 33, T40N, R10E
 UNION TOWNSHIP, OAKLAND COUNTY, MICHIGAN

DES.	TMK	DN.	SUR.	KTC	P.M.	JBT
V:\PROJECTS\2018\19-01 SILVERBELL POINTE CONDO - 3rd\WYOMING PLAN 4-21-19\GRADE DET-18150.dwg						

ORIGINAL ISSUE DATE: MARCH 17, 2020
PEA JOB NO. 2018-150
SCALE: 1" = 20'
DRAWING NUMBER: C-4.4



PANORAMA CIRCLE BOULEVARD AND INTERSECTION DETAIL
SCALE: 1"=20'

CORRUGATED PLASTIC PIPE MEETING AASHTO M294, TYPE S REQUIREMENTS FOR STORM SEWERS FROM 12" TO 24" DIAMETERS, MAY BE USED IN THIS DEVELOPMENT. HOWEVER, PRIOR TO APPROVAL OF THE STORM SYSTEM OR START OF ROAD PAVING A MANUFACTURER'S CERTIFICATE OF COMPLIANCE WITH THESE REQUIREMENTS SHALL BE SUBMITTED TO THE ROAD COMMISSION OF OAKLAND COUNTY. ALSO AT LEAST FIFTY PERCENT OF THE SEWER CARRYING ROAD DRAINAGE, AS SELECTED BY THE ENGINEER, SHALL BE TESTED FOR DEFORMATION BY THE CONTRACTOR USING A NINEPOINT MANDREL. ENGINEER CERTIFICATION THAT THE PIPE HAS PASSED THESE TESTS SHALL BE SUBMITTED TO THE ROAD COMMISSION FOR OAKLAND COUNTY.

ANY RIGHT-OF-WAY OR EASEMENTS NEEDED TO INSTALL THE PROPOSED IMPROVEMENTS MUST BE OBTAINED PRIOR TO FINAL PLAN APPROVAL/STREET ACCEPTANCE OR CONSTRUCTION, WHICHEVER OCCURS FIRST.

THE PROPRIETOR SHALL INSURE THAT OPEN DISCHARGE OF SUMP PUMPS INTO THE ROAD RIGHT-OF-WAY DOES NOT OCCUR.

PROPER SIGNING IS REQUIRED BEFORE ANY WORK IN R.O.W. IS STARTED.

LANE CLOSURES RESTRICTED TO 9-3 MONDAY - FRIDAY.

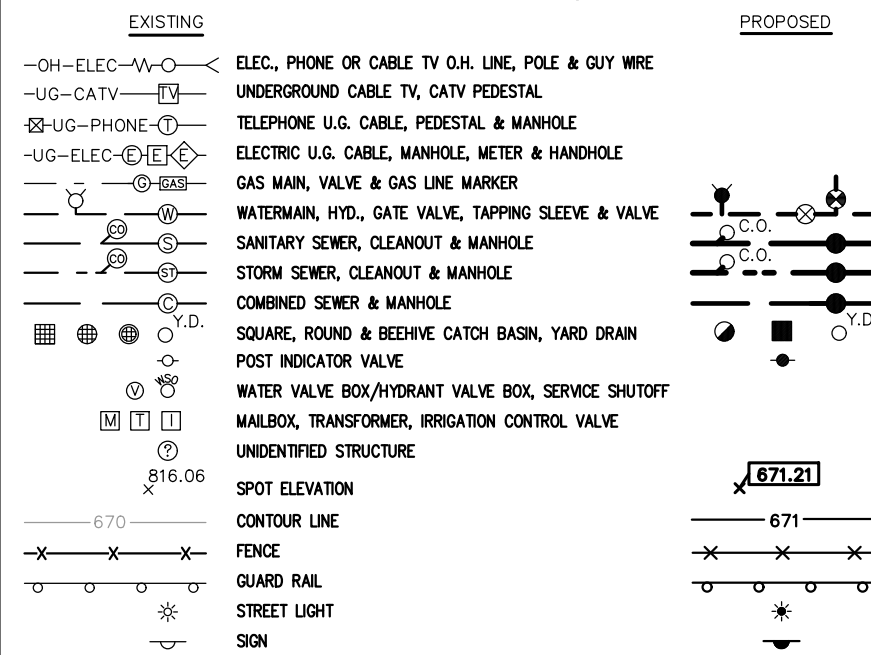
MAINTAIN TWO-WAY TRAFFIC AT ALL TIMES.





FLAG PERSON REQUIRED FOR TEMPORARY ONE LANE ROADS.

THESE NOTES APPLY TO ALL CONSTRUCTION ACTIVITIES ON THIS PROJECT

1. CONTRACTOR TO FIELD VERIFY ALL EXISTING TREES AND BRUSH AND REMOVE ALL THAT ARE NECESSARY TO GRADE SITE.
2. ALL GRADES ARE TO TOP OF PAVEMENT UNLESS OTHERWISE NOTED.
3. THE STAGING OF CONSTRUCTION ACTIVITIES SHALL OCCUR ONLY WITHIN THE SITE BOUNDARIES. ANY CONSTRUCTION ACTIVITIES OUTSIDE OF THE SITE BOUNDARIES SHALL BE AT THE SOLE RESPONSIBILITY AND RISK OF THE CONTRACTOR.
4. ALL SOIL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL MEET THE REQUIREMENTS OF OAKLAND COUNTY. AN EROSION CONTROL PERMIT MUST BE SECURED FROM THE COUNTY PRIOR TO CONSTRUCTION.
5. SEE ADDITIONAL GRADING AND EARTHWORK NOTES ON DETAIL SHEET C-5.0
6. REFER TO SHEET C-5.0 FOR ALL SOIL EROSION AND SEDIMENTATION CONTROL MEASURES AND NOTES.
7. ALL DISTURBED AREAS SHALL BE SEEDED AND MULCHED OR SOODED IN ACCORDANCE WITH THE LANDSCAPE PLANS. PROVIDE A MINIMUM OF 3" OF TOPSOIL IN THESE AREAS UNLESS OTHERWISE NOTED.
8. THE CONTRACTOR SHALL NOTE EXISTING UNDERGROUND UTILITIES WITHIN AND ADJACENT TO THE SITE. BACKFILL FOR EXISTING UTILITY TRENCHES SHALL BE WITH AN CRITICAL AND/OR CRITICAL TO FOUNDATION. SOFT, UNSTABLE OR UNSUITABLE BACKFILL MATERIAL IN THE OPINION OF THE GEOTECHNICAL ENGINEER, THAT ARE TO BE WITHIN THE ZONE OF INFLUENCE OF PROPOSED FOUNDATION OR PAVEMENT SHALL BE COMPLETELY EXCAVATED AND BACKFILLED WITH SUITABLE MATERIAL.

● IRON FOUND ☒ BRASS PLUG SET ● SEC. CORNER FOUND
 ☒ IRON SET ● MONUMENT FOUND R RECORDED
 ● NAIL FOUND ☒ MONUMENT SET M MEASURED
 ☒ NAIL & CAP SET



	CONC.	CONCRETE
	ASPH.	ASPHALT
	GRAVEL	GRAVEL
		WETLAND

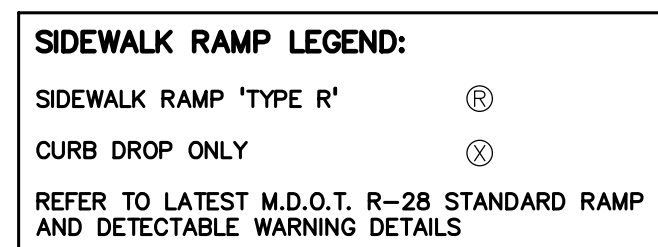
SYMBOLS: GRADING

PROPOSED SPOT GRADE ELEVATION. ALL GRADES INDICATED ARE TOP OF PAVEMENT UNLESS OTHERWISE NOTED.

PROPOSED CONTOUR LINE

EARTHWORK BALANCING NOTE:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPORTING OR EXPORTING ALL MATERIALS AS REQUIRED TO PROPERLY GRADE THIS PROJECT TO THE FINISHED ELEVATIONS SHOWN ON THE APPROVED PLANS. THE CONTRACTOR SHALL MAKE THEIR OWN DETERMINATION OF CUT AND FILL QUANTITIES AND ALLOW FOR REMOVAL OF EXCESS OR IMPORTATION OF ADDITIONAL MATERIAL AT NO ADDITIONAL COST TO THE OWNER.



No.	BY	CHK	DESCRIPTION	DATE
4	KP	JBT	AMENDED FINAL PUD	09-13-2020
3	TMM	JBT	REVISIONS PER NOVEMBER 13, 2020 TWP REVIEW	09-15-2020
2	TMM	JBT	REVISIONS FOR ADDED EVA	10-05-2020
1	TMM	JBT	REVISIONS PER MAY 6, 2020 PC MEETING	08-13-2020

CAUTION!!
THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

THIS DRAWING AND DESIGN ARE THE PROPERTY OF
PEA, INC. THEY ARE SUBMITTED ON THE CONDITION
THAT THEY ARE NOT TO BE USED, REPRODUCED, OR
COPIED, IN WHOLE OR IN PART, OR USED FOR
FURNISHING INFORMATION TO OTHERS, WITHOUT THE
PRIOR WRITTEN CONSENT OF PEA, INC. ALL COMMON
LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE
HEREBY SPECIFICALLY RESERVED. © 2020 PEA, INC.

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN

**3 FULL WORKING DAYS
BEFORE YOU DIG CALL**

811


Know what's below
Call before you dig
MISS DIG System, Inc.

1-800-482-7171 www.missdig.net
(TOLL FREE)



PEA

PEA, Inc.

2430 Rochester Ct, Ste 100
Troy, MI 48063-1872

t: 248.689.9090
f: 248.689.1044
www.peainc.com

	10E	JBT	
--	-----	-----	--

LLC

MES,
SUITE 150
N 48334

PLAN
INTE
SECTION 3
TY, MICHIG

R

C-4.5) ROW GR

E HO
E ROAD, S
MICHIGAN

DING

L PO
& NE 1/4 S
ND COUNT

SUR. KT
G/FINAL PUD\

RIDG
 WARD LAKE
 ON HILLS,
GRAD
RBEL
 CTION 28
 P, OAKLAND
 TMK
 CONDO - JET/DA

KLINIK
180 ORCHARD
ARMINGTON
C.W. (
SILVER
1/4 OF SE
TOWNSHIP
DON.
ERBELL POINTE

FRANK	30	R.O	IF THE SE	ORION	TMK	1	2018-150 SILV
-------	----	-----	-----------	-------	-----	---	---------------

FI

ORIGINAL ISSUE DATE:				
MARCH 17, 2020				

PEA JOB NO. 2018-150

SCALE: 1" = 20'

DRAWING NUMBER:
C-4.5

XREF: S:PROJECTS\2018\2018150\DWG\18150-TOPBASE.DWG
XREF: S:PROJECTS\2018\2018150\DWG\FINAL PUD\X-BASE-18150.DWG
XREF: S:PROJECTS\2018\2018150\DWG\FINAL PUD\X-TBK-18150.DWG

CORRUGATED PLASTIC PIPE MEETING AASHTO M294, TYPE S REQUIREMENTS FOR STORM SEWERS FROM 12" TO 24" DIAMETERS, MAY BE USED IN THIS DEVELOPMENT. HOWEVER, PRIOR TO APPROVAL OF THE STORM SYSTEM OR START OF ROAD PAVING A MANUFACTURER'S CERTIFICATE OF COMPLIANCE WITH THESE REQUIREMENTS SHALL BE SUBMITTED TO THE ROAD COMMISSION OF OAKLAND COUNTY. ALSO AT LEAST FIFTY PERCENT OF THE SEWER CARRYING ROAD DRAINAGE, AS SELECTED BY THE ENGINEER, SHALL BE TESTED FOR DEFORMATION BY THE CONTRACTOR USING A NINEPOINT MANDREL. ENGINEER CERTIFICATION THAT THE PIPE HAS PASSED THESE TESTS SHALL BE SUBMITTED TO THE ROAD COMMISSION FOR OAKLAND COUNTY.

ANY RIGHT-OF-WAY OR EASEMENTS NEEDED TO INSTALL THE PROPOSED IMPROVEMENTS MUST BE OBTAINED PRIOR TO FINAL PLAN APPROVAL/STREET ACCEPTANCE OR CONSTRUCTION, WHICHEVER OCCURS FIRST.

THE PROPRIETOR SHALL INSURE THAT OPEN DISCHARGE OF SUMP PUMPS INTO THE ROAD RIGHT-OF-WAY DOES NOT OCCUR.

PROPER SIGNING IS REQUIRED BEFORE ANY WORK IN R.O.W. IS STARTED.

LANE CLOSURES RESTRICTED TO 9-3 MONDAY - FRIDAY.

MAINTAIN TWO-WAY TRAFFIC AT ALL TIMES.

FLAG PERSON REQUIRED FOR TEMPORARY ONE LANE ROADS.

THESE NOTES APPLY TO ALL CONSTRUCTION ACTIVITIES ON THIS PROJECT

1. CONTRACTOR TO FIELD VERIFY ALL EXISTING TREES AND BRUSH AND REMOVE ALL THAT ARE NECESSARY TO GRADE SITE.
2. ALL GRADES ARE TO TOP OF PAVEMENT UNLESS OTHERWISE NOTED.
3. THE STAGING OF CONSTRUCTION ACTIVITIES SHALL OCCUR ONLY WITHIN THE SITE BOUNDARIES. ANY CONSTRUCTION ACTIVITIES OUTSIDE OF THE SITE BOUNDARIES SHALL BE AT THE SOLE RESPONSIBILITY AND RISK OF THE CONTRACTOR.
4. ALL SOIL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL MEET THE REQUIREMENTS OF OAKLAND COUNTY. AN EROSION CONTROL PERMIT MUST BE SECURED FROM THE COUNTY PRIOR TO CONSTRUCTION.
5. SEE ADDITIONAL GRADING AND EARTHWORK NOTES ON DETAIL SHEET C-5.0
6. REFER TO SHEET C-5.0 FOR ALL SOIL EROSION AND SEDIMENTATION CONTROL MEASURES AND NOTES.
7. ALL DISTURBED AREAS SHALL BE SEEDED AND MULCHED OR SODDED IN ACCORDANCE WITH THE LANDSCAPE PLANS. PROVIDE A MINIMUM OF 3" OF TOPSOIL IN THESE AREAS UNLESS OTHERWISE NOTED.
8. THE CONTRACTOR SHALL NOTE EXISTING UNDERGROUND UTILITIES WITHIN AND ADJACENT TO THE SITE. BACKFILL FOR EXISTING UTILITY TRENCHES SHALL BE EXAMINED FOR ANY UTILITY TRENCHES FOUND TO HAVE SOFT, UNSTABLE OR UNSUITABLE BACKFILL MATERIAL. IN THE OPINION OF THE GEOTECHNICAL ENGINEER, THAT ARE TO BE WITHIN THE ZONE OF INFLUENCE OF PROPOSED CONSTRUCTION, THE BACKFILL SHALL BE COMPLETELY EXCAVATED AND BACKFILLED WITH SUITABLE MATERIAL.

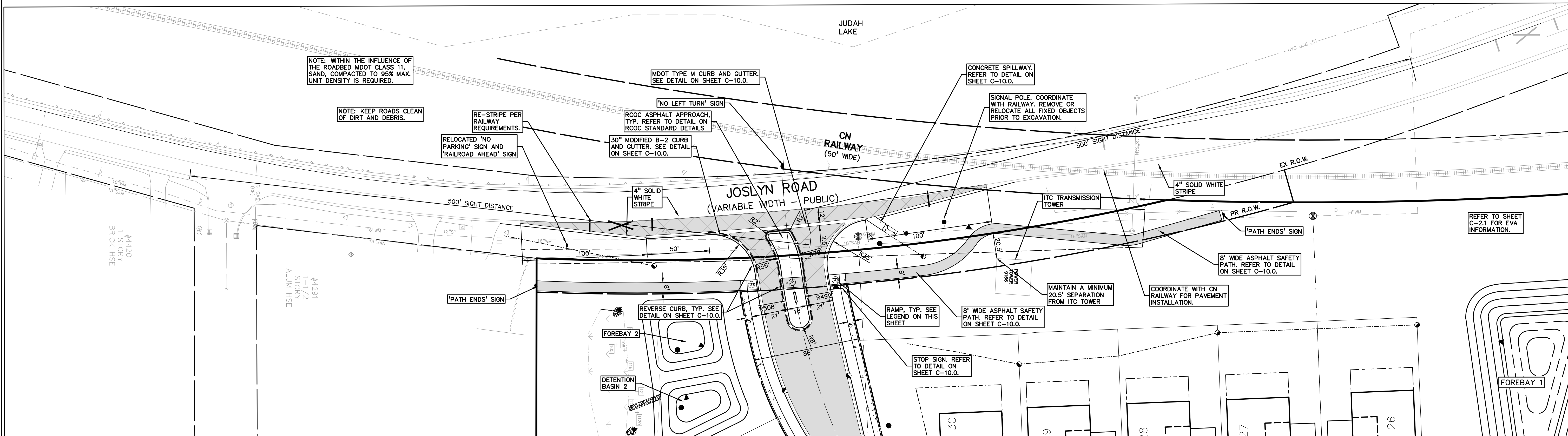
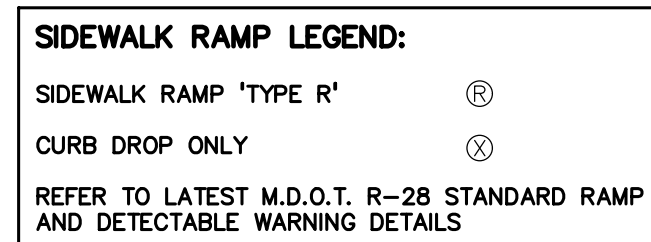
[illegible]

SYMBOLS: GRADING

PROPOSED SPOT GRADE ELEVATION. ALL GRADES INDICATED ARE TOP OF PAVEMENT UNLESS OTHERWISE NOTED.

EARTHWORK BALANCING NOTE:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPORTING OR EXPORTING ALL MATERIALS AS REQUIRED TO PROPERLY GRADE THIS PROJECT TO THE FINISHED ELEVATIONS SHOWN ON THE APPROVED PLANS. THE CONTRACTOR SHALL MAKE THEIR OWN DETERMINATION OF CUT AND FILL QUANTITIES AND ALLOW FOR REMOVAL OF EXCESS OR IMPORTATION OF ADDITIONAL MATERIAL AT NO ADDITIONAL COST TO THE OWNER.



DIMENSION PLAN

No.	BY	CHK	DESCRIPTION	DATE
4	KP	JBT	AMERISED FINAL PUD	06-13-22
3	THNK	JBT	REVISIONS PER NOVEMBER 13, 2020 TWP REVIEW	12-15-20
2	THNK	JBT	REVISIONS FOR ADDED E/A	10-05-20
1	THNK	JBT	REVISIONS PER MAY 6, 2020 PC MEETING	08-31-20

CAUTION!!
THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

THIS DRAWING AND DESIGN ARE THE PROPERTY OF
PEA, INC. THEY ARE SUBMITTED ON THE CONDITION
THAT THEY ARE NOT TO BE USED, REPRODUCED, OR
COPIED, IN WHOLE OR IN PART, OR USED FOR
FURNISHING INFORMATION TO OTHERS, WITHOUT THE
PRIOR WRITTEN CONSENT OF PEA, INC. ALL COMMON
LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE
HEREBY SPECIFICALLY RESERVED. © 2020 PEA, INC.

CONSTRUCTION CONTRACTOR AGREES THAT IN CONNECTION WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT. INCLUDING SUCH PERSONS AND PROPERTY THAT THE REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD THE OWNER AND ARCHITECT HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN

**3 FULL WORKING DAYS
BEFORE YOU DIG CALL**

811
Know what's below
Call before you dig
MISS DIG System, Inc.

1-800-482-7171 www.missdig.net
(TOLL FREE)



PEA, Inc.
2430 Rochester Ct, Ste 100
Troy, MI 48083-1872
t: 248.689.9090
f: 248.689.1044
www.peainc.com

FRANKLIN RIDGE HOMES, LLC
30180 ORCHARD LAKE ROAD, SUITE 150
FARMINGTON HILLS, MICHIGAN 48334

R.O.W. DIMENSION PLAN

SILVERBELL POINTE

PART OF THE SE 1/4 OF SECTION 28 & NE 1/4 SECTION 33, T04N, R10E, S01W, CHANDLER TOWNSHIP, OAKLAND COUNTY, MICHIGAN

DES.	TWK	DN	DMK	SUR.	KTR	P.M.
PROJECTS 2018-150, 350, 360, 370, 380, 390, 400, 410, 420, 430, 440, 450, 460, 470, 480, 490, 500, 510, 520, 530, 540, 550, 560, 570, 580, 590, 600, 610, 620, 630, 640, 650, 660, 670, 680, 690, 700, 710, 720, 730, 740, 750, 760, 770, 780, 790, 800, 810, 820, 830, 840, 850, 860, 870, 880, 890, 900, 910, 920, 930, 940, 950, 960, 970, 980, 990, 1000, 1010, 1020, 1030, 1040, 1050, 1060, 1070, 1080, 1090, 1100, 1110, 1120, 1130, 1140, 1150, 1160, 1170, 1180, 1190, 1200, 1210, 1220, 1230, 1240, 1250, 1260, 1270, 1280, 1290, 1300, 1310, 1320, 1330, 1340, 1350, 1360, 1370, 1380, 1390, 1400, 1410, 1420, 1430, 1440, 1450, 1460, 1470, 1480, 1490, 1500, 1510, 1520, 1530, 1540, 1550, 1560, 1570, 1580, 1590, 1600, 1610, 1620, 1630, 1640, 1650, 1660, 1670, 1680, 1690, 1700, 1710, 1720, 1730, 1740, 1750, 1760, 1770, 1780, 1790, 1800, 1810, 1820, 1830, 1840, 1850, 1860, 1870, 1880, 1890, 1900, 1910, 1920, 1930, 1940, 1950, 1960, 1970, 1980, 1990, 2000, 2010, 2020, 2030, 2040, 2050, 2060, 2070, 2080, 2090, 2100, 2110, 2120, 2130, 2140, 2150, 2160, 2170, 2180, 2190, 2200, 2210, 2220, 2230, 2240, 2250, 2260, 2270, 2280, 2290, 2300, 2310, 2320, 2330, 2340, 2350, 2360, 2370, 2380, 2390, 2400, 2410, 2420, 2430, 2440, 2450, 2460, 2470, 2480, 2490, 2500, 2510, 2520, 2530, 2540, 2550, 2560, 2570, 2580, 2590, 2600, 2610, 2620, 2630, 2640, 2650, 2660, 2670, 2680, 2690, 2700, 2710, 2720, 2730, 2740, 2750, 2760, 2770, 2780, 2790, 2800, 2810, 2820, 2830, 2840, 2850, 2860, 2870, 2880, 2890, 2900, 2910, 2920, 2930, 2940, 2950, 2960, 2970, 2980, 2990, 3000, 3010, 3020, 3030, 3040, 3050, 3060, 3070, 3080, 3090, 3100, 3110, 3120, 3130, 3140, 3150, 3160, 3170, 3180, 3190, 3200, 3210, 3220, 3230, 3240, 3250, 3260, 3270, 3280, 3290, 3300, 3310, 3320, 3330, 3340, 3350, 3360, 3370, 3380, 3390, 3400, 3410, 3420, 3430, 3440, 3450, 3460, 3470, 3480, 3490, 3500, 3510, 3520, 3530, 3540, 3550, 3560, 3570, 3580, 3590, 3600, 3610, 3620, 3630, 3640, 3650, 3660, 3670, 3680, 3690, 3700, 3710, 3720, 3730, 3740, 3750, 3760, 3770, 3780, 3790, 3800, 3810, 3820, 3830, 3840, 3850, 3860, 3870, 3880, 3890, 3900, 3910, 3920, 3930, 3940, 3950, 3960, 3970, 3980, 3990, 4000, 4010, 4020, 4030, 4040, 4050, 4060, 4070, 4080, 4090, 4100, 4110, 4120, 4130, 4140, 4150, 4160, 4170, 4180, 4190, 4200, 4210, 4220, 4230, 4240, 4250, 4260, 4270, 4280, 4290, 4300, 4310, 4320, 4330, 4340, 4350, 4360, 4370, 4380, 4390, 4400, 4410, 4420, 4430, 4440, 4450, 4460, 4470, 4480, 4490, 4500, 4510, 4520, 4530, 4540, 4550, 4560, 4570, 4580, 4590, 4600, 4610, 4620, 4630, 4640, 4650, 4660, 4670, 4680, 4690, 4700, 4710, 4720, 4730, 4740, 4750, 4760, 4770, 4780, 4790, 4800, 4810, 4820, 4830, 4840, 4850, 4860, 4870, 4880, 4890, 4900, 4910, 4920, 4930, 4940, 4950, 4960, 4970, 4980, 4990, 5000, 5010, 5020, 5030, 5040, 5050, 5060, 5070, 5080, 5090, 5100, 5110, 5120, 5130, 5140, 5150, 5160, 5170, 5180, 5190, 5200, 5210, 5220, 5230, 5240, 5250, 5260, 5270, 5280, 5290, 5300, 5310, 5320, 5330, 5340, 5350, 5360, 5370, 5380, 5390, 5400, 5410, 5420, 5430, 5440, 5450, 5460, 5470, 5480, 5490, 5500, 5510, 5520, 5530, 5540, 5550, 5560, 5570, 5580, 5590, 5600, 5610, 5620, 5630, 5640, 5650, 5660, 5670, 5680, 5690, 5700, 5710, 5720, 5730, 5740, 5750, 5760, 5770, 5780, 5790, 5800, 5810, 5820, 5830, 5840, 5850, 5860, 5870, 5880, 5890, 5900, 5910, 5920, 5930, 5940, 5950, 5960, 5970, 5980, 5990, 6000, 6010, 6020, 6030, 6040, 6050, 6060, 6070, 6080, 6090, 6100, 6110, 6120, 6130, 6140, 6150, 6160, 6170, 6180, 6190, 6200, 6210, 6220, 6230, 6240, 6250, 6260, 6270, 6280, 6290, 6300, 6310, 6320, 6330, 6340, 6350, 6360, 6370, 6380, 6390, 6400, 6410, 6420, 6430, 6440, 6450, 6460, 6470, 6480, 6490, 6500, 6510, 6520, 6530, 6540, 6550, 6560, 6570, 6580, 6590, 6600, 6610, 6620, 6630, 6640, 6650, 6660, 6670, 6680, 6690, 6700, 6710, 6720, 6730, 6740, 6750, 6760, 6770, 6780, 6790, 6800, 6810, 6820, 6830, 6840, 6850, 6860, 6870, 6880, 6890, 69						

ORIGINAL ISSUE DATE:
MARCH 17, 2020

PEA JOB NO. 2018-150

SCALE: 1" = 40'

DRAWING NUMBER:

C-4.6

XREF: S:PROJECTS\2018\2018150\DWG\18150-TOPBASE.DWG
XREF: S:PROJECTS\2018\2018150\DWG\FINAL PUD\X-BASE-18150.DWG
XREF: S:PROJECTS\2018\2018150\DWG\FINAL PUD\X-TBK-18150.DWG

SOIL EROSION MAINTENANCE SCHEDULE AND NOTES:

1. THE SOIL EROSION CONTROLS WILL BE MAINTAINED WEEKLY AND AFTER EVERY STORM EVENT BY:

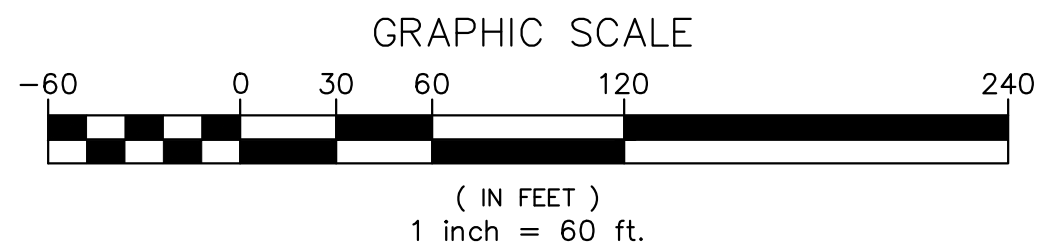
DAVID STEUER
FRANKLIN RIDGE HOMES, LLC
30180 ORCHARD LAKE ROAD, SUITE 150
FARMINGTON HILLS, MI 48334
(248) 790-4481
2. IF ANY DAMAGE HAS OCCURRED AS A RESULT OF STORM WATER DISCHARGE FROM THE SITE, THE FOLLOWING STEPS SHALL BE IMPLEMENTED.
3. ANY DEBRIS OR DIRT ON ANY PAVED AREA RESULTING FROM CONSTRUCTION TRAFFIC SHALL BE CLEANED IN A PROMPT MANNER BY THE CONTRACTOR. THE CONSTRUCTION DRIVE SHALL BE CLEANED AT THE END OF EACH DAY.
4. ALL DIRT AND MUD TRACKED ONTO PAVED AREAS SHALL BE REMOVED BY THE CONTRACTOR DAILY BY SCRAPING. STREET SWEEPING IS REQUIRED WEEKLY.
5. SILT FENCE MAINTENANCE SHALL INCLUDE THE REMOVAL OF ANY BUILT UP SEDIMENT WHEN THE SEDIMENT HEIGHT ACCUMULATES TO 1/3 TO 1/2 OF THE HEIGHT OF THE FENCE. THE CONTRACTOR IS RESPONSIBLE TO REMOVE, REPLACE, RETRENCH OR REBACKFILL THE SILTATION FENCE SHOULD IT FALL OR BE DAMAGED DURING CONSTRUCTION.
6. INLET FILTER MAINTENANCE SHALL INCLUDE THE REMOVAL OF ANY ACCUMULATED SILT OR OTHER DEBRIS. THE REMOVAL OF SILT SHOULD BE WITH THE USE OF A STIFF BRISTLE BROOM OR SQUARE POINT SHOVEL. IF INLET FILTERS CAN NOT BE CLEANED OR ARE DAMAGED, THEN THE FABRIC MUST BE REPLACED.
7. CONTRACTOR TO PROVIDE WATER TRUCK TO WATER DOWN THE SITE ON A DAILY BASIS AS REQUIRED TO MAINTAIN DUST CONTROL.
8. IF HIGH GROUNDWATER IS ANTICIPATED OR ENCOUNTERED DURING CONSTRUCTION A DEWATERING PLAN MUST BE SUBMITTED TO THE CITY ENGINEERING DIVISION FOR REVIEW.

NOTE:

POST CONSTRUCTION STORM WATER MANAGEMENT/SECC WILL BE THE RESPONSIBILITY OF THE HOA.

SEQUENCE OF CONSTRUCTION

START DAY	END DAY	DESCRIPTION
1	7	INSTALL CRUSHED LESTONE AGGREGATE ACCESS DRIVE AT SITE ACCESS POINTS.
1	7	INSTALL TEMPORARY SOIL EROSION CONTROL MEASURES, SILT FENCES, INLET FILTERS, ETC. AS NECESSARY.
2	7	REMOVE ALL VEGETATION, TREES AND BRUSH FROM THE PROPOSED CONSTRUCTION AREA UNLESS MARKED TO REMAIN. STRIP AND STOCKPILE TOPSOIL. STOCKPILE SHALL BE GRADED AND SEEDDED.
2	7	REMOVE ALL PAVEMENT, SIDEWALKS, UTILITIES, SIGNS, ETC. AS REQUIRED TO INSTALL THE PROPOSED WORK AS SHOWN ON THE DEMOLITION PLAN.
2	7	DISPOSE OF ALL EXCESS/UNSUITABLE MATERIALS OFF SITE IN A LEGAL MANNER. NO ON-SITE BURN OR BURY PITS ALLOWED.
6	45	ROUGH GRADE SITE. SEED AND MULCH BLANKETS MUST BE INSTALLED AS SHOWN WITHIN 5 DAYS OF FINAL GRADE. REPAIR AND/OR RE-INSTALL ANY TEMPORARY SOIL EROSION CONTROL MEASURES THAT WERE DAMAGED DURING GRADING OPERATIONS.
45	120	INSTALL SITE UTILITIES (STORM SEWER, SANITARY SEWER, WATER MAIN ETC.). INSTALL INLET FILTERS AT CATCH BASINS AS SHOWN.
90	470	BEGIN CONSTRUCTION OF BUILDINGS.
180	210	FINE GRADE SITE AND PREPARE FOR SITE PAVING OPERATIONS.
210	440	INSTALL ALL PAVEMENT, SIDEWALKS, CURBING AS PROPOSED. REPAIR INLET FILTERS, SILT FENCE AND ANY OTHER DAMAGED SOIL EROSION CONTROL MEASURES AS NECESSARY.
440	470	FINAL GRADE, REDISTRIBUTE STOCKPILED TOPSOIL, ESTABLISH VEGETATION AND INSTALL ALL PERMANENT LANDSCAPING IN ALL DISTURBED AREAS NOT BUILT.
470	490	CLEAN PAVEMENT AND REMOVE ALL TEMPORARY SOIL EROSION CONTROL MEASURES. RE-ESTABLISH VEGETATION AS REQUIRED.
490	500	REMOVE SEDIMENTATION CONTROLS ONCE ENTIRE SITE HAS BEEN PERMANENTLY STABILIZED.



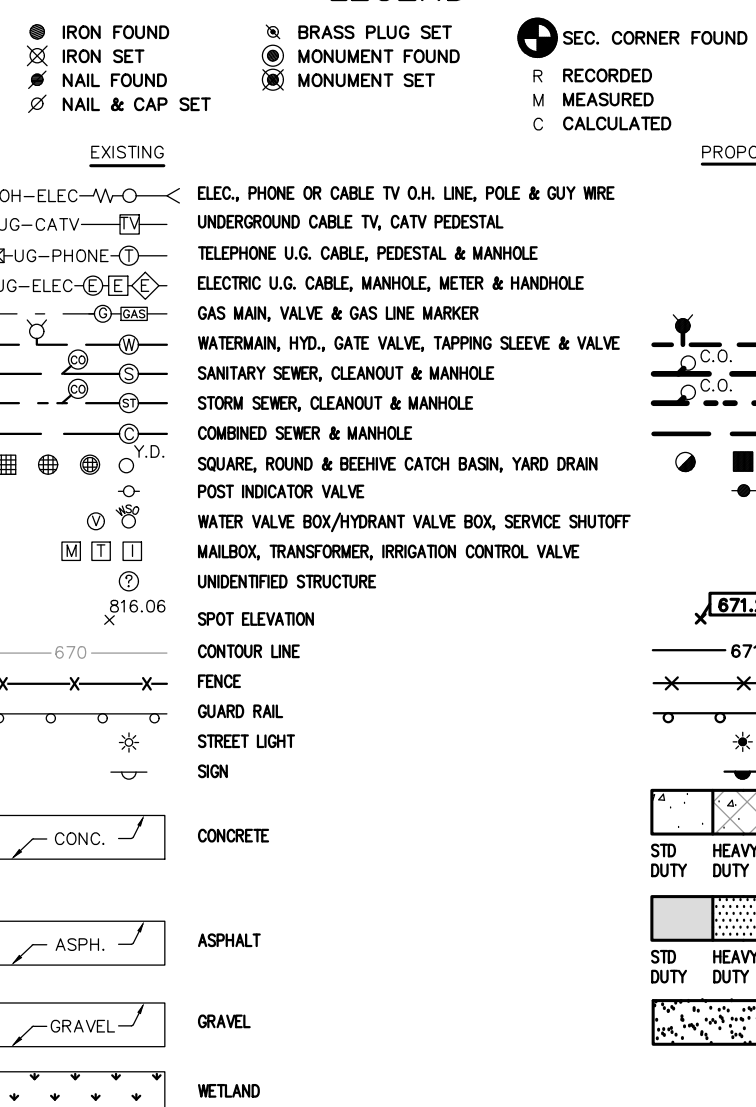
EROSION CONTROL QUANTITIES:

SILT FENCE	6748 LF
LOW POINT INLET FILTER	23 EA.
RYCB INLET FILTER	13 EA.
TEMPORARY CONSTRUCTION ACCESS DRIVE	1 EA.

ANTICIPATED START DATE (9/30/2021)

ANTICIPATED COMPLETION DATE (12/1/2022)

LEGEND



LEGAL DESCRIPTION — OVERALL CONDO

(Combined parcel as surveyed by PEA Inc.)

Part of the southeast and southwest 1/4 of Section 28, together with part of the northeast and northwest 1/4 of Section 33, Town 4 North, Range 10 East, Orion Township, Oakland County, Michigan being more particularly described as:

Commencing at the South 1/4 corner of said Section 28, thence N00°54'08"E, 1037.65 feet along the north-south 1/4 line of said section to the south line of Silverbell Road (66' wide) and the Point of Beginning; thence along said south line N81°37'14"E, 336.39 feet; thence S00°54'10"W, 1088.15 feet to the east-west 1/4 line of said section; thence along said line S89°44'45"E, 999.50 feet; thence S00°20'21"E, 1319.24 feet to the north line of "Supervisor's Plat of Lakeview Subdivision" as recorded in Liber 53, Page 21, Oakland County Records; thence along said north line, N89°37'34"W, 293.09 feet; thence N00°10'08"W, 119.60 feet; thence the following four courses along the waters edge of Mud Lake, S64°19'49"W, 74.39 feet and N70°02'23"W, 24.20 feet and S81°31'02"W, 81.02 feet and N81°09'09"W, 121.30 feet to the northerly extension of the west line of Lot 12 of said supervisor's plat; thence along said extension, S00°10'08"E, 100.45 feet to the aforementioned north line of said supervisor's plat; thence along said north line, N89°37'34"W, 768.31 feet to a 3/8" iron in a 4" square concrete monument; thence continuing along said north line, N89°55'57"W, 363.34 feet to the east line of Joslyn Road (66' wide) as recorded in Liber 36264, Page 120, Oakland County Records; thence along said east line, 509.14 feet along the arc of a curve to the left having a radius of 1903.83 feet and a chord that bears N05°17'23"W, 507.63 feet to the east line of the Canadian National Rail Road Right-of-Way (50' wide); thence the following two courses along said east line, 580.44 feet along the arc of a curve to the left having a radius of 3299.18 feet and a chord that bears N03°05'37"W, 579.69 feet and N08°08'02"W, 791.10 feet; thence N81°37'14"E, 440.00 feet; thence N08°08'02"W, 396.00 feet to the south line of the aforementioned Silverbell Road; thence along said south line, N81°37'14"E, 204.52 feet to the Point of Beginning.

Containing 69.419 acres of land, more or less

SOIL EROSION AND SEDIMENTATION CONTROL SEQUENCE OF CONSTRUCTION

1. SEE OAKLAND COUNTY W.R.C. SOIL EROSION AND SEDIMENTATION CONTROL DETAILS SHEET FOR ALL SOIL EROSION CONTROL RELATED DETAILS.
2. PLACE SILT FENCE & INSTALL INLET FILTERS ON EXISTING STORM SEWER STRUCTURES, ACCORDING TO PLANS.
3. INSTALL TEMPORARY CRUSHED LESTONE AGGREGATE ACCESS DRIVE AT ALL CONSTRUCTION ENTRANCES. (80"x24"x8" W/MINIMUM OF 1"-3" CRUSHED AGGREGATE — NO FINES).
4. REMOVE CURB, PAVEMENT, TREES, ETC. AS DIRECTED ON THE DEMOLITION PLAN.
5. STRIP AND STOCKPILE TOPSOIL FOR RESTORATION REQUIREMENTS.
6. DISPOSE OF ALL EXCESS, UNSUITABLE MATERIALS OFF SITE IN A LEGAL MANNER. NO BURN OR BURY PITS ALLOWED.
7. UNSUITABLE MATERIALS CONSIST OF, BUT ARE NOT NECESSARILY LIMITED TO THE FOLLOWING: CONCRETE, ASPHALT, TREES, BRUSH, STUMPS, ROOTS, OR OTHER MISCELLANEOUS DEBRIS OR TRASH.
8. MASS GRADE THE SITE IN ACCORDANCE WITH THE PLANS.
9. INSTALL SEED, MULCH AND EROSION CONTROL BLANKETS AS SHOWN ON THE PLAN WITHIN 5 DAYS OF COMPLETION OF MASS GRADING OR WHENEVER DISTURBED AREAS WILL REMAIN UNCHANGED FOR 30 DAYS OR GREATER. 3-4" TOPSOIL WILL BE USED WHERE VEGETATION IS REQUIRED.
10. COMPLETE ROUGH GRADING OF SITE AND INSTALL UTILITIES. PLACE INLET FILTERS AT ALL INLETS AND CATCH BASINS, AS SHOWN.
11. FINISH GRADE AND PAVE SITE AS PROPOSED TO DRAIN TO STORM SEWER SYSTEM. REPAIR INLET FILTERS AS REQUIRED.
12. APPLY TOPSOIL, SEED AND MULCH/SOD TO ALL DISTURBED AREAS UPON COMPLETION OF GRADING. THE CONTRACTOR SHALL STAGE CONSTRUCTION ACTIVITIES IN ORDER TO MINIMIZE THE EXPOSURE OF UNSTABILIZED AREAS.
13. CLEAN PAVEMENT AND STORM SEWERS. REMOVE SILT FENCE, AND INLET FILTERS ONCE VEGETATION HAS BEEN ESTABLISHED.
14. CLEAN DETENTION BASIN AND OVERFLOW SPILLWAYS AND REPAIR RIPRAP AS NECESSARY.
15. ALL DIRT AND MUD TRACKED ONTO PUBLIC ROADS SHALL BE REMOVED DAILY.
16. STREET CATCH BASINS TO BE PERIODICALLY CLEANED AND FILTER CLOTH CHANGED AND MAINTAINED.

S:\PROJECTS\2018\2018150\DWG\18150-TOPBASE.DWG
WREF: S:\PROJECTS\2018\2018150\DWG\FINAL_PUD\X-BASE-18150.DWG
XREF: S:\PROJECTS\2018\2018150\DWG\FINAL_PUD\X-TBLK-18150.DWG

NO.	DATE	REVISIONS
1	09-13-22	1. JBT AMENDED FINAL PUD
2	12-15-22	2. JBT REVISIONS FOR NOVEMBER 13, 2020 TMP REVIEW
3	10-05-22	3. JBT REVISIONS FOR APRIL 6, 2020 PC MEETINGS
4	08-13-22	4. JBT REVISIONS FOR MAY 6, 2020 PC MEETINGS
5	08-13-22	5. JBT CHN DISCUSSION

CAUTION!!
THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

THIS DRAWING AND DESIGN ARE THE PROPERTY OF PEA, INC. THEY ARE SUBMITTED ON THE UNDERSTANDING THAT THEY ARE NOT TO BE USED, REPRODUCED, OR COPIED IN WHOLE OR IN PART, OR USED FOR FURNISHING INFORMATION TO OTHERS, WITHOUT THE PRIOR WRITTEN CONSENT OF PEA, INC. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED. © 2022 PEA, INC.

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTRACTUALLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFINE, INDENTIFY AND HOLD DESIGN PROFESSIONAL, ENGINEER AND ARCHITECT, PEA, INC. HARMLESS FROM ANY AND ALL LIABILITY, LOSS OR ALLEGED IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

3 FULL WORKING DAYS BEFORE YOU DIG CALL

811
Know what's below
Call before you dig
MISS Dig System, Inc.
1-800-482-7171 www.missdig.net
(1001 AREA)



PEA, Inc.
2430 Rochester Ct, Ste 100
Troy, MI 48063-1872
t: 248.689.9090
f: 248.689.1044
www.peainc.com

DES.	TKM	DN	TKM	SUR	KTR	P.M.	JBT
FRANKLIN RIDGE HOMES, LLC 30180 ORCHARD LAKE ROAD, SUITE 150 FARMINGTON HILLS, MICHIGAN 48334 SOIL SILVERBELL POINT PART OF THE SE 1/4 OF SECTION 28 & NE 1/4 SECTION 33, TOWN R10E ORION TOWNSHIP, OAKLAND COUNTY, MICHIGAN S:\PROJECTS\2018\2018150\DWG\FINAL_PUD\X-BASE-18150.DWG							

ORIGINAL ISSUE DATE:
MARCH 17, 2020

PEA JOB NO. 2018-150

SCALE: 1" = 60'

DRAWING NUMBER:

C-5.0

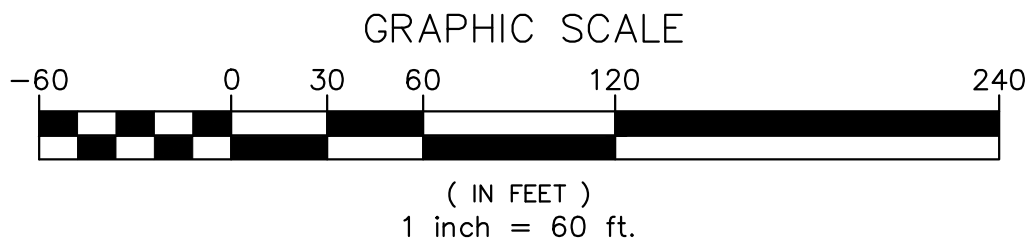
CROSSING	CROSSING PIPE 1	CROSSING PIPE 2	Clearance	NOTES
1	8" SAN T/P= 988.47	8" WM B/P= 995.25	6.79	
2	15" ST B/P= 995.45	8" WM T/P= 993.95	1.50	DIP WATER MAIN
3	12" ST B/P= 995.94	8" SAN T/P= 988.82	7.12	
4	12" ST T/P= 996.79	8" WM B/P= 998.29	1.50	
5	24" ST B/P= 993.64	8" SAN T/P= 992.09	1.55	
6	12" ST B/P= 991.57	8" SAN T/P= 984.83	6.74	
7	18" SAN T/P= 984.87	8" WM B/P= 990.71	5.84	
8	48" ST B/P= 989.47	18" SAN T/P= 987.74	1.73	
9	12" ST B/P= 992.15	18" SAN T/P= 983.68	8.47	
10	12" ST B/P= 992.59	16" WM T/P= 987.56	5.03	
11	48" ST B/P= 989.42	16" WM T/P= 986.14	3.28	DIP WATER MAIN
12	12" ST B/P= 991.51	8" WM T/P= 990.01	1.50	DIP WATER MAIN
13	12" ST B/P= 993.91	8" WM T/P= 992.41	1.50	DIP WATER MAIN
14	8" SAN T/P= 991.10	8" WM B/P= 997.43	6.33	
15	24" ST B/P= 993.97	8" WM T/P= 992.47	1.50	DIP WATER MAIN
16	#N/A " SAN #N/A #N/A ###	" SAN #N/A #N/A #N/A	#N/A	#N/A
17	#N/A " SAN #N/A #N/A ###	" SAN #N/A #N/A #N/A	#N/A	#N/A

SANITARY SEWER BASIS OF DESIGN:	
(Unit Factors Based on Oakland County Unit Assignment Factors)	
Residential Dwelling	
INITIAL DESIGN	
Number of Lots	46.0
REU	46.0
Population (P) (3.5 PEOPLE/EDU)	161 People
Average Flow (100 GPCPD)	16,100 G.P.D.
	0.025 C.F.S.
P (1000s)	0.161
Peaking Factor (PF)	4.18
PF = (18+sqrt(P))/(4+sqrt(P))	
Peak Flow (G.D.P.)	67,313 G.P.D.
Peak Flow (C.F.S.)	0.104 C.F.S.
ULTIMATE DESIGN	
Number of Lots	46.0
REU	46.0
Population (P) (3.5 PEOPLE/EDU)	161 People
Average Flow (100 GPCPD)	16,100 G.P.D.
	0.025 C.F.S.
P (1000s)	0.161
Peaking Factor (PF)	4.18
PF = (18+sqrt(P))/(4+sqrt(P))	
Peak Flow (G.D.P.)	67,313 G.P.D.
Peak Flow (C.F.S.)	0.104 C.F.S.

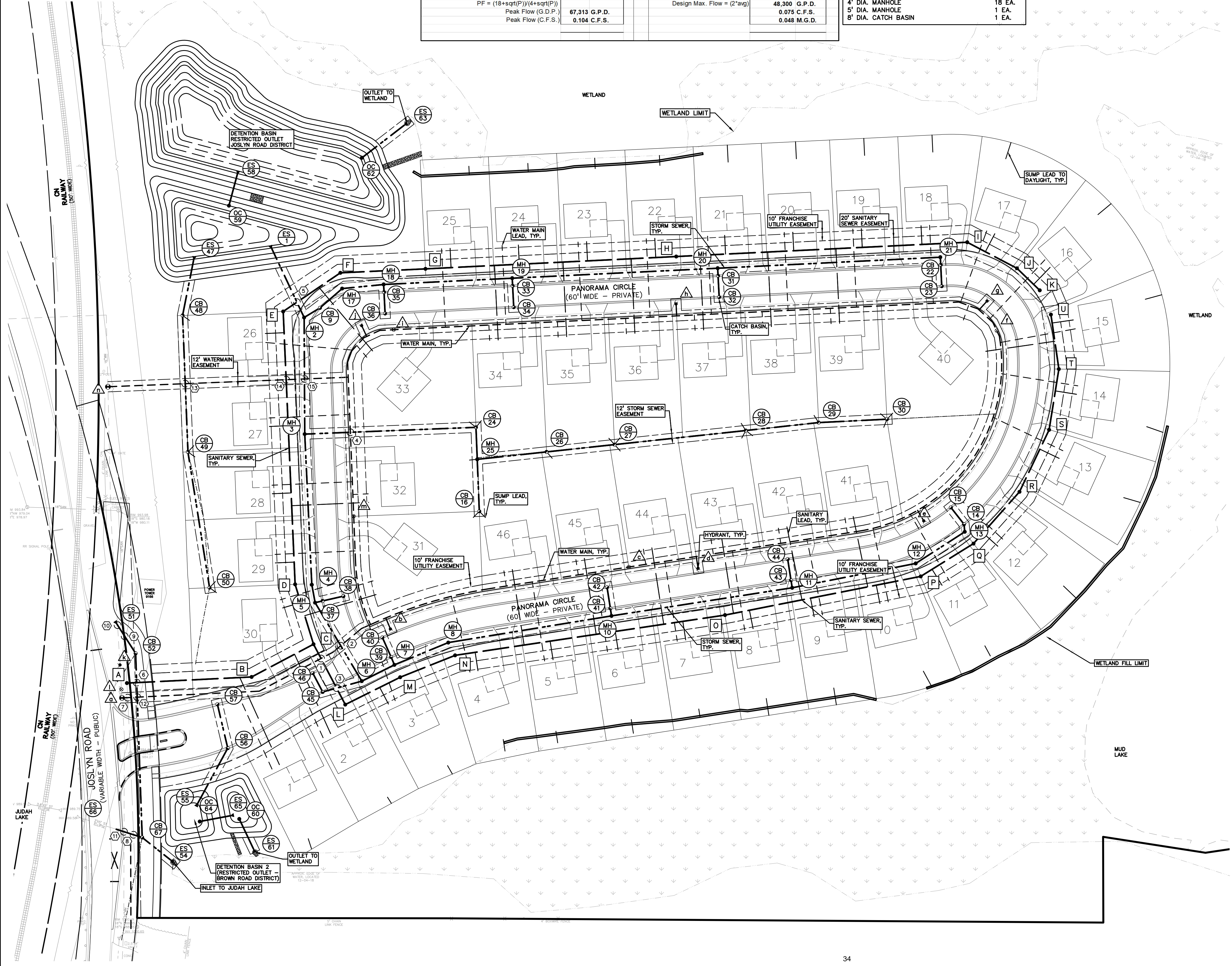
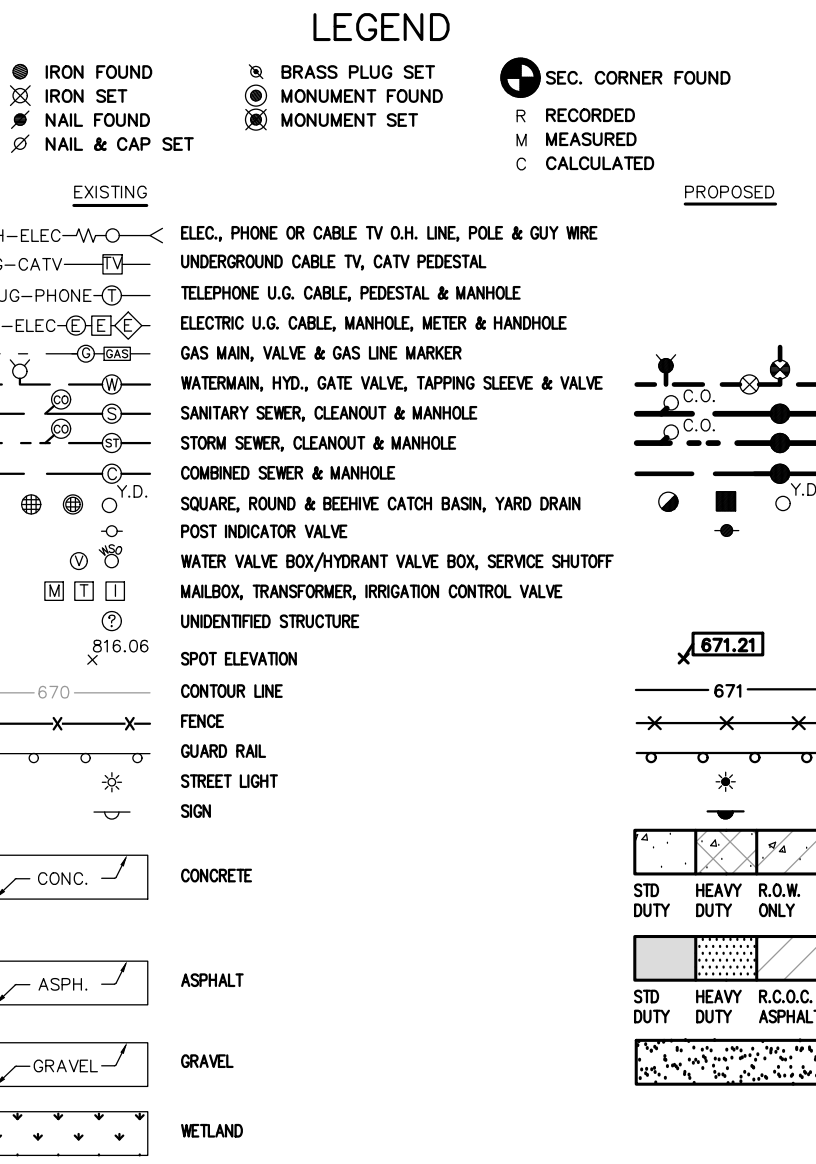
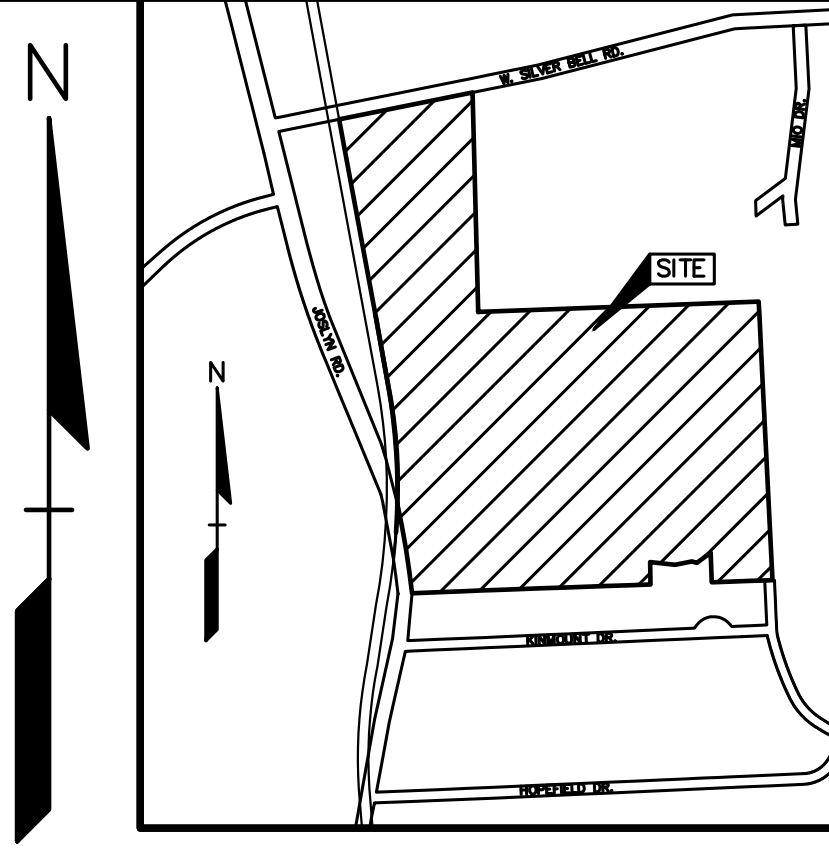
WATER MAIN BASIS OF DESIGN:	
(Unit Factors Based on Oakland County Unit Assignment Factors)	
Residential Dwelling	
INITIAL DESIGN	
Number of Lots	46.0
REU	46.0
Population (P) (3.5 PEOPLE/EDU)	161 People
Average Flow (150 GPCPD)	24,150 G.P.D.
	0.037 C.F.S.
	0.024 M.G.D.
Design Max. Flow = (2*avg)	48,300 G.P.D.
	0.075 C.F.S.
	0.048 M.G.D.
ULTIMATE DESIGN	
Number of Lots	46.0
REU	46.0
Population (P) (3.5 PEOPLE/EDU)	161 People
Average Flow (150 GPCPD)	24,150 G.P.D.
	0.037 C.F.S.
	0.024 M.G.D.
Design Max. Flow = (2*avg)	48,300 G.P.D.
	0.075 C.F.S.
	0.048 M.G.D.

SANITARY SEWER QUANTITIES:	
8" PVC TRUSS PIPE	2687 LF
4" DIA. MANHOLE	21 EA.
WATER MAIN QUANTITIES:	
8" D.I.W.M. CLASS 54	2602 LF
6" D.I.W.M. CLASS 54	84 LF
8" GATE VALVE AND WELL	5 EA.
8"x16" T.S.V. AND WELL	2 EA.
HYDRANT ASSEMBLY	7 EA.
RELOCATE HYDRANT	1 EA.

STORM SEWER QUANTITIES:	
12" RCP CL-IV PIPE	3074 LF
15" RCP CL-IV PIPE	604 LF
18" RCP CL-IV PIPE	198 LF
24" RCP CL-IV PIPE	230 LF
48" RCP CL-IV PIPE	78 LF
12" CONC. END SECTION W/ BAR GRATE	9 EA.
24" CONC. END SECTION W/ BAR GRATE	1 EA.
4' DIA. CATCH BASIN	35 EA.
4' DIA. MANHOLE	18 EA.
5' DIA. MANHOLE	1 EA.
8' DIA. CATCH BASIN	1 EA.



NOTE:
CONTRACTOR TO VERIFY ALL QUANTITIES. ANY
DEVIATIONS TO THE PLAN QUANTITIES SHALL
BE BROUGHT TO THE ATTENTION OF PEA, INC.
FOR VERIFICATION, PRIOR TO BIDDING.



- GENERAL UTILITY NOTES:**
- ALL UTILITY LINES, STRUCTURES AND TRENCHES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE STANDARDS AND REQUIREMENTS OF ORION TOWNSHIP.
 - NO PHYSICAL CONNECTION TO THE EXISTING WATER MAIN CAN BE MADE UNTIL ALL NEW WATER MAIN PASSES PRESSURE AND BACTERIOLOGICAL TESTS TO THE SATISFACTION OF THE TOWNSHIP.
 - REFER TO DETAIL SHEETS C-10.0 FOR ADDITIONAL UTILITY DETAILS AND NOTES.
 - ALL WATER MAIN AND FITTINGS (3" DIAMETER AND LARGER) SHALL BE DUCTILE IRON, CLASS 54.
 - WATER MAIN SERVICE LEADS SHALL BE TYPE 'K' ANNEALED SEAMLESS COPPER WITH FLARED FITTINGS, UNLESS OTHERWISE NOTED.
 - ALL WATER MAIN SHALL BE PROVIDED WITH 5.5' OF COVER UNLESS OTHERWISE NOTED.
 - ALL FIRE HYDRANTS SHALL BE E.I.W. #5BR MODEL #250 PER TOWNSHIP STANDARDS.
 - ALL HYDRANTS TO BE A MINIMUM OF 5' FROM BACK OF CURB, TYP.
 - ALL NECESSARY FITTINGS, THRUST BLOCKS, RESTRAINING GLANDS, BLOW OFFS, ETC. FOR WATER MAIN ARE CONSIDERED INCIDENTAL TO THIS PROJECT. THE CONTRACTOR SHALL INSTALL THESE ITEMS AS NECESSARY AND AS REQUIRED BY ORION TOWNSHIP.
 - THE WATER MAIN CONTRACTOR SHALL NOTIFY THE INSPECTION SECTION OF THE DETROIT WATER AND SEWER DEPARTMENT AT (313) 833-4682 AT LEAST THREE WORKING DAYS IN ADVANCE OF STARTING CONSTRUCTION.
 - ALL SANITARY SEWER 8" OR LARGER SHALL BE P.V.C. TRUSS PIPE (ASTM D2680) AND FITTINGS, WITH ELASTOMERIC GASKET JOINTS PER ASTM D3212 UNLESS OTHERWISE NOTED.
 - ALL SANITARY SEWER LEADS SHALL BE POLYVINYL CHLORIDE (PVC) SDR 23.5 PIPE AND FITTINGS. ALL JOINTS TO BE ELASTOMERIC GASKET JOINTS PER ASTM D3212 UNLESS OTHERWISE NOTED.
 - SANITARY LEADS SHALL BE PROVIDED WITH CLEANOUTS EVERY 100 FEET AND AT EVERY BEND AS SHOWN. ALL CLEANOUTS TO BE PROVIDED WITH E.I.W. #1565 BOX OR EQUAL.
 - ALL STORM SEWER 12" DIAMETER OR LARGER SHALL BE REINFORCED CONCRETE PIPE (RCP C-78) CLASS IV WITH MODIFIED TONGUE AND GROOVE JOINT WITH RUBBER GASKETS UNLESS SPECIFIED OTHERWISE (ASTM C-443).
 - ALL STORM SEWER LEADS SHALL BE PVC SCHEDULE 40 WITH GLUED JOINTS UNLESS OTHERWISE NOTED.
 - PIPE LENGTHS ARE GIVEN FROM CENTER OF STRUCTURE AND TO END OF FLARED END SECTION UNLESS NOTED OTHERWISE.
 - THE ORION TOWNSHIP STANDARD DETAIL SHEETS ARE INCORPORATED INTO AND MADE A PART OF THESE PLANS. CONTRACTOR TO REFER TO THE ORION TOWNSHIP STANDARD DETAIL SHEETS FOR ALL STRUCTURE, PIPE MATERIALS, BEDDING, TESTING, ETC. NOTES AND DETAILS.

PUBLIC UTILITY EASEMENTS:
ALL SANITARY SEWERS 8" AND LARGER IN DIAMETER ARE TO BE PUBLIC AND SHALL BE LOCATED IN A 20' WIDE EASEMENT. ALL WATER MAIN SHALL BE LOCATED IN A 12' WIDE EASEMENT.

STORM SEWER FRAME & COVER NOTES
CATCH BASIN/INLET WITHIN CURB
USE MDOT TYPE 'C' COVER WITH MDOT 'K' FRAME
CATCH BASIN/INLET WITHIN GRASS AREAS
USE E.I.W. #1040 WITH TYPE '02' BEEHIVE COVER
MANHOLE
USE MDOT TYPE 'B' COVER

NOTE:
ALL DWELLING UNITS WILL BE FIRE SUPPRESSED AND BE
EQUIPPED WITH AN APPROVED AUTOMATIC SPRINKLER SYSTEM
IN ACCORDANCE WITH NFPA 13R.

NO.	DATE	REVISIONS
1	09-13-22	1. JBT AMENDED FINAL PUD
2	12-15-22	2. TBMK REVISIONS PER NOVEMBER 13, 2020 TWP REVIEW
3	10-05-23	3. TBMK REVISIONS PER ADDED E.V.A.
4	08-13-23	4. TBMK REVISIONS PER MAY 6, 2020 P.C. MEETINGS
5	08-13-23	5. JBT CANCELLED

CAUTION!!
THE LOCATION AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS GIVEN FOR THE ACCURACY OF THE INFORMATION. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.
THIS DRAWING AND DESIGN ARE THE PROPERTY OF PEA, INC. THEY ARE LOANED TO THE CONTRACTOR FOR THEIR USE ONLY. THEY ARE NOT TO BE REPRODUCED, COPIED, REPRODUCED, OR REPRODUCED IN ANY MANNER OR FOR ANY PURPOSE WITHOUT THE WRITTEN CONSENT OF PEA, INC. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHER RIGHTS ARE HEREBY SPECIFICALLY RESERVED. © 2023 PEA, INC.
CONSTRUCTION CONTRACTOR AGREES THAT IN CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THAT THIS REQUIREMENT SHALL BE MADE TO APPLY TO CONTRACTORS AND NOT BE LIMITED TO NORMAL WORKING HOURS AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFINE, INDENTIFY AND HOLD DESIGN PROFESSIONAL LIABILITY FROM ANY AND ALL LIABILITY, LOSS OR ALLEGED IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

3 FULL WORKING DAYS BEFORE YOU DIG CALL

811
Know what's below
Call before you dig
MISS DIG System, Inc.
1-800-482-7171 www.missdig.net
(TOLL FREE)



PEA, Inc.
2430 Rochester Ct, Ste 100
Troy, MI 48063-1872
t: 248.689.9090
f: 248.689.1044
www.peainc.com

FRANKLIN RIDGE HOMES, LLC
30180 ORCHARD LAKE ROAD, SUITE 150
FARMINGTON HILLS, MICHIGAN 48334
OVERALL UTILITY PLAN
SILVERBELL POINT
PART OF THE SE 1/4 OF SECTION 28 & NE 1/4 SECTION 33, T40N, R10E
ORION TOWNSHIP, OAKLAND COUNTY, MICHIGAN
DES. TBMK DN. TBMK SUR. KTR. P.M. JBT
S:\PROJECTS\2018\2018150\DWG\FINAL_PUD\X-C-BASE-18150.DWG

ORIGINAL ISSUE DATE:
MARCH 17, 2020
PEA JOB NO. 2018-150
SCALE: 1" = 60'
DRAWING NUMBER:
C-6.0

XREF: S:\PROJECTS\2018\2018150\DWG\18150-TOPBASE.DWG
XREF: S:\PROJECTS\2018\2018150\DWG\FINAL_PUD\X-C-BASE-18150.DWG
XREF: S:\PROJECTS\2018\2018150\DWG\FINAL_PUD\X-TBK-18150.DWG

LEGEND

● IRON FOUND
⊗ IRON SET
⊗ NAIL FOUND
⊗ NAIL & CAP SET

⊗ BRASS PLUG SET
⊗ MONUMENT FOUND
⊗ MONUMENT SET

⊗ SEC. CORNER FOUND
R RECORDED
M MEASURED
C CALCULATED

EXISTING
-OH-ELEC-W- ELEC. PHONE OR CABLE TV OH. LINE, POLE & GUY WIRE
-UG-CATV- TELEPHONE CABLE TV, CATV, FIBER
-UG-PHONE- TELEPHONE U.G. CABLE, PEDestal & MANHOLE
-UG-ELEC- ELEC. U.G. CABLE, MANHOLE, METER & MANHOLE
WATERMAN, HYD. GATE VALVE, TAPPING SLEEVE & VALVE
SANITARY SEWER, CLEANOUT & MANHOLE
STORM SEWER, CLEANOUT & MANHOLE
CORNERED SEWER & MANHOLE
SQUARE, ROUND & BEEHIVE CATCH BASIN, YARD DRAIN
POST INDICATOR VALVE
WATER VALVE BOX/HYDRANT VALVE BOX, SERVICE SHUTOFF
MOTOR, TRANSFORMER, IRRIGATION CONTROL VALVE
UNIDENTIFIED STRUCTURE

PROPOSED
-ELEC- ELEC. LINE, POLE & GUY WIRE
-CATV- TELEPHONE CABLE TV, CATV, FIBER
-PHONE- TELEPHONE U.G. CABLE, PEDestal & MANHOLE
-ELEC- ELEC. U.G. CABLE, MANHOLE, METER & MANHOLE
WATERMAN, HYD. GATE VALVE, TAPPING SLEEVE & VALVE
SANITARY SEWER, CLEANOUT & MANHOLE
STORM SEWER, CLEANOUT & MANHOLE
CORNERED SEWER & MANHOLE
SQUARE, ROUND & BEEHIVE CATCH BASIN, YARD DRAIN
POST INDICATOR VALVE
WATER VALVE BOX/HYDRANT VALVE BOX, SERVICE SHUTOFF
MOTOR, TRANSFORMER, IRRIGATION CONTROL VALVE
UNIDENTIFIED STRUCTURE

CONC. CONCRETE
ASPH. ASPHALT
GRAVEL GRAVEL
WETLAND

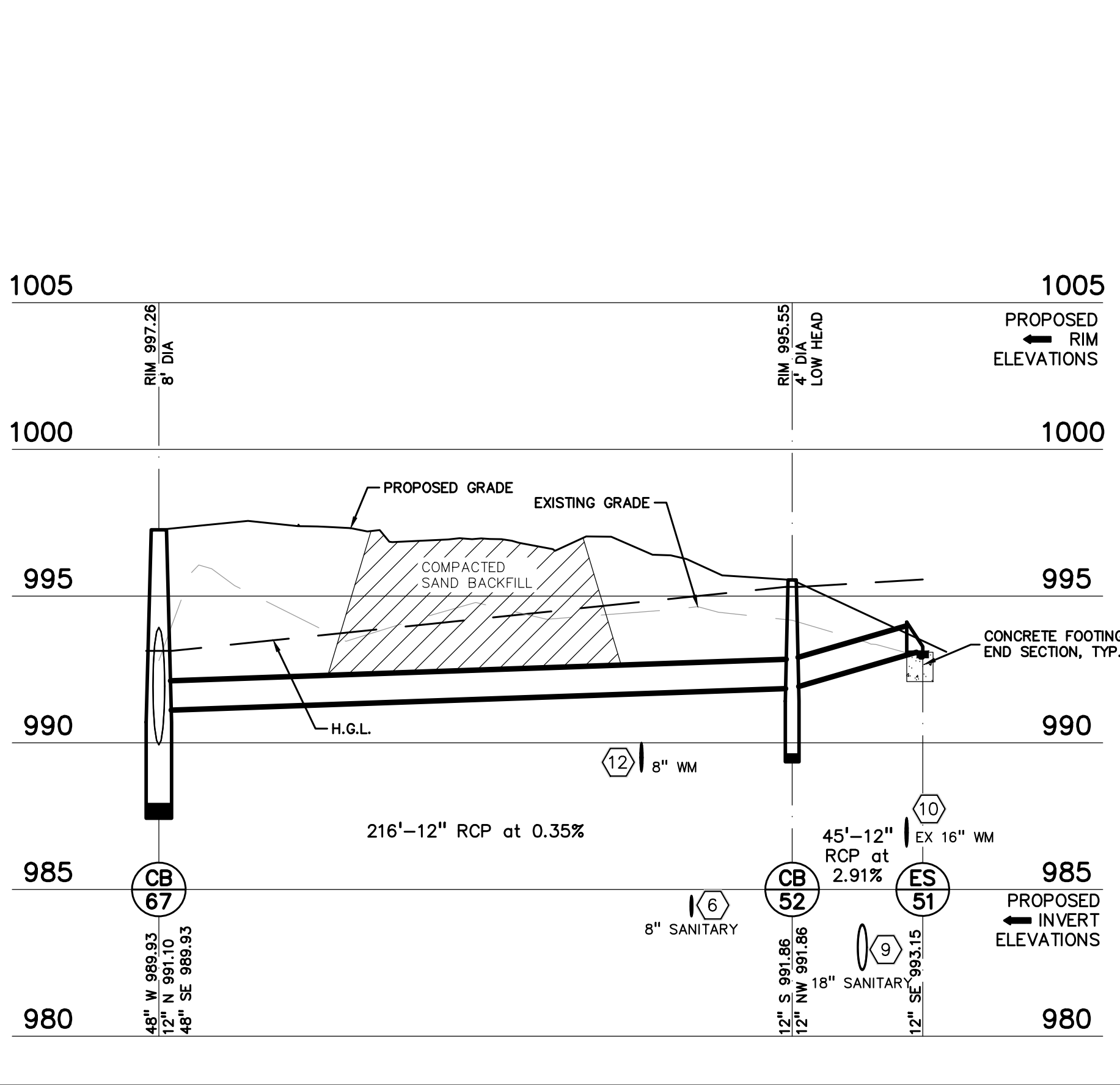
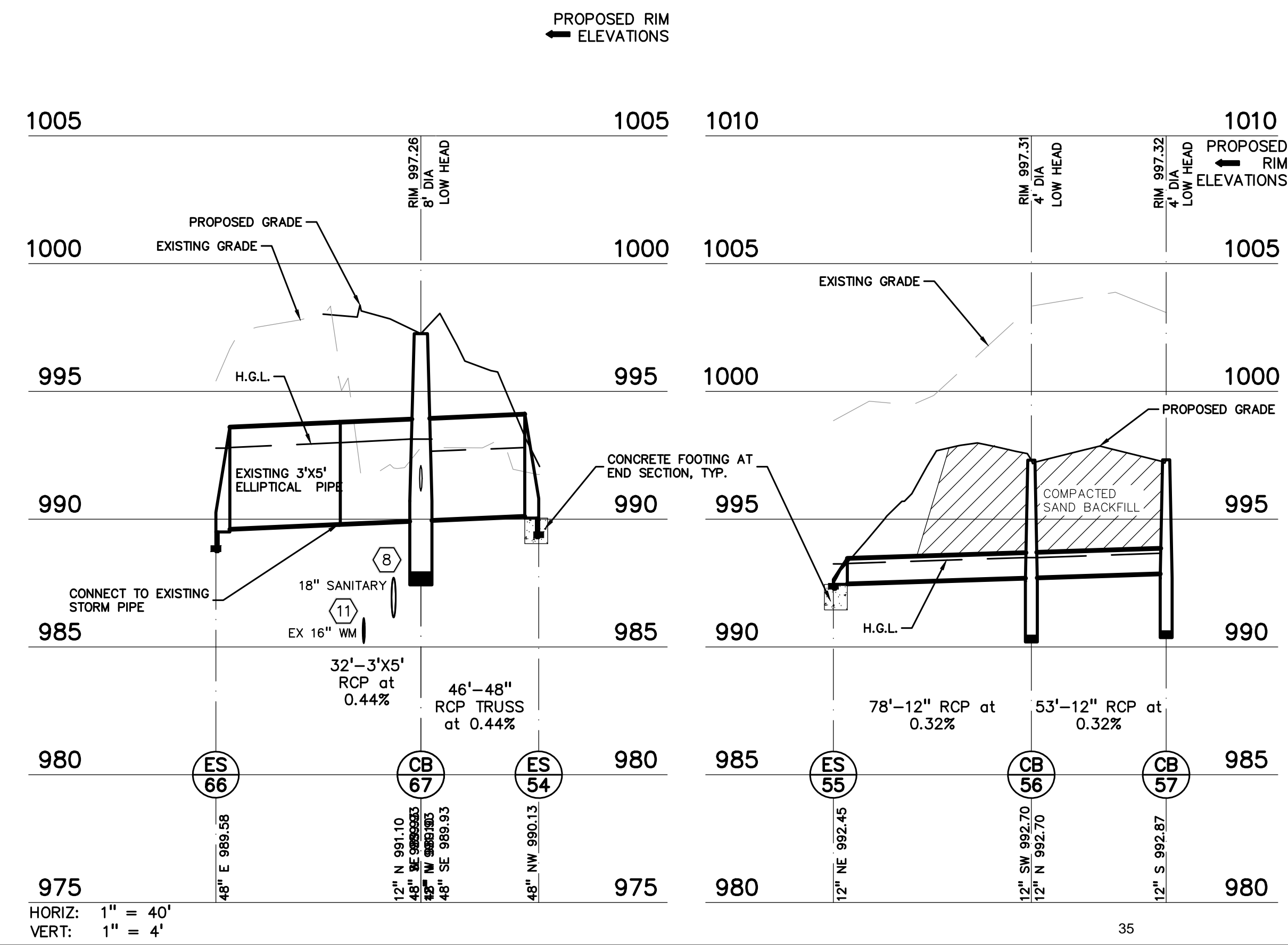
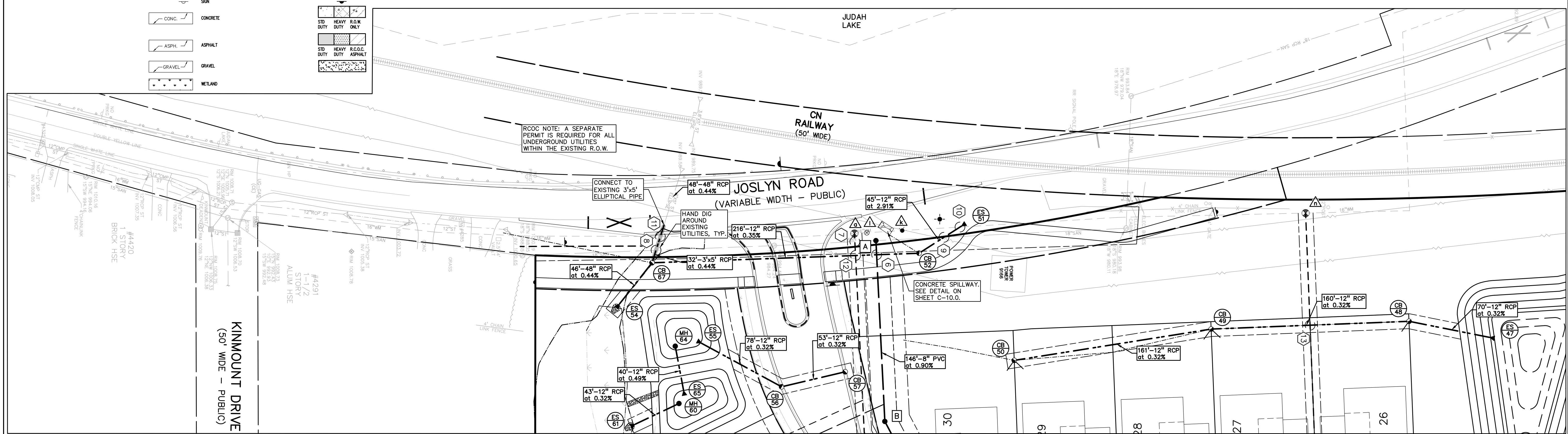
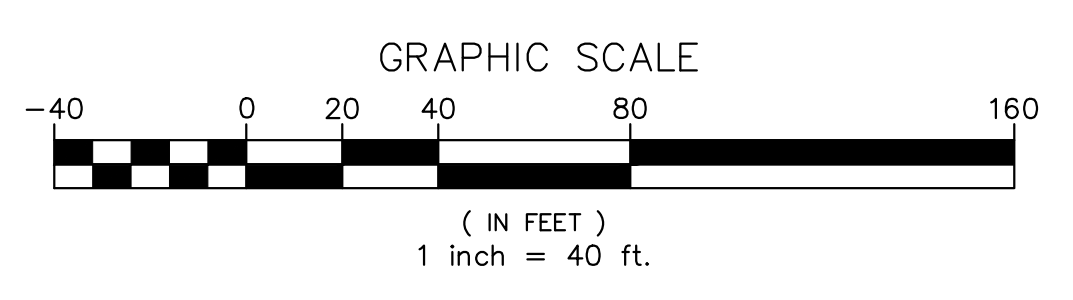
NOTE:
SEE SHEET C-6.0 FOR UTILITY NOTES FOR QUANTITIES.

STORM SEWER FRAME & COVER NOTES
CATCH BASIN/INLET WITHIN CURB
USE MDOT TYPE 'C' COVER WITH MDOT 'K' FRAME
CATCH BASIN/INLET WITHIN GRASS AREAS
USE E.J.I.W. #1040 WITH TYPE '02' BEEHIVE COVER
MANHOLE
USE MDOT TYPE 'B' COVER

SAND BACKFILL NOTE:
ALL UTILITIES UNDER PAVEMENT OR WITHIN 3' OF THE EDGE OF PAVEMENT (OR WITHIN THE 45° LINE OF INFLUENCE OF PAVEMENT) SHALL HAVE M.D.O.T. CLASS II GRANULAR BACKFILL COMPACTED TO 95% MAX. DRY DENSITY (ASTM D-1557).

STORM STRUCTURES			END SECTIONS	
CB	52	(4' DIA./2' SUMP) RIM = 995.55 12" NW 991.86 12" S 991.96	51	END SECTION 12" 993.15
CB	67	(8' DIA./2' SUMP) RIM = 997.26 12" N 991.10 3'x5' ELLIP. SE 989.93 48" W 989.93	54	END SECTION 48" 990.13

SANITARY STRUCTURES		WATER MAIN STRUCTURES	
A	MH (4' DIA.) RIM = 996.30 8" E 984.00 18" S 983.07 18" N 983.07	a	TAPPING SLEEVE AND WELL RIM = 993.26
EX2	EX (4' DIA.) RIM = 1000.19 18" N 988.35	I	GV IN WELL RIM = 996.40
EX3	EX (4' DIA.) RIM = 994.63 18" S 980.18	k	HYDRANT ASSEMBLY F.G. = 996.00



XREF: S:\PROJECTS\2018\2018150\DWG\18150-TOPBASE.DWG
XREF: S:\PROJECTS\2018\2018150\DWG\FINAL_PUD\X-BASE-18150.DWG
XREF: S:\PROJECTS\2018\2018150\DWG\FINAL_PUD\X-TBLK-18150.DWG

CAUTION!!
THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS GIVEN BY THE ENGINEER OR THE CONTRACTOR FOR THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

THE DRAWING AND DESIGN ARE THE PROPERTY OF PEA, INC. THEY ARE TO BE USED ONLY FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED THEREON. NO PART OF THIS DRAWING OR DESIGN IS TO BE REPRODUCED, COPIED, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, WITHOUT THE WRITTEN CONSENT OF PEA, INC. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED. © 2020 PEA, INC.

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE RESPONSIBLE FOR THE SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, LOSS OR ALLEGED IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

3 FULL WORKING DAYS BEFORE YOU DIG CALL

811

Know what's below
Call before you dig

MISS Dig System, Inc.
1-800-482-7171 www.missdig.net
(1021-4821)

PEA

PEA, Inc.
2430 Rochester Ct, Ste 100
Troy, MI 48063-1872
t: 248.689.9090
f: 248.689.1044
www.peainc.com

FRANKLIN RIDGE HOMES, LLC
30180 ORCHARD LAKE ROAD, SUITE 150
FARMINGTON HILLS, MICHIGAN 48334

R.O.W. UTILITY PLAN
SILVERBELL POINTE
PART OF THE SE 1/4 OF SECTION 28 & NE 1/4 SECTION 33, T40N, R10E
ORION TOWNSHIP, OAKLAND COUNTY, MICHIGAN

DES. TMK DN. TMK SUR. KTR P.M. JBT

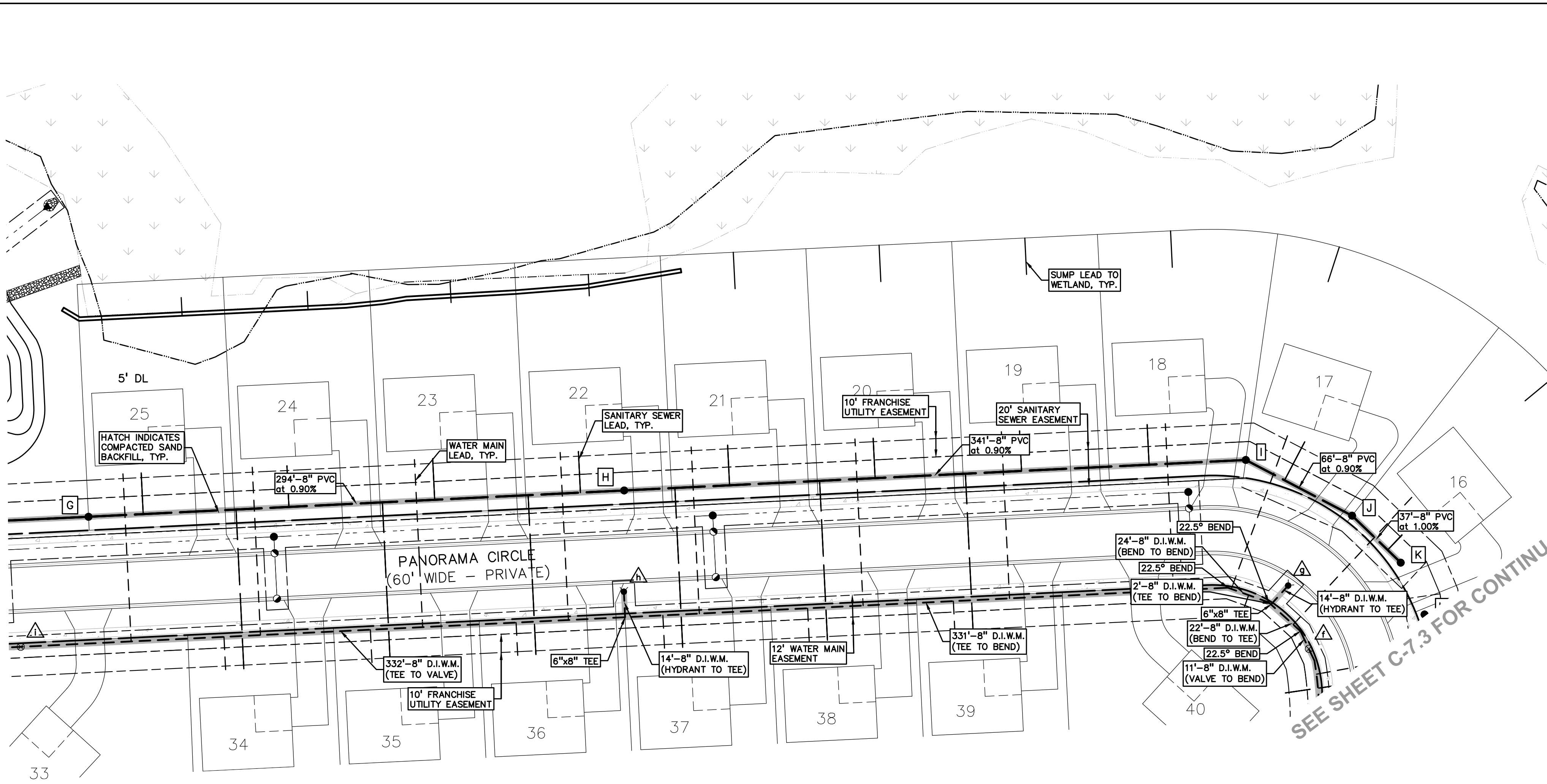
ORIGINAL ISSUE DATE:
MARCH 17, 2020

PEA JOB NO. 2018-150

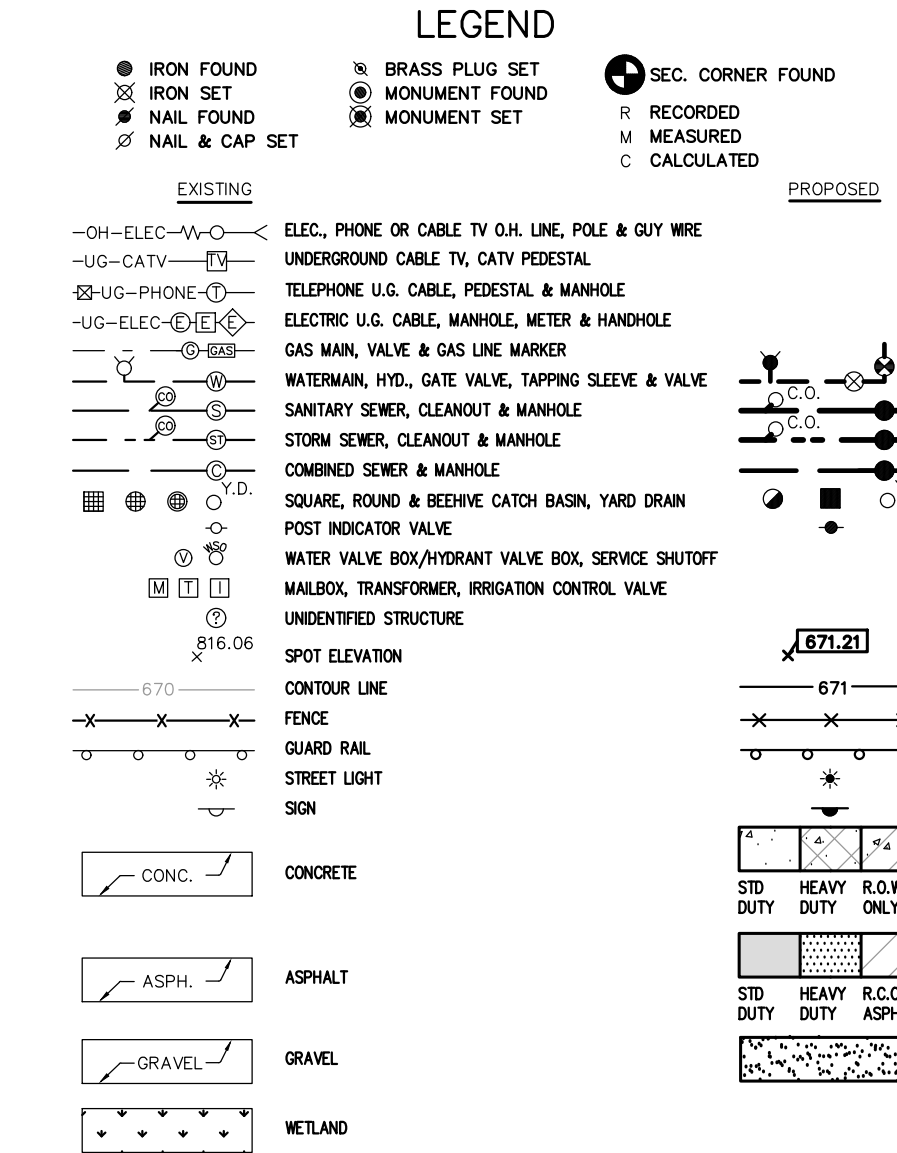
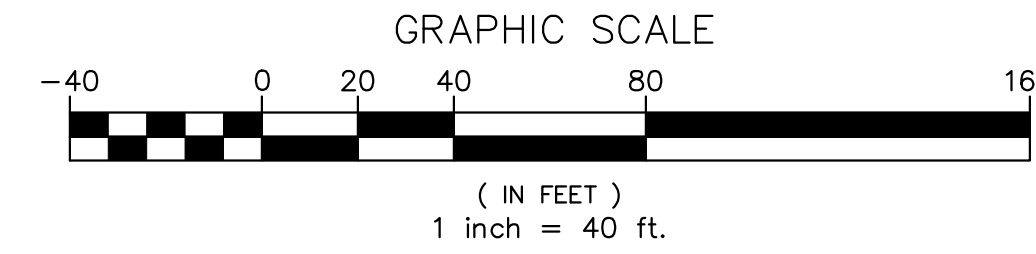
SCALE: 1" = 40'

DRAWING NUMBER:
C-6.1

SEE SHEET C-7.2 FOR CONTINUATION



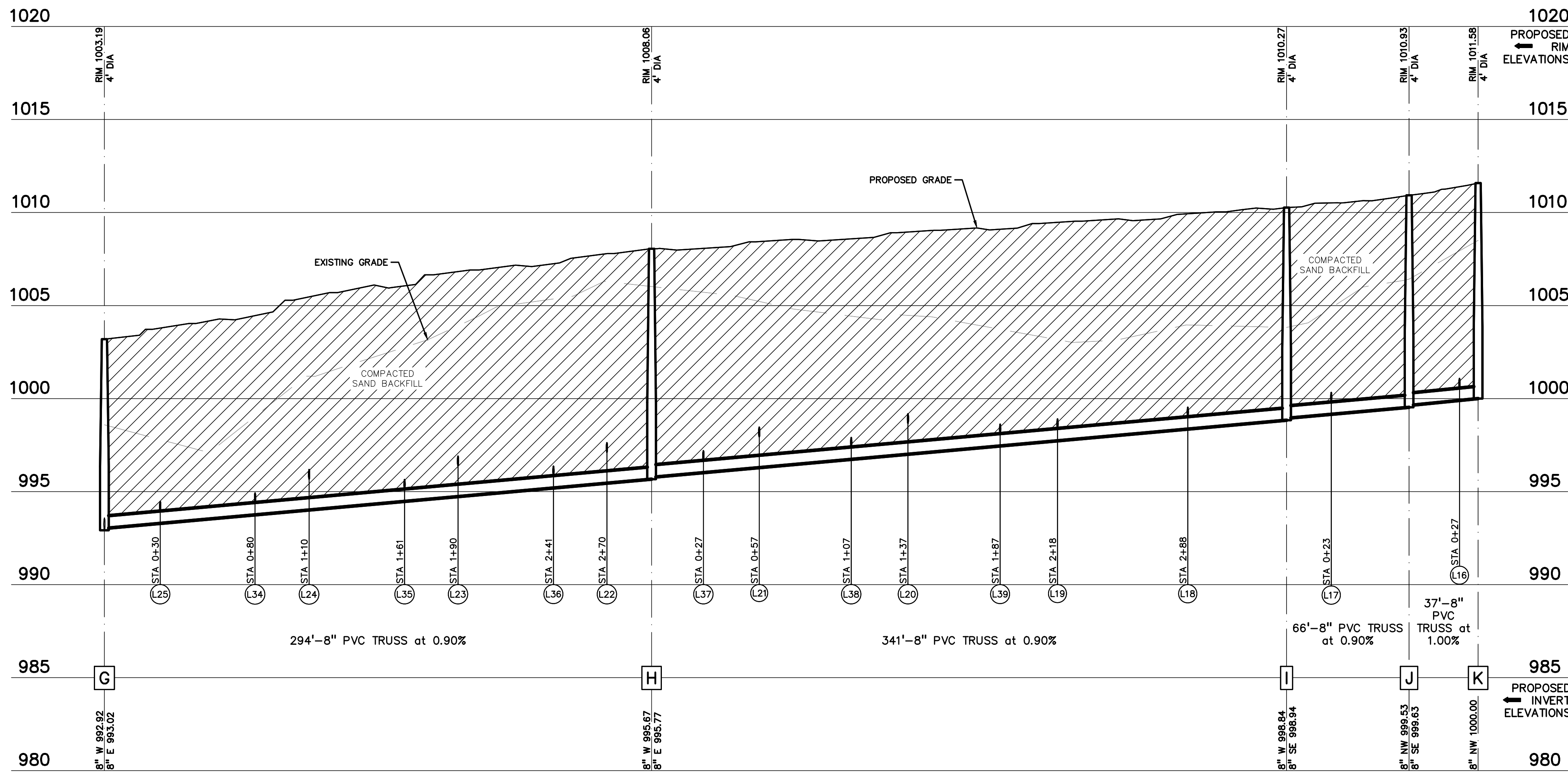
SEE SHEET C-7.3 FOR CONTINUATION



NOTE:
SEE SHEET C-6.0 FOR UTILITY NOTES.

SAND BACKFILL NOTE:
ALL UTILITIES UNDER PAVEMENT OR WITHIN 3' OF THE EDGE OF PAVEMENT (OR WITHIN THE 45° LINE OF INFLUENCE OF PAVEMENT) SHALL HAVE M.D.O.T. CLASS II GRANULAR BACKFILL COMPACTED TO 95% MAX. DRY DENSITY (ASTM D-1557).

SANITARY STRUCTURES		HYDRANTS	
G	MH (4' DIA.) RIM = 1003.19 8" E 993.02 8" W 992.92	g	HYDRANT ASSEMBLY F.G. = 1010.41
		h	HYDRANT ASSEMBLY F.G. = 1007.30
H	MH (4' DIA.) RIM = 1008.06 8" E 995.77 8" W 995.67	WATER MAIN STRUCTURES	
I	MH (4' DIA.) RIM = 1010.27 8" SE 998.34 8" W 998.84	f	GV IN WELL RIM = 1011.67
J	MH (4' DIA.) RIM = 1010.93 8" SE 999.63 8" NW 999.53	i	GV IN WELL RIM = 1002.93
K	MH (4' DIA.) RIM = 1011.58 8" NW 1000.00		



SANITARY SEWER LEADS									
Unit #	Sewer Main Invert at lead	Lead Invert at Main (w/o Riser)	Lead Length (LF)	Lead Slope (%)	Lead Dia. (in)	House F.G.	Riser at Main (Ft.)	Stub Invert at Esmt.	Riser at Stub (Ft.)
L16	999.90	1000.57	28	3.70%	6	1012.60		1001.60	
L17	999.15	999.82	24	4.54%	6	1011.90		1000.90	
L18	998.36	999.03	22	5.34%	6	1011.20		1000.20	
L19	997.73	998.40	22	5.93%	6	1010.70		999.70	
L20	997.01	997.67	22	2.43%	6	1010.20	1	999.20	
L21	996.29	996.95	22	3.39%	6	1009.70	1	998.70	
L22	995.45	996.12	23	4.81%	6	1009.20	1	998.20	
L23	994.73	995.40	23	5.78%	6	1008.70	1	997.70	
L24	994.01	994.68	23	3.20%	6	1007.40	1	996.40	
L25	993.29	993.96	23	1.52%	6	1005.30		994.30	
L34	993.75	994.42	87	1.24%	6	1006.50		995.50	
L35	994.47	995.14	87	1.90%	6	1007.80		996.80	
L36	995.19	995.86	87	2.33%	6	1008.90		997.90	
L37	996.02	996.68	87	1.96%	6	1009.40		998.40	
L38	996.73	997.40	87	1.72%	6	1009.90		998.90	
L39	997.45	998.12	87	1.58%	6	1010.50		999.50	
L40	1000.21	1000.88	82	1.01%	6	1012.70		1001.70	

REVISIONS

NO.	DATE	DESCRIPTION
1	09-13-20	ANNEDED FINAL PUD
2	12-15-20	REVISIONS FOR NOVEMBER 13, 2020 TYP REVIEW
3	10-05-20	REVISIONS FOR ADDED EVA
4	08-13-20	REVISIONS FOR MAY 6, 2020 P.C. MEETING
5	08-13-20	DATE DISAPPROVED

CAUTION!!

THE LOCATION AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS GIVEN FOR THE ACCURACY OF THE INFORMATION. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

THIS DRAWING AND DESIGN ARE THE PROPERTY OF PEA, INC. THEY ARE NOT TO BE REPRODUCED, COPIED, REPRODUCED, OR REPRODUCED IN ANY MANNER OR FOR ANY PURPOSE WITHOUT THE WRITTEN CONSENT OF PEA, INC. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED. © 2020 PEA, INC.

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT. INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THAT THE REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFINE, INDENTIFY AND HOLD DESIGN PROFESSIONAL, INDENTIFY FROM ANY AND ALL LIABILITY, HOLD OR ALLEGED IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

3 FULL WORKING DAYS BEFORE YOU DIG CALL

811

Know what's below
Call before you dig

MISS Dig System, Inc.
1-800-482-7171 www.missdig.net
(1021-4821)

PEA

PEA, Inc.
2430 Rochester Ct, Ste 100
Troy, MI 48063-1872
t: 248.689.9090
f: 248.689.1044
www.peainc.com

FRANKLIN RIDGE HOMES, LLC
30180 ORCHARD LAKE ROAD, SUITE 150
FARMINGTON HILLS, MICHIGAN 48334

SANITARY AND WATER MAIN PLAN - NORTH

SILVERBELL POINTE

PART OF THE SE 1/4 OF SECTION 28 & NE 1/4 SECTION 33, T40N, R10E
ORION TOWNSHIP, OAKLAND COUNTY, MICHIGAN

DES.	TMK	DN.	TMK	SUR.	KTR	P.M.	JBT
------	-----	-----	-----	------	-----	------	-----

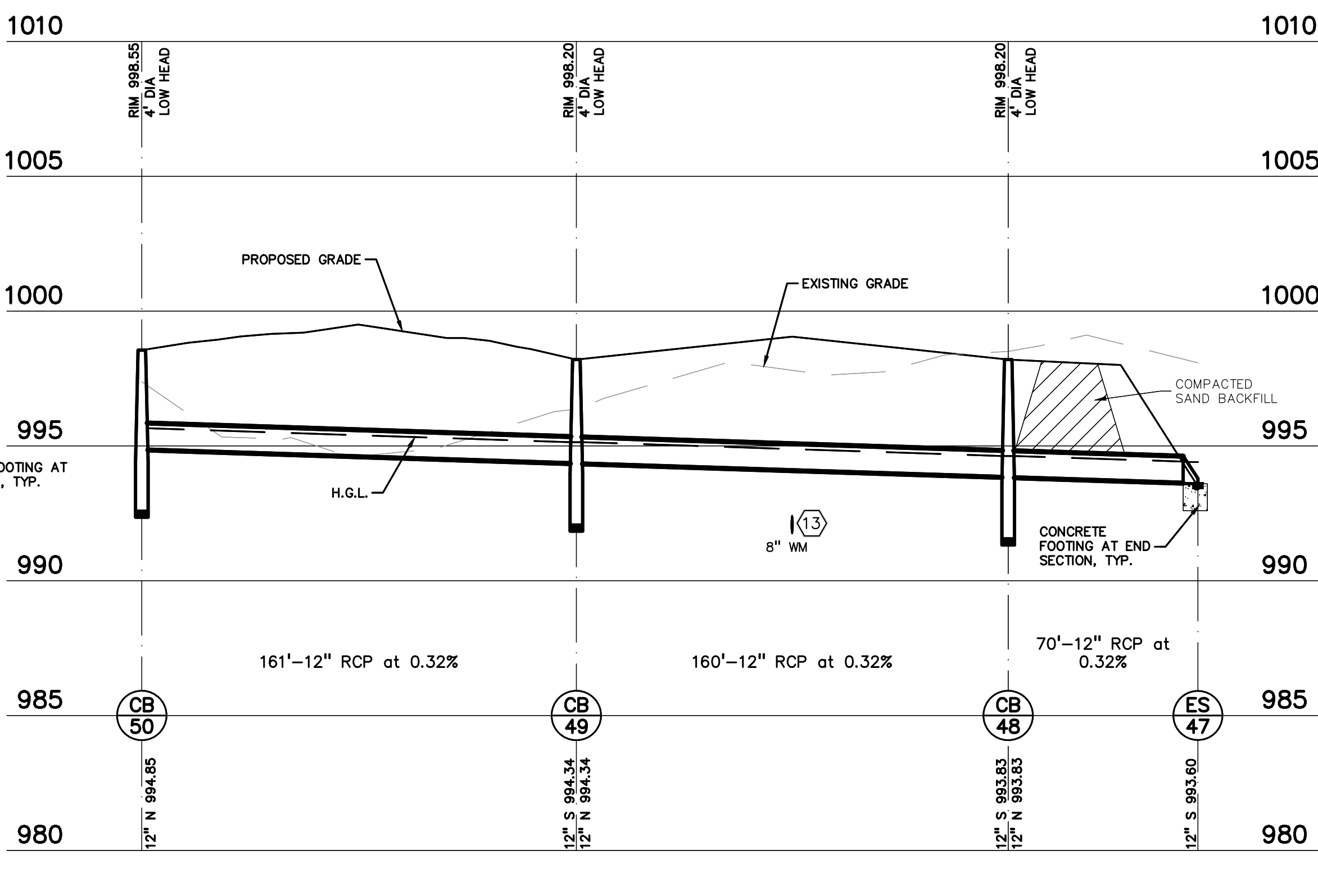
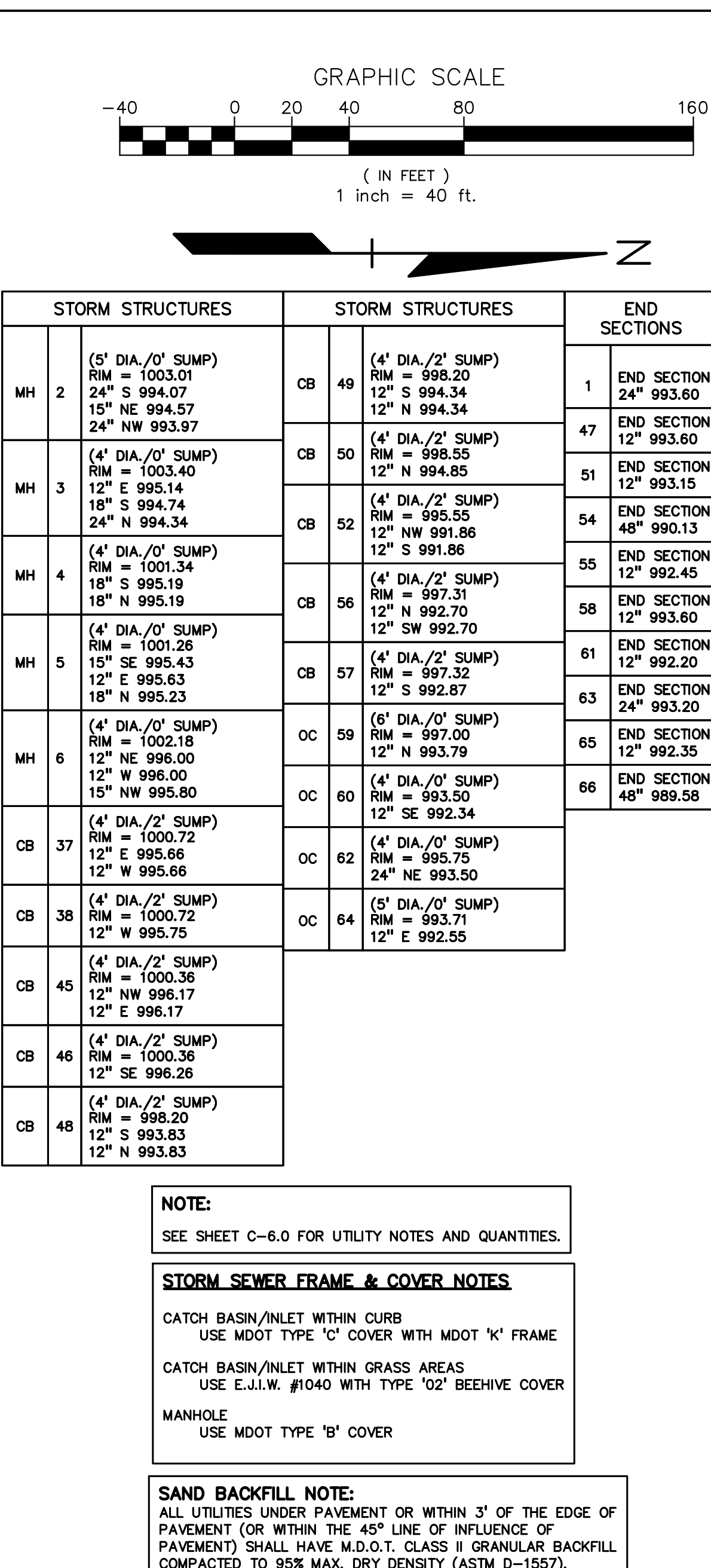
ORIGINAL ISSUE DATE:
MARCH 17, 2020

PEA JOB NO. 2018-150

SCALE: 1" = 40'

DRAWING NUMBER:
C-7.1





DATE	BY	DESCRIPTION	REV
06-23-20	1	TBKT	REVISED PER MAY 4, 2020 PC MEETING
10-05-20	2	TBKT	REVISED FOR ADDED EVA
12-15-20	3	TBKT	REVISED PER NOVEMBER 13, 2020 TWP REVIEW
06-13-22	4	TBKT	AMENDED FINAL PWD

THIS DRAWING AND DESIGN ARE THE PROPERTY OF THE DESIGN PROFESSIONAL. NO PART OF THIS DRAWING OR DESIGN IS TO BE REPRODUCED, COPIED, OR WHOLE OR IN PART, OR USED FOR ANY OTHER PROJECT OR INFORMATION TO OTHERS, WITHOUT THE PRIOR WRITTEN CONSENT OF P.E. INC. ALL COMMON LAW AND STATUTORY COPYRIGHTS ARE HEREBY SPECIFICALLY RESERVED. © 2020 P.E. INC.

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOME OF THE RESPONSIBILITIES AND OBLIGATIONS UNDER THE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THAT THE DESIGN PROFESSIONAL SHALL BE MADE TO APPLY CONTINUOUSLY, AND NOT BE LIMITED TO PROVIDING THE DESIGN PROFESSIONAL WITH THE DESIGN CONTRACT FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD HIS DESIGN PROFESSIONAL, HARMLESS FROM ANY AND ALL DAMAGES, LOSSES AND EXPENSES, INCLUDING IN CONNECTION WITH THE PERFORMANCE OF THE DESIGN PROFESSIONAL'S OBLIGATIONS ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

811
Know what's below
Call before you dig
MISS DIG System, Inc.



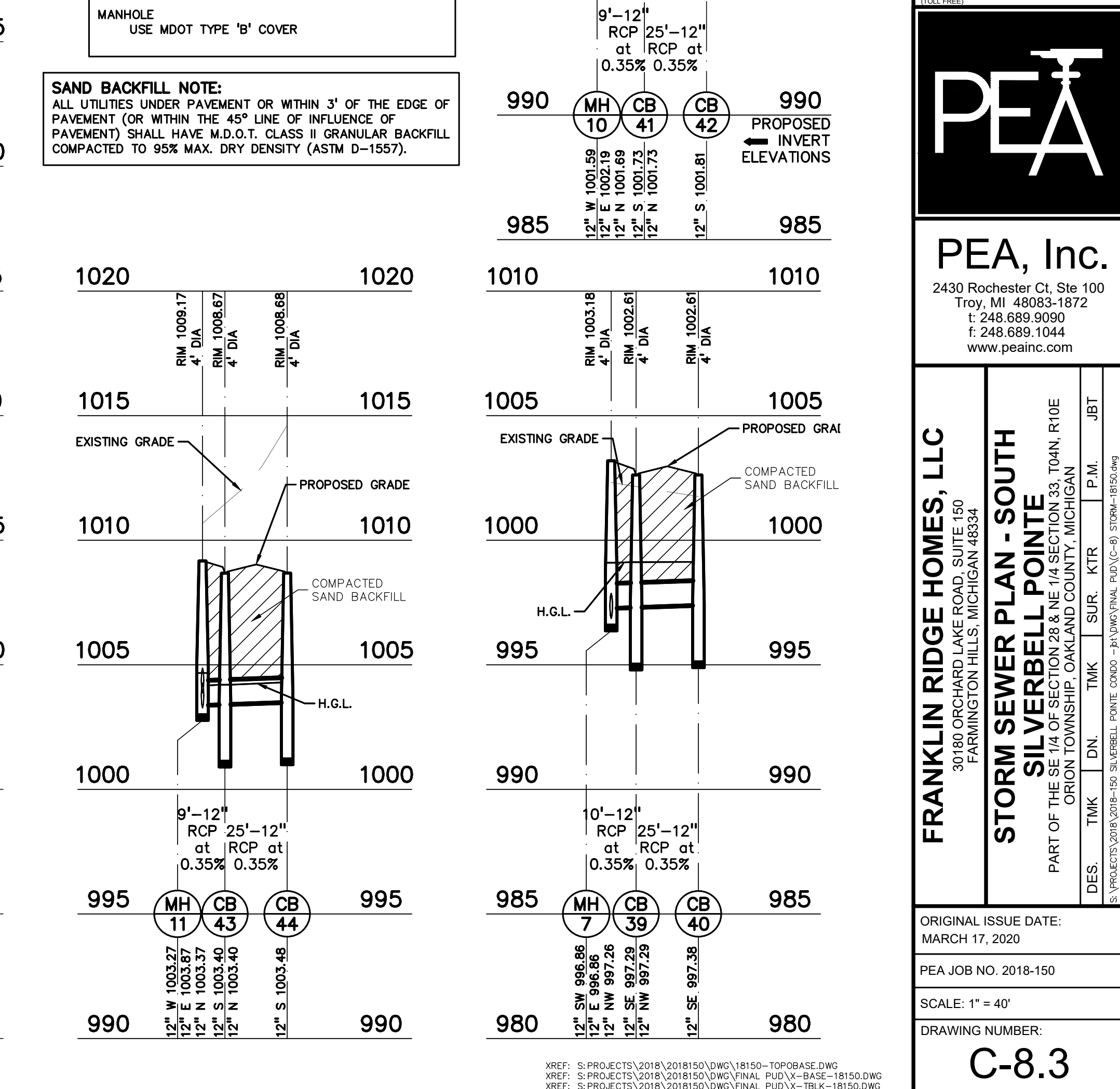
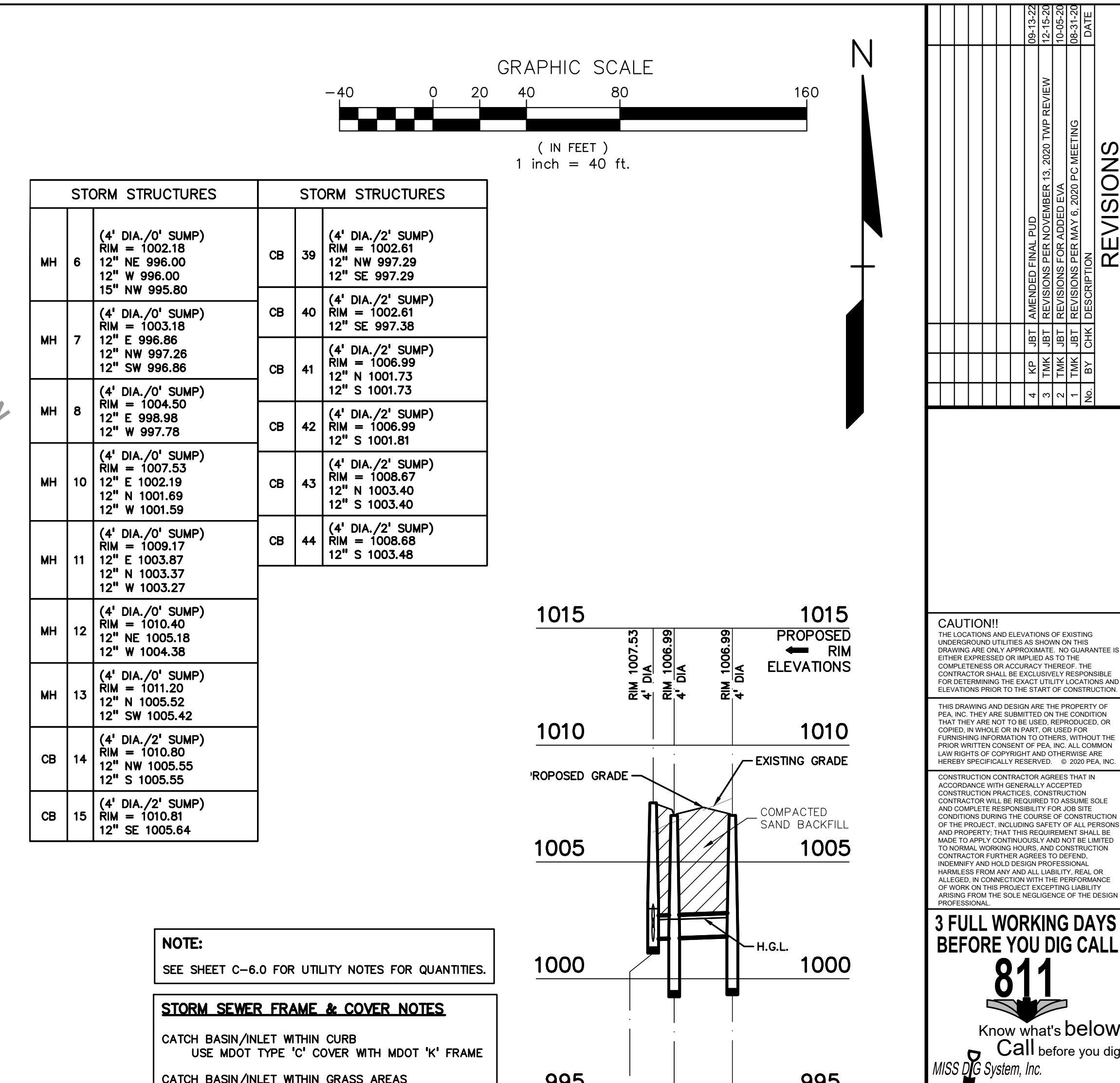
PEA, Inc.
2430 Rochester Ct, Ste 100
Troy, MI 48083-1872
t: 248.689.9090
f: 248.689.1044
www.peainc.com

FRANKLIN RIDGE HOMES, LLC
30760 ORCHARD LAKE ROAD, SUITE 150
PARKMINGTON HILLS, MICHIGAN 48334

STORM SEWER PLAN - WEST
SILVERBELL POINTE
PART OF THE SE 1/4 OF SECTION 28 & NE 1/4 SECTION 33, T04N, R10E, S01E, 2ND P.M.,
ORION TOWNSHIP OF OAKLAND COUNTY, MICHIGAN

S.	T.M.K.	S.	T.M.K.	S.	T.M.K.	S.	T.M.K.
SECTION 28	28	SILVERBELL POINTE	0000	3A	W04N07E	150	STORM SEWER

ORIGINAL ISSUE DATE: MARCH 17, 2020
PEA JOB NO. 2018-150
SCALE: 1" = 40'
DRAWING NUMBER: C-8.2



NOTE:
SEE SHEET C-6.0 FOR UTILITY NOTES FOR QUANTITIES.

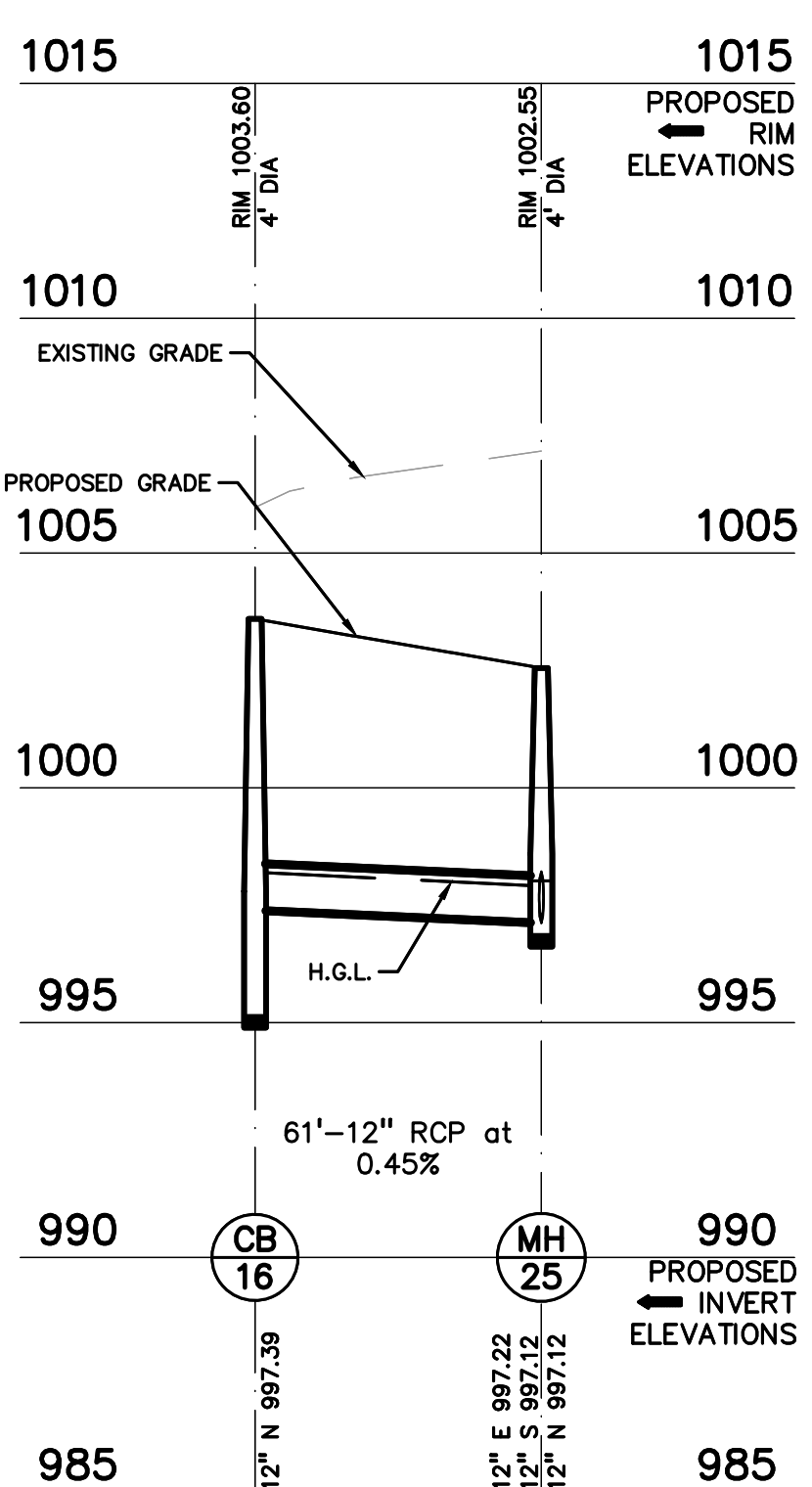
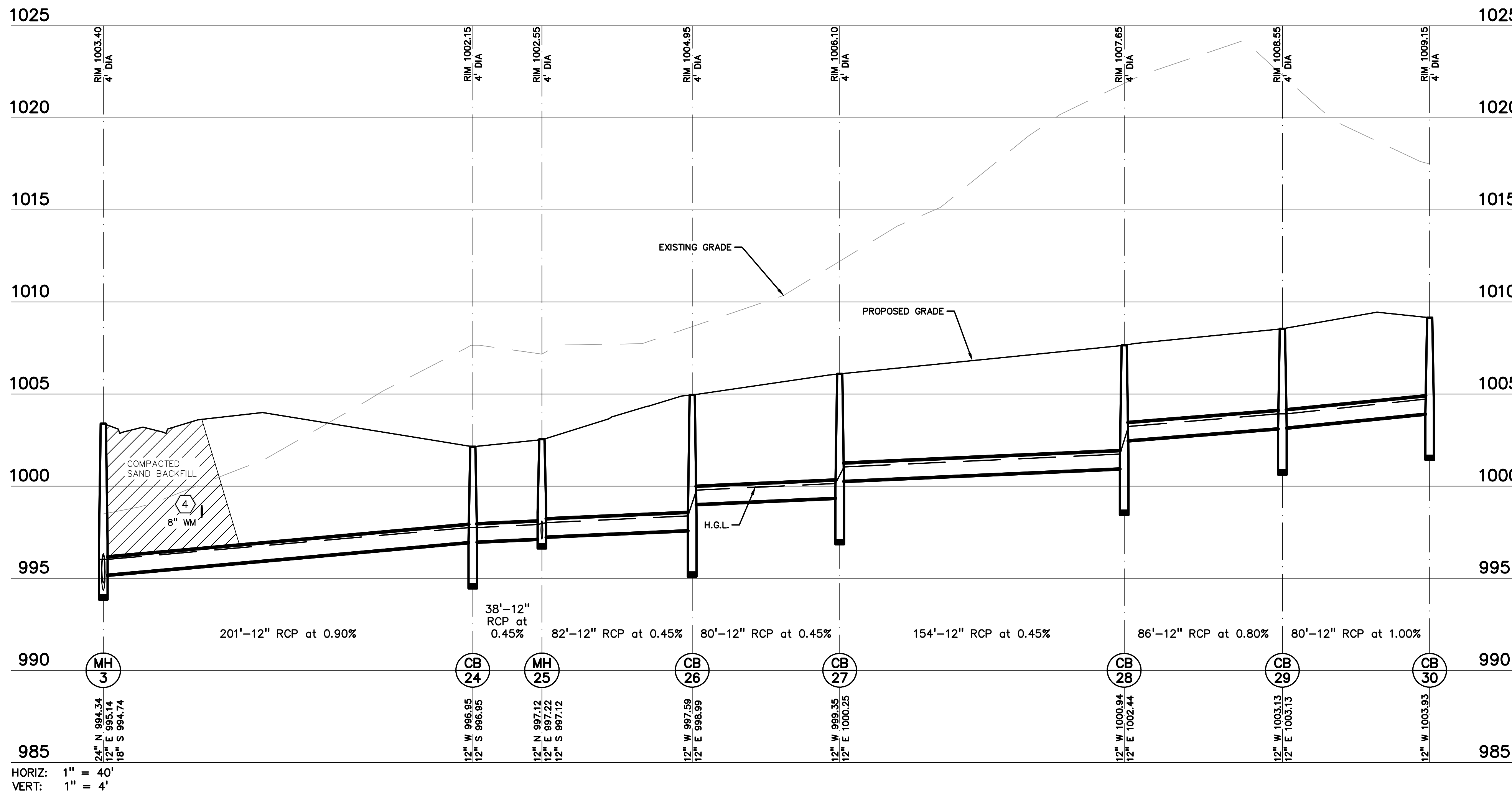
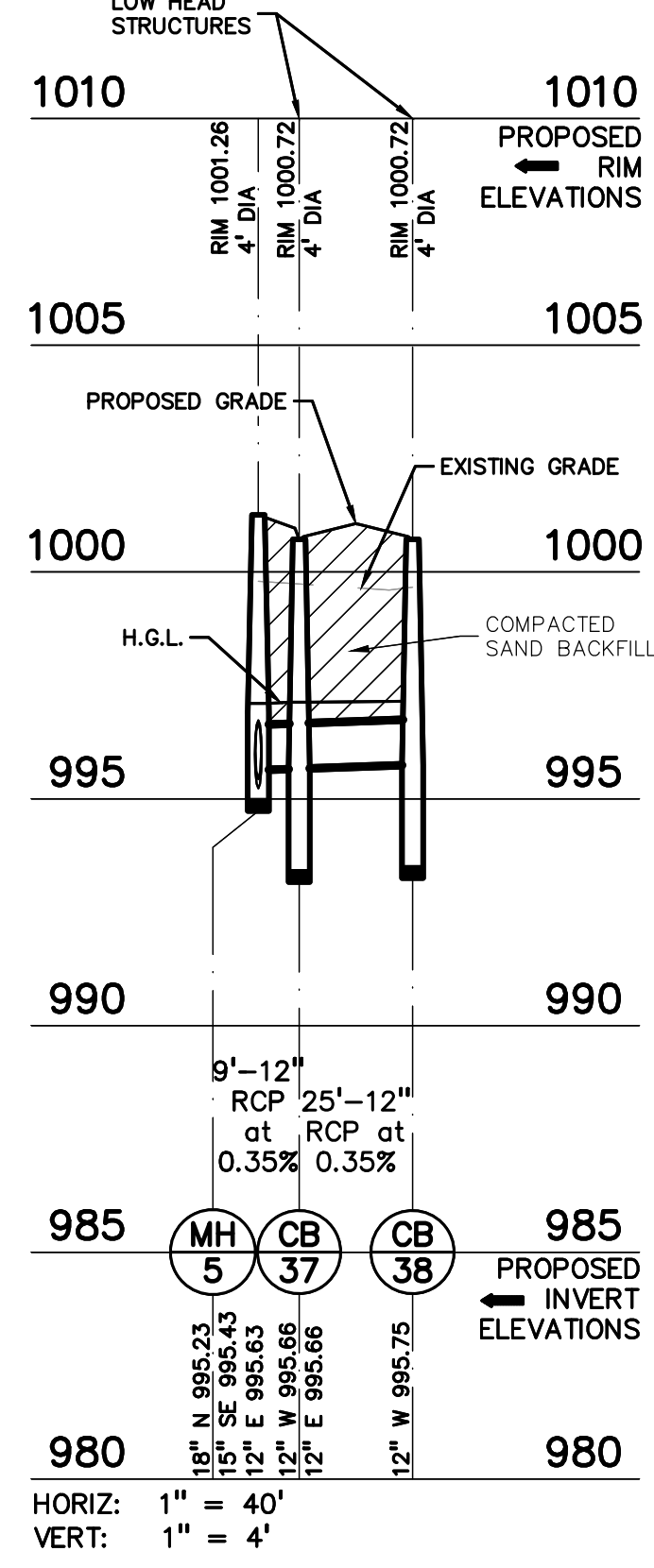
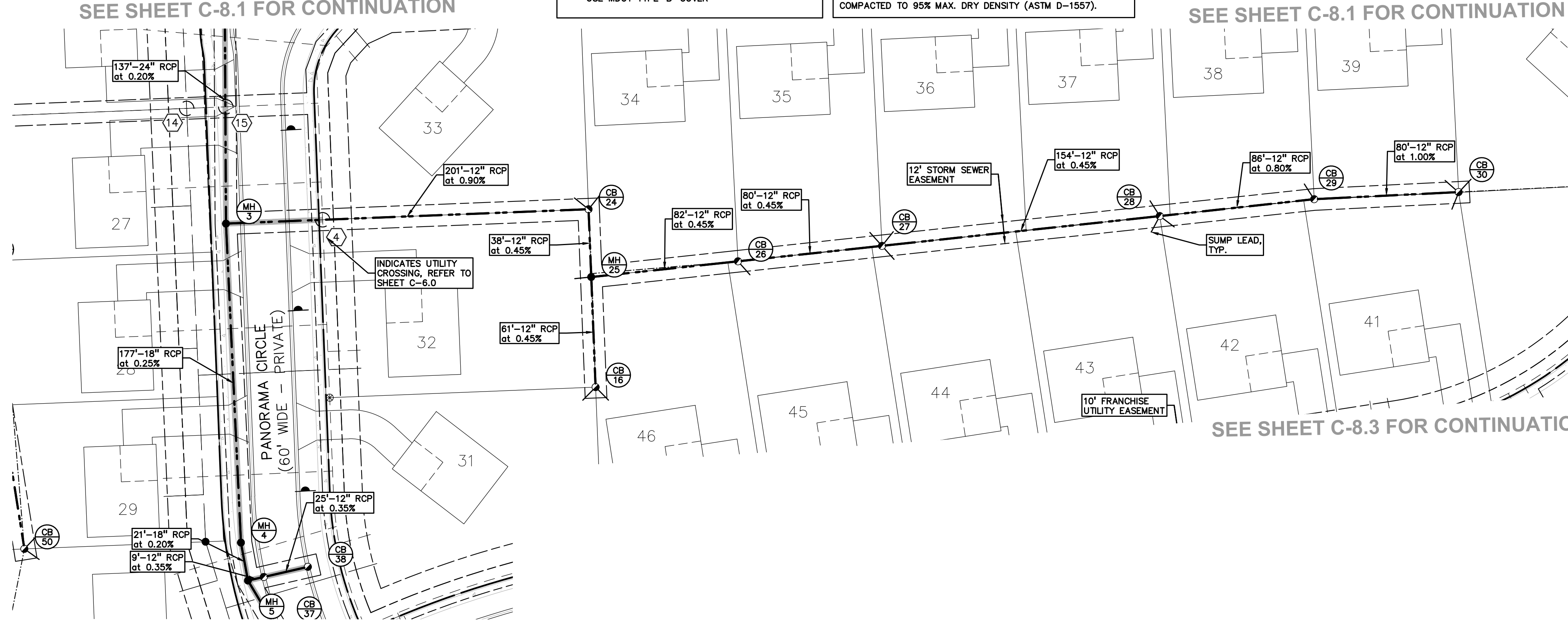
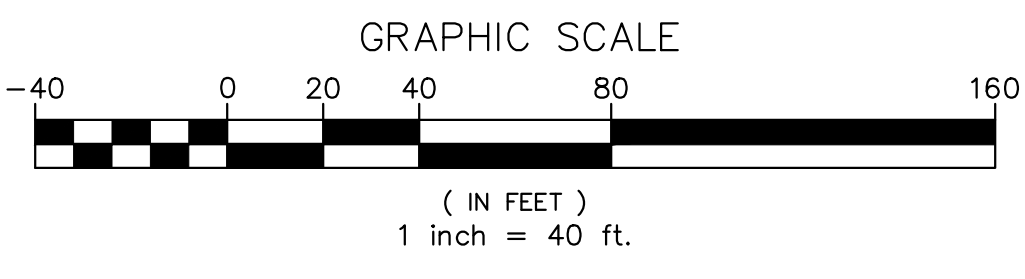
STORM SEWER FRAME & COVER NOTES

CATCH BASIN/INLET WITHIN CURB
USE MDOT TYPE 'C' COVER WITH MDOT 'K' FRAME

CATCH BASIN/INLET WITHIN GRASS AREAS
USE E.J.I.W. #1040 WITH TYPE '02' BEEHIVE COVER

MANHOLE
USE MDOT TYPE 'B' COVER

SAND BACKFILL NOTE:
ALL UTILITIES UNDER PAVEMENT OR WITHIN 3' OF THE EDGE OF PAVEMENT (OR WITHIN THE 45° LINE OF INFLUENCE OF PAVEMENT) SHALL HAVE M.D.O.T. CLASS II GRANULAR BACKFILL COMPACTED TO 95% MAX. DRY DENSITY (ASTM D-1557).



STORM STRUCTURES			
MH	3	(4' DIA./0' SUMP) RIM = 1003.40 12" E 995.14 18" S 994.74 24" N 994.34	
MH	5	(4' DIA./0' SUMP) RIM = 1001.26 15" SE 995.43 12" E 995.63 18" N 995.23	
CB	16	(4' DIA./2' SUMP) RIM = 1003.60 12" N 997.39	
CB	24	(4' DIA./2' SUMP) RIM = 1002.15 12" S 996.95 12" W 996.95	
MH	25	(4' DIA./0' SUMP) RIM = 1002.55 12" E 997.22 12" S 997.12 12" N 997.12	
CB	26	(4' DIA./2' SUMP) RIM = 1004.95 12" E 998.99 12" W 997.59	
CB	27	(4' DIA./2' SUMP) RIM = 1006.10 12" E 1000.25 12" W 999.35	
CB	28	(4' DIA./2' SUMP) RIM = 1007.65 12" E 1002.44 12" W 1000.94	
CB	29	(4' DIA./2' SUMP) RIM = 1008.55 12" E 1003.13 12" W 1003.13	
CB	30	(4' DIA./2' SUMP) RIM = 1009.15 12" E 995.66 12" W 1003.93	
CB	37	(4' DIA./2' SUMP) RIM = 1000.72 12" E 995.66 12" W 995.66	
CB	38	(4' DIA./2' SUMP) RIM = 1000.72 12" W 995.75	

REVISIONS

NO.	DATE	DESCRIPTION
1	09-13-20	AMENDED FINAL PUD
2	12-15-20	REVISIONS PER NOVEMBER 13, 2020 TWP REVIEW
3	10-05-20	REVISIONS FOR ADDED E.V.A.
4	08-13-20	REVISIONS PER MAY 6, 2020 P.C. MEETING

CAUTION!!
THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS GIVEN FOR THE ACCURACY OF THE INFORMATION. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

THIS DRAWING AND DESIGN ARE THE PROPERTY OF PEA, INC. THEY ARE LOANED TO THE CONTRACTOR FOR THEIR USE ONLY. THEY ARE NOT TO BE REPRODUCED, COPIED, REPRODUCED, OR COPIED IN WHOLE OR IN PART, OR USED FOR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF PEA, INC. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED. © 2020 PEA, INC.

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR SHALL BE RESPONSIBLE FOR THE SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFINE, INDENTIFY AND HOLD DESIGN PROFESSIONAL, INDENTIFY AND HOLD DESIGN PROFESSIONAL, OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPT LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

3 FULL WORKING DAYS BEFORE YOU DIG CALL 811

Know what's below
Call before you dig

MISS Dig System, Inc.
1-800-482-7171 www.missdig.net (TOLL FREE)

PEA, Inc.
2430 Rochester Ct, Ste 100
Troy, MI 48063-1872
t: 248.689.9090
f: 248.689.1044
www.peainc.com

FRANKLIN RIDGE HOMES, LLC
30180 ORCHARD LAKE ROAD, SUITE 150
FARMINGTON HILLS, MICHIGAN 48334

STORM SEWER PLAN - CENTER
SILVERBELL POINTE
PART OF THE SE 1/4 OF SECTION 28 & NE 1/4 SECTION 33, T40N, R10E
ORION TOWNSHIP, OAKLAND COUNTY, MICHIGAN

DES. TMK DN. TMK SUR. KTR P.M. JBT

ORIGINAL ISSUE DATE:
MARCH 17, 2020

PEA JOB NO. 2018-150

SCALE: 1" = 40'

DRAWING NUMBER:
C-8.4

XREF: S:\PROJECTS\2018\2018150\DWG\18150-TOPBASE.DWG
XREF: S:\PROJECTS\2018\2018150\DWG\FINAL_PUD\X-BASE-18150.DWG
XREF: S:\PROJECTS\2018\2018150\DWG\FINAL_PUD\X-TBLK-18150.DWG

STORM SEWER SYSTEM DESIGN

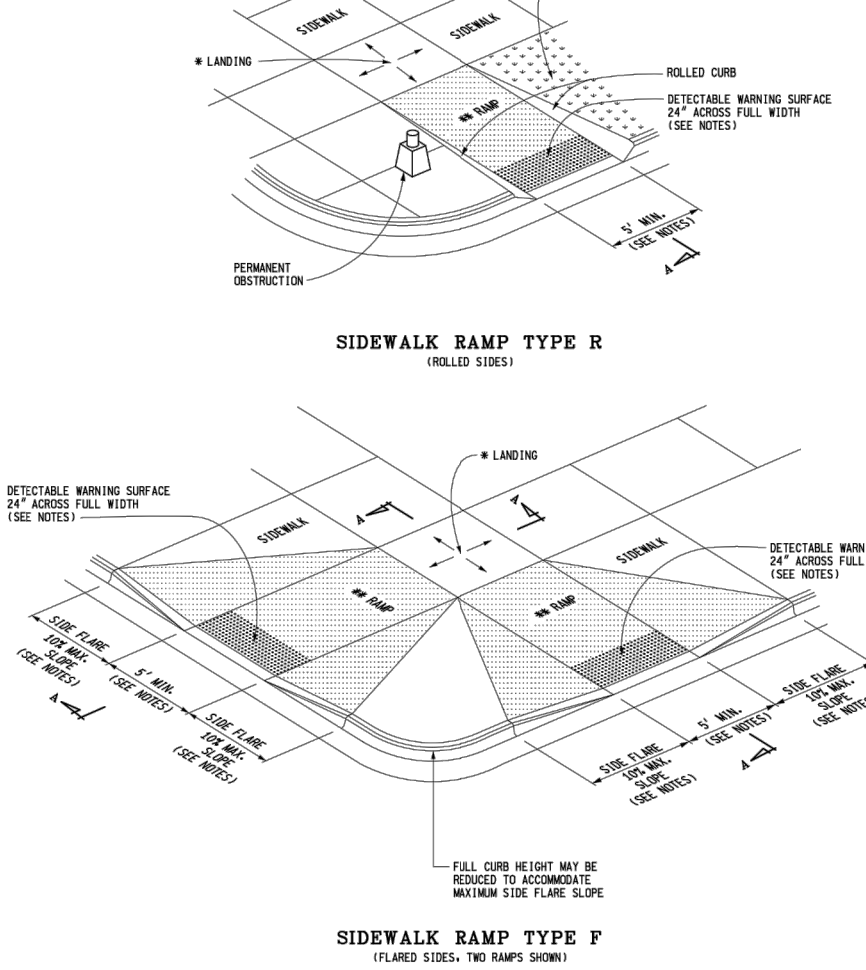
I = B/(T+D) ^E
C = varies
T = 20 (min.)
B = 175.0
D = 25.0
E = 1
Pipe "n" Value = 0.013

FROM STR	TO STR	AREA (A) (Acres)	COEF. C	A x C	TOTAL AREA (Ax C)	TOTAL AREA (Acres)	TIME t (min.)	INT. I (in/hr)	FLOW Q (cfs)	PIPE CAP. (cfs)	PIPE DIA. (in.)	PIPE LENGTH (ft.)	PIPE SLOPE (%)	MIN HG PER "Q"	VEL. FULL (ft./sec)	TIME FLOW (min.)	H.G.L. ELEV. UP STREAM	H.G.L. ELEV. DOWN STREAM	RIM ELEV. UP STREAM	RIM ELEV. DOWN STREAM	INVERT ELEV. UP STREAM	INVERT ELEV. DOWN STREAM	PIPE COVER UP STREAM	PIPE COVER DOWN STREAM	HGL COVER UP STREAM	HGL COVER DOWN STREAM
15	14	0.20	0.39	0.08	0.08	0.20	20.00	3.89	0.29	2.11	12	25	0.35	0.01%	2.7	0.2	1006.44	1006.35	1010.81	1010.80	1005.64	1005.55	4.00	4.09	4.37	4.45
14	13	0.28	0.56	0.16	0.23	0.47	20.20	3.87	0.90	2.11	12	9	0.35	0.06%	2.7	0.1	1006.35	1006.32	1010.80	1011.20	1005.55	1005.52	4.09	4.51	4.45	4.88
13	12	0.00	0.00	0.00	0.23	0.47	20.30	3.86	0.90	2.11	12	68	0.35	0.06%	2.7	0.4	1006.22	1005.98	1011.20	1010.40	1005.42	1005.18	4.61	4.05	4.98	4.41
12	11	0.00	0.00	0.00	0.23	0.47	20.70	3.83	0.90	2.11	12	147	0.35	0.06%	2.7	0.9	1005.18	1004.67	1010.40	1009.17	1004.38	1003.87	4.85	4.13	5.21	4.50
11	10	0.00	0.00	0.00	0.65	1.23	21.60	3.76	2.44	2.52	12	214	0.50	0.47%	3.2	1.1	1004.07	1002.99	1009.17	1007.53	1003.27	1002.19	4.73	4.16	5.10	4.53
10	8	0.00	0.00	0.00	1.11	2.02	22.70	3.67	4.08	4.14	12	194	1.35	1.31%	5.3	0.6	1002.52	999.99	1007.53	1004.50	1001.59	998.98	4.76	4.35	5.00	4.51
8	7	0.00	0.00	0.00	1.11	2.02	23.30	3.62	4.08	4.14	12	68	1.35	1.31%	5.3	0.2	999.99	999.09	1004.50	1003.18	997.78	996.86	5.55	5.16	4.51	4.09
7	6	0.00	0.00	0.00	1.55	2.87	23.50	3.61	5.60	5.04	12	43	2.00	2.47%	6.4	0.1	999.09	998.04	1003.18	1002.18	996.86	996.00	5.16	5.01	4.09	4.15
6	5	0.00	0.00	0.00	1.68	3.10	23.60	3.60	6.03	3.82	15	107	0.35	0.87%	3.1	0.6	998.04	997.10	1002.18	1001.26	995.80	995.43	4.94	4.39	4.15	4.16
5	4	0.00	0.00	0.00	2.17	4.13	24.20	3.56	7.74	4.70	18	21	0.20	0.54%	2.7	0.1	997.10	996.99	1001.26	1001.34	995.23	995.19	4.32	4.44	4.16	4.35
4	3	0.00	0.00	0.00	2.17	4.13	24.30	3.55	7.74	5.25	18	177	0.25	0.54%	3.0	1.0	996.99	996.03	1001.34	1003.40	995.19	994.74	4.44	6.94	4.35	7.37
3	2	0.00	0.00	0.00	2.98	6.88	25.30	3.48	10.38	10.12	24	137	0.20	0.21%	3.2	0.7	996.03	995.74	1003.40	1003.01	994.34	994.07	6.80	6.69	7.37	7.27
2	1	0.00	0.00	0.00	5.02	10.70	26.00	3.43	17.23	14.31	24	93	0.40	0.58%	4.6	0.3	995.74	995.20	1003.01	995.93	993.97	993.60	6.79	0.08	7.27	0.73
23	22	0.33	0.44	0.15	0.15	0.33	20.00	3.89	0.58	2.39	12	25	0.45	0.03%	3.0	0.1	1004.59	1004.48	1009.02	1009.02	1003.79	1003.68	4.06	4.17	4.42	4.53
22	21	0.55	0.59	0.32	0.47	0.88	20.10	3.88	1.82	2.39	12	9	0.45	0.26%	3.0	0.0	1004.48	1004.44	1009.02	1009.56	1003.68	1003.64	4.17	4.75	4.53	5.11
21	20	0.00	0.00	0.00	0.47	0.88	20.10	3.88	1.82	2.39	12	261	0.45	0.26%	3.0	1.4	1004.34	1003.17	1009.56	1007.83	1003.54	1002.37	4.85	4.30	5.21	4.66
20	19	0.00	0.00	0.00	0.98	1.84	21.50	3.76	3.70	6.46	15	241	1.00	0.33%	5.3	0.8	1002.47	1000.06	1007.83	1004.57	1001.47	999.06	4.93	4.08	5.36	4.52
19	18	0.00	0.00	0.00	1.48	2.73	22.30	3.70	5.49	7.64	15	151	1.40	0.72%	6.2	0.4	999.26	997.15	1004.57	1002.59	998.26	996.15	4.88	5.01	5.32	5.44
18	17	0.00	0.00	0.00	2.04	3.82	22.70	3.67	7.48	7.91	15	49	1.50	1.34%	6.5	0.1	997.15	996.49	1002.59	1002.71	996.15	995.41	5.01	5.86	5.44	6.21
17	9	0.00	0.00	0.00	2.04	3.82	22.80	3.66	7.48	7.91	15	34	1.50	1.34%	6.5	0.1	996.49	996.03	1002.71	1002.20	995.41	994.90	5.86	5.86	6.21	6.17
9	2	0.00	0.00	0.00	2.04	3.82	22.90	3.65	7.48	7.91	15	22	1.50	1.34%	6.5	0.1	996.03	995.74	1002.20	1003.01	994.90	994.57	5.86	7.00	6.17	7.27
30	29	0.32	0.25	0.08	0.08	0.32	20.00	3.89	0.31	3.56	12	80	1.00	0.01%	4.5	0.3	1004.73	1003.93	1009.15	1008.55	1003.93	1003.13	4.05	4.25	4.42	4.62
29	28	0.19	0.37	0.07	0.15	0.52	20.30	3.86	0.59	3.19	12	86	0.80	0.03%	4.1	0.4	1003.93	1003.24	1008.55	1007.65	1003.13	1002.44	4.25	4.04	4.62	4.41
28	27	0.31	0.30	0.09	0.25	0.83	20.70	3.83	0.94	2.39	12	154	0.45	0.07%	3.0	0.8	1001.74	1001.05	1007.65	1006.10	1000.94	1000.25	5.54	4.68	5.91	5.05
27	26	0.66	0.30	0.20	0.44	1.49	21.50	3.76	1.67	2.39	12	80	0.45	0.22%	3.0	0.4	1000.15	999.79	1006.10	1004.95	999.35	998.99	5.58	4.80	5.95	5.16
26	25	0.36	0.29	0.10	0.55	1.85	21.90	3.73	2.04	2.39	12	82	0.45	0.33%	3.0	0.4	998.39	998.02	1004.95	1002.55	997.59	997.22	6.20	4.16	6.56	4.53
25	24	0.00	0.00	0.00	0.61	2.03	22.30	3.70	2.27	2.39	12	38	0.45	0.41%	3.0	0.2	997.92	997.75	1002.55	1002.15	997.12	996.95	4.26	4.03	4.63	4.39
24	3	0.72	0.27	0.19	0.81	2.75	22.50	3.68	2.97	3.38	12	201	0.90	0.70%	4.3	0.8	997.75	996.03	1002.15	1003.40	996.95	995.14	4.03	7.09	4.39	7.37
50	49	0.23	0.34	0.08	0.08	0.23	20.00	3.89	0.30	2.02	12	161	0.32	0.01%	2.6	1.0	995.65	995.14	998.55	998.20	994.85	994.34	2.53	2.70	2.90	3.06
49	48	0.29	0.31	0.09	0.17	0.52	21.00	3.80	0.64	2.02	12	160	0.32	0.03%	2.6	1.0	995.14	994.63	998.20	998.20	994.34	993.83	2.70	3.21	3.06	3.57
48	47	0.18	0.29	0.05	0.22	0.70	22.00	3.72	0.82	2.02	12	70	0.32	0.05%	2.6	0.5	994.63	994.40	998.20	994.85	993.83	993.60	3.21	0.08	3.57	0.45
32	31	0.48	0.51	0.24	0.24	0.48	20.00	3.89	0.95	2.11	12	25	0.35	0.07%	2.7	0.2	1002.88	1002.80	1007.29	1007.29	1002.08	1002.00	4.04	4.13	4.41	4.50
31	20	0.48	0.57	0.27	0.52	0.96	20.20	3.87	1.99	2.11	12	9	0.35	0.31%	2.7	0.1	1002.80	1002.77	1007.29	1007.83	1002.00	1001.97	4.13	4.70	4.50	5.06
34	33	0.45	0.55	0.25	0.25	0.45	20.00	3.89	0.98	2.39	12	25	0.45	0.08%	3.0	0.1	999.61	999.50	1004.04	1004.03	998.81	998.70	4.06	4.17	4.43	4.54
33	19	0.44	0.56	0.25	0.50	0.90	20.10	3.88	1.94	2.39	12	9	0.45	0.30%	3.0	0.0	999.50	999.46	1004.03	1004.57	998.70	998.66	4.17	4.75	4.54	5.12
36	35	0.51	0.47	0.24	0.24	0.51	20.00	3.89	0.94	2.39	12	25	0.45	0.07%	3.0	0.1	997.60	997.49	1002.05	1002.05	996.80	996.69	4.08	4.20	4.45	4.57
35	18	0.58	0.55	0.31	0.56	1.09	20.10	3.88	2.16	2.39	12	9	0.45	0.37%	3.0	0.0	997.49	997.45	1002.05	1002.59	996.69	996.65	4.20	4.78	4.57	5.15
38	37	0.51	0.51	0.26	0.26	0.51	20.00	3.89	1.01	2.11	12	25	0.35	0.08%	2.7	0.2	997.15	997.13	1000.72	1000.72	995.75	995.66	3.80	3.89	3.57	3.59
37	5	0.52	0.46	0.24	0.50	1.03	20.20	3.87	1.93	2.11	12	9	0.35	0.29%	2.7	0.1	997.13	997.10	1000.72	1001.26	995.66	995.63	3.89	4.46	3.59	4.16
40	39	0.40	0.49	0.19	0.19	0.40	20.00	3.89	0.76	2.11	12	25	0.35	0.05%	2.7	0.2	999.13	999.11	1002.61	1002.61	997.38	997.29	4.06	4.15	3.49	3.50
39	7	0.46	0.54	0.25	0.44	0.86	20.20	3.87	1.71	2.11	12	10	0.35	0.23%	2.7	0.1	999.11	999.09	1002.61	1003.18	997.29	997.26	4.15	4.76	3.50	4.09
42	41	0.41	0.59	0.24	0.24	0.41	20.00	3.89	0.94	2.11	12	25	0.35	0.07%	2.7	0.2	1002.61	1002.54	1006.99	1006.99	1001.81	1001.73	4.01	4.09	4.38	4.44
41	10	0.37	0.59	0.22	0.46	0.78	20.20	3.87	1.79	2.11	12	9	0.35	0.25%	2.7	0.1	1002.54	1002.52	1006.99	1007.53	1001.73	1001.69	4.09	4.66	4.44	5.00
44	43	0.35	0.52	0.18	0.18	0.35	20.00	3.89	0.71	2.11	12	25	0.35	0.04%	2.7	0.2	1004.28	1004.20	1008.68	1008.67	1003.48	1003.40	4.03	4.11	4.39	4.48
43	11	0.41	0.58	0.23	0.42	0.76	20.20	3.87	1.62	2.11	12	9	0.35	0.21%	2.7	0.1	1004.20	1004.17	1008.67	1009.17	1003.40	1003.37	4.11	4.63	4.48	5.00
46	45	0.05	0.53	0.03	0.03	0.05	20.00	3.89	0.10	2.11	12	25	0.35	0.00%	2.7	0.2	998.04	998.04	1000.36	1000.36	996.26	996.17	2.94	3.03	2.32	2.32
45	6	0.17	0.56	0.10	0.12	0.22	20.20	3.87	0.48	2.11	12	47	0.35	0.02%	2.7	0.3	998.04	998.04	1000.36	1002.18	996.17	996.00	3.03	5.01	2.32	4.15
51	52	0.76	0.20	0.1																						



* MAXIMUM LANDING SLOPE IS 2:00, IN EACH DIRECTION OF TRAVEL. LANDING MINIMUM DIMENSIONS 5' x 5'. SEE NOTES.

** MAXIMUM RAMP CROSS SLOPE IS 2:12. RUNNING SLOPE IS 1:10 TO 1:15. SEE NOTES.



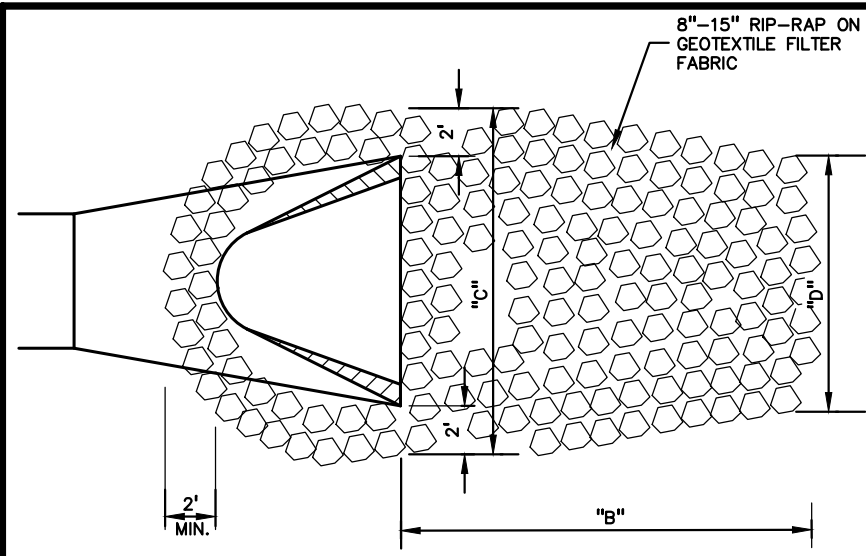
SIDEWALK RAMP AND DETECTABLE WARNING DETAILS

PREPARED BY: **MDOT**
DESIGN DIVISION
DESIGNED BY: **MDOT**
CHECKED BY: **MDOT**

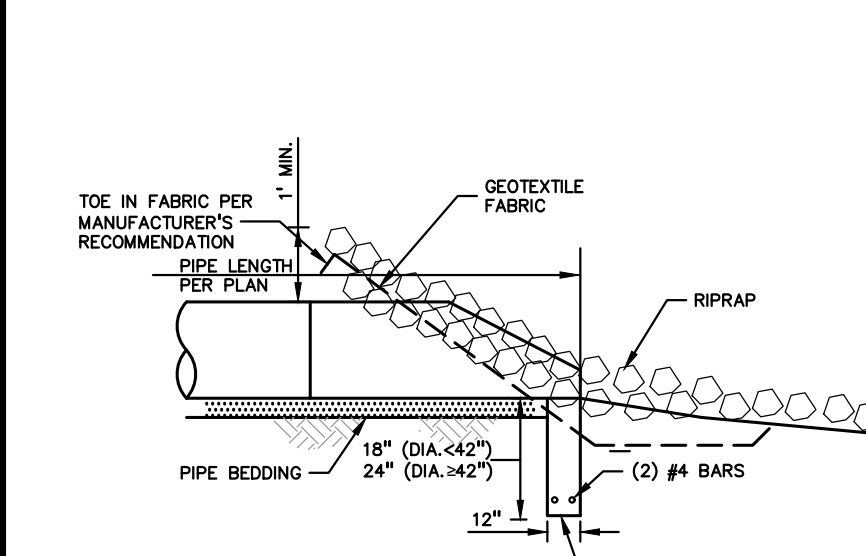
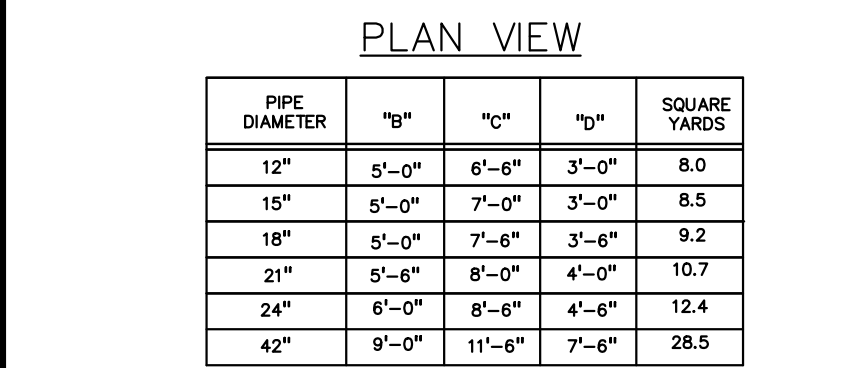
APPROVED BY: **MDOT**
DIRECTOR, BUREAU OF FIELD SERVICES
APPROVED BY: **MDOT**
SPECIAL INCHARGE, DESIGN

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF DEVELOPMENT ENGINEERING
DESIGNED BY: **MDOT**
CHECKED BY: **MDOT**
APPROVED BY: **MDOT**

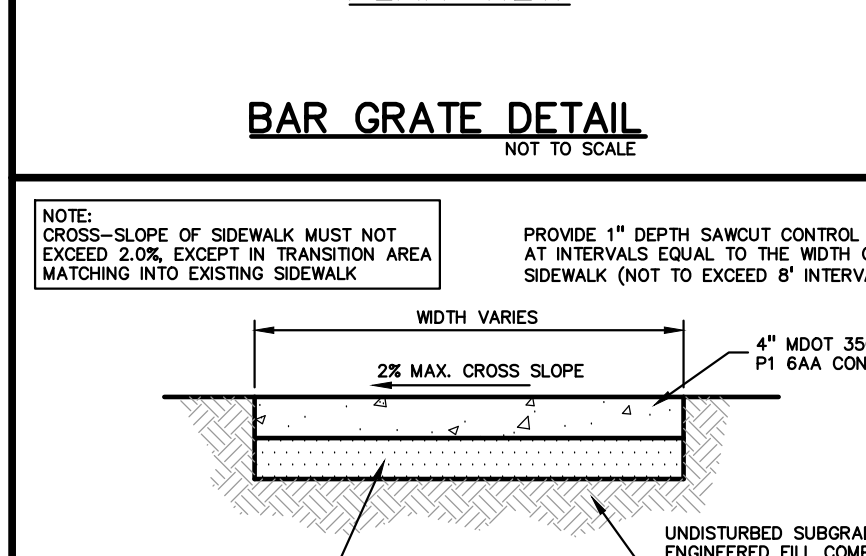
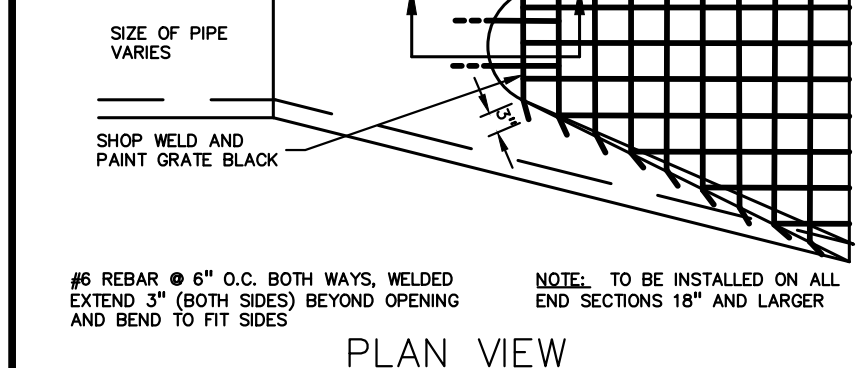
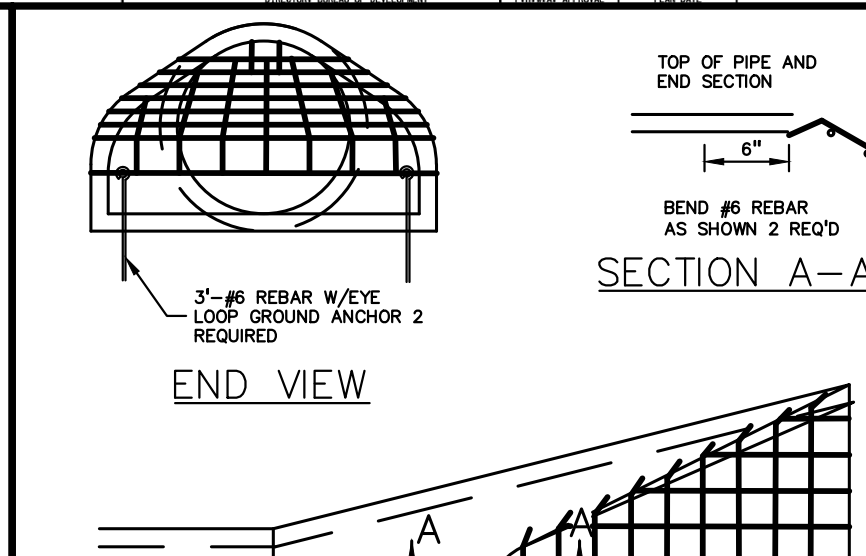
DATE: 12-11-2007
SHEET: 1 OF 1
PROJECT: **R-28-J**



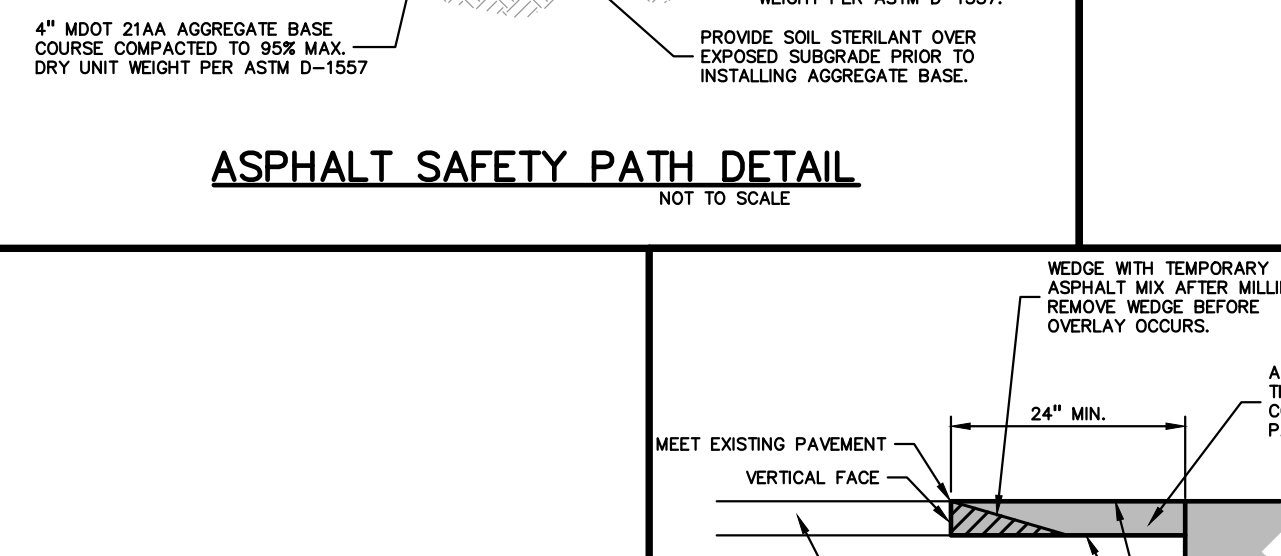
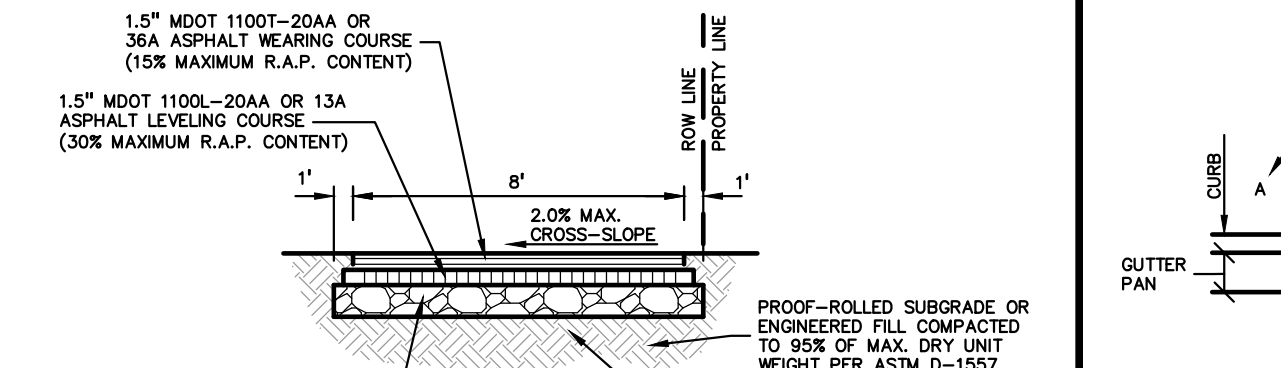
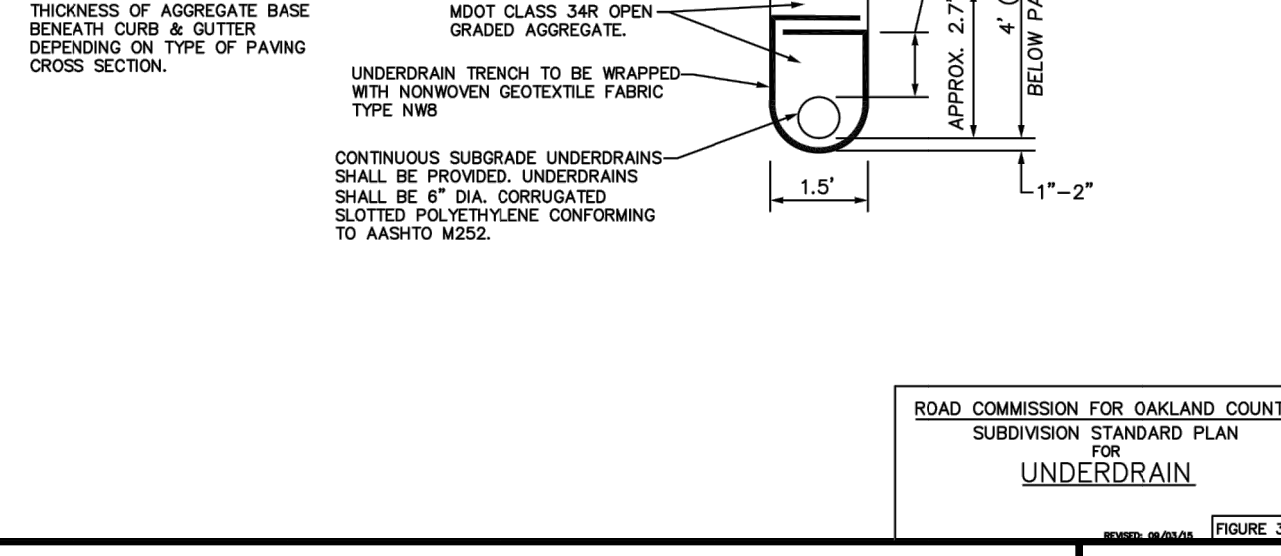
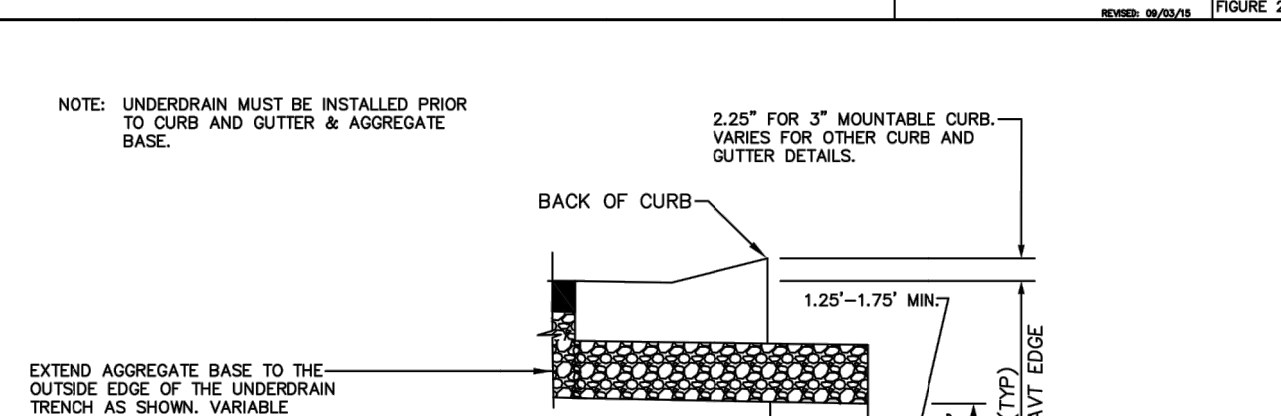
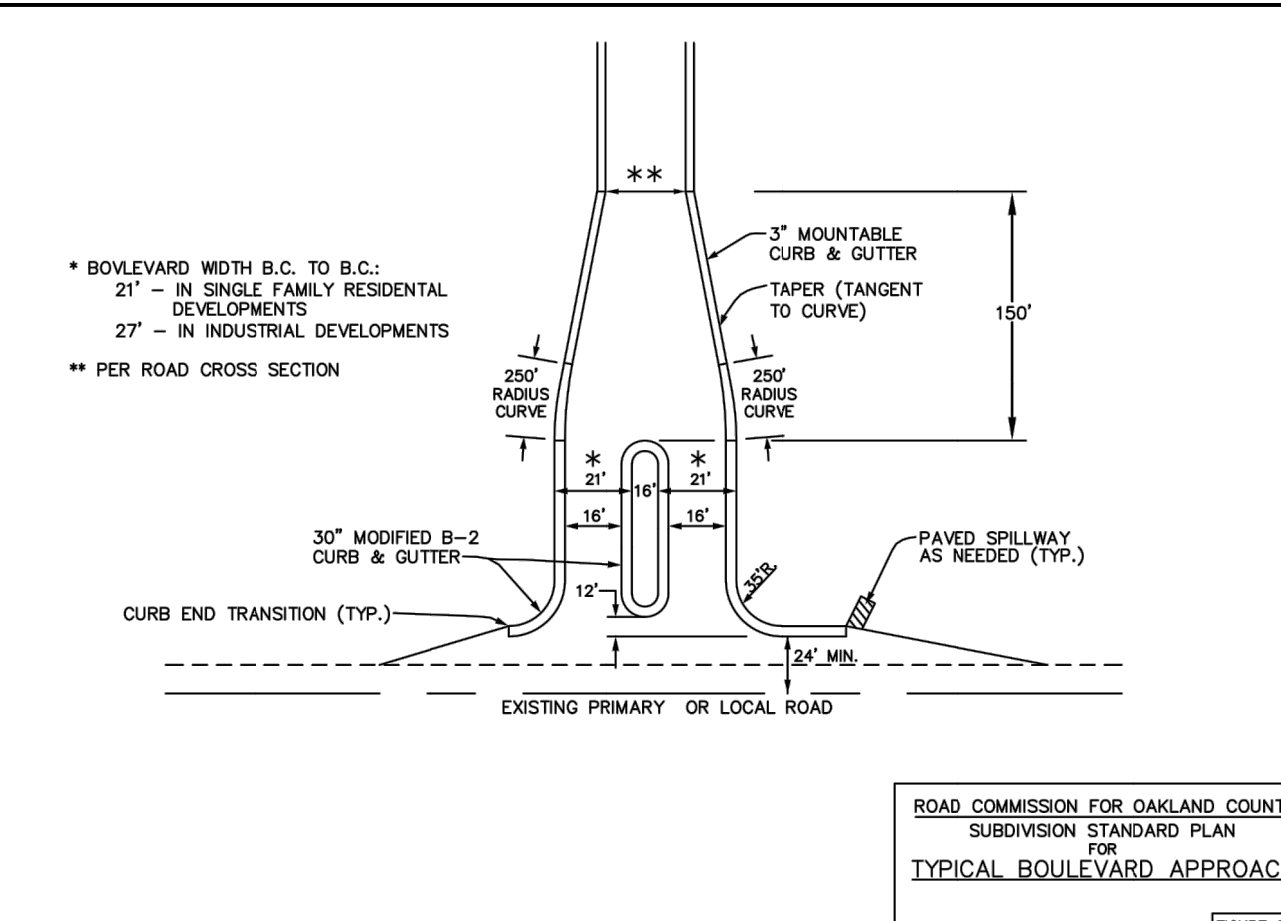
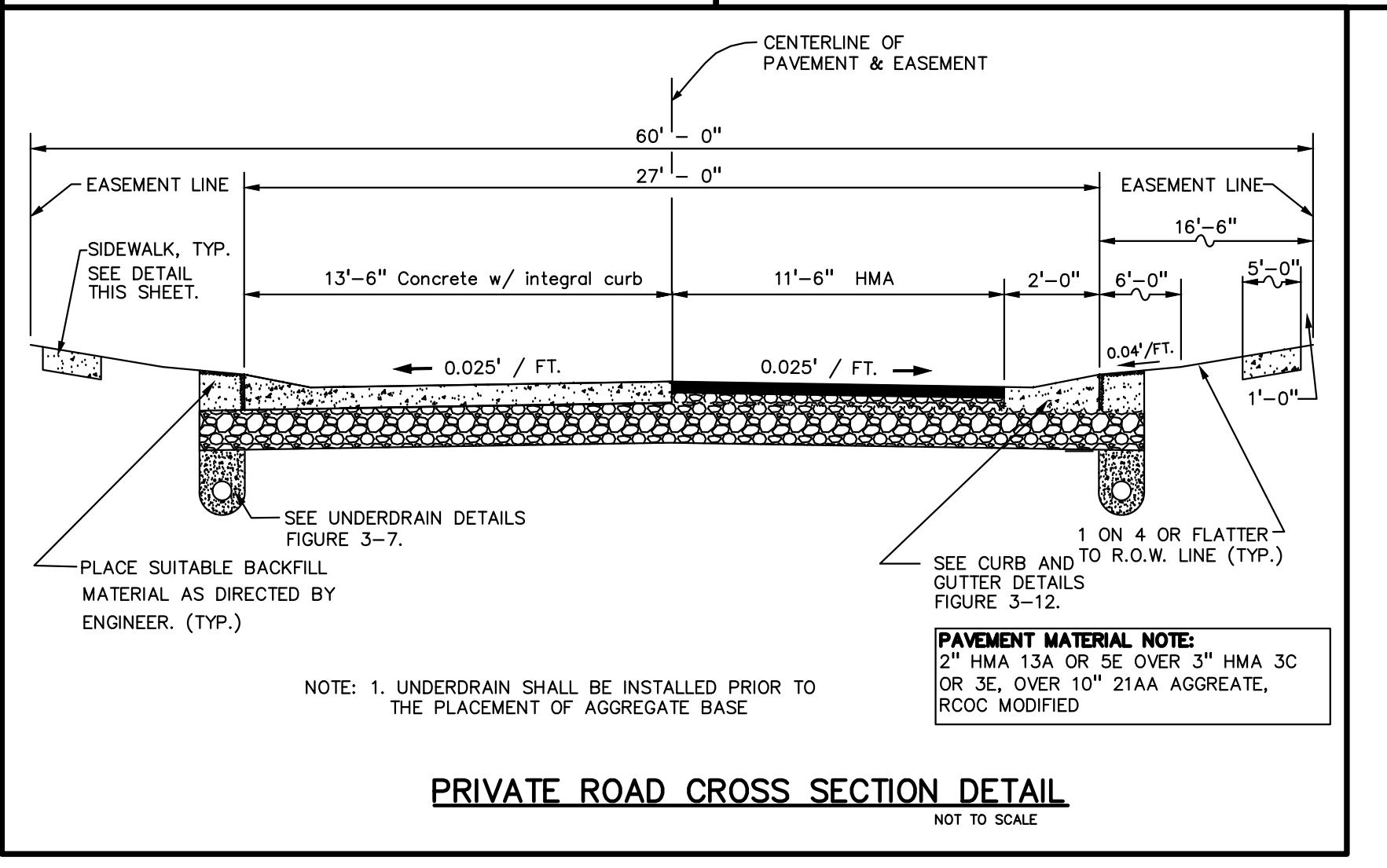
PIPE DIAMETER	"b"	"c"	"d"	SQUARE YARDS
12"	5'-0"	6'-6"	3'-0"	8.0
15"	5'-0"	7'-0"	3'-0"	8.5
18"	5'-0"	7'-6"	3'-6"	9.2
21"	5'-6"	8'-0"	4'-0"	10.7
24"	6'-0"	8'-6"	4'-6"	12.4
42"	9'-0"	11'-6"	7'-6"	28.5



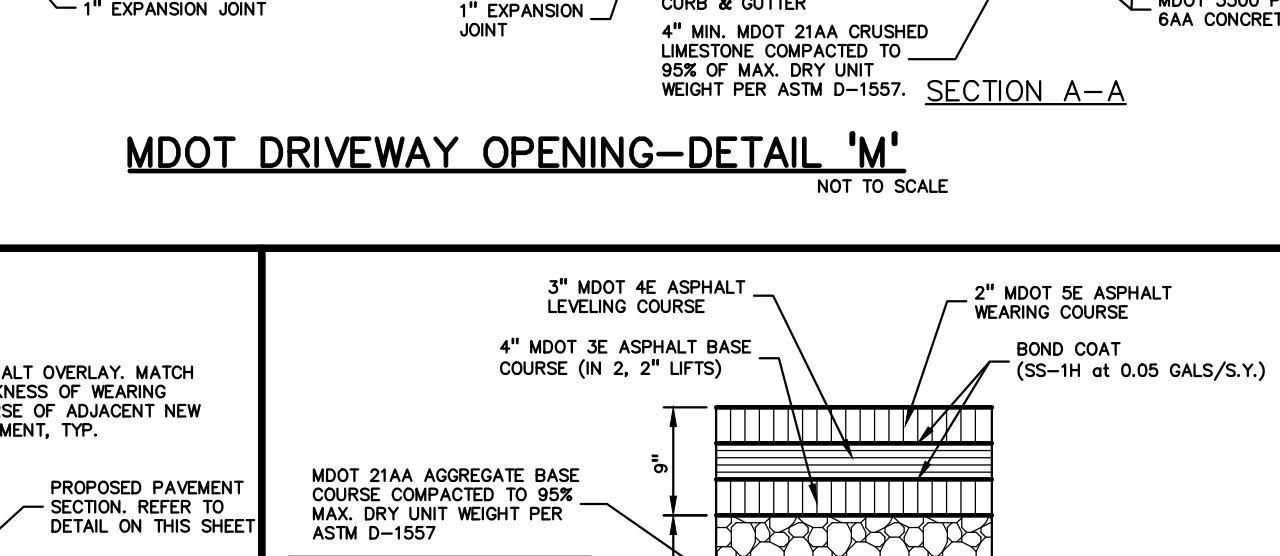
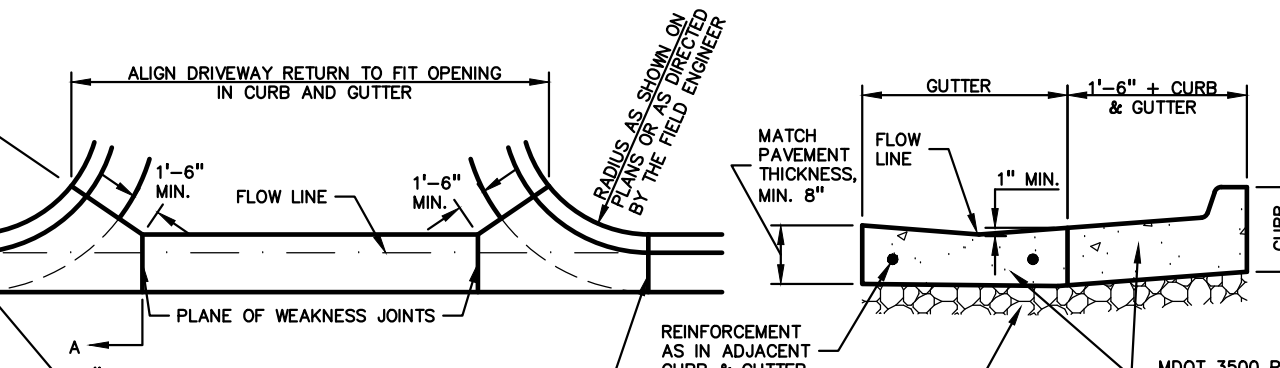
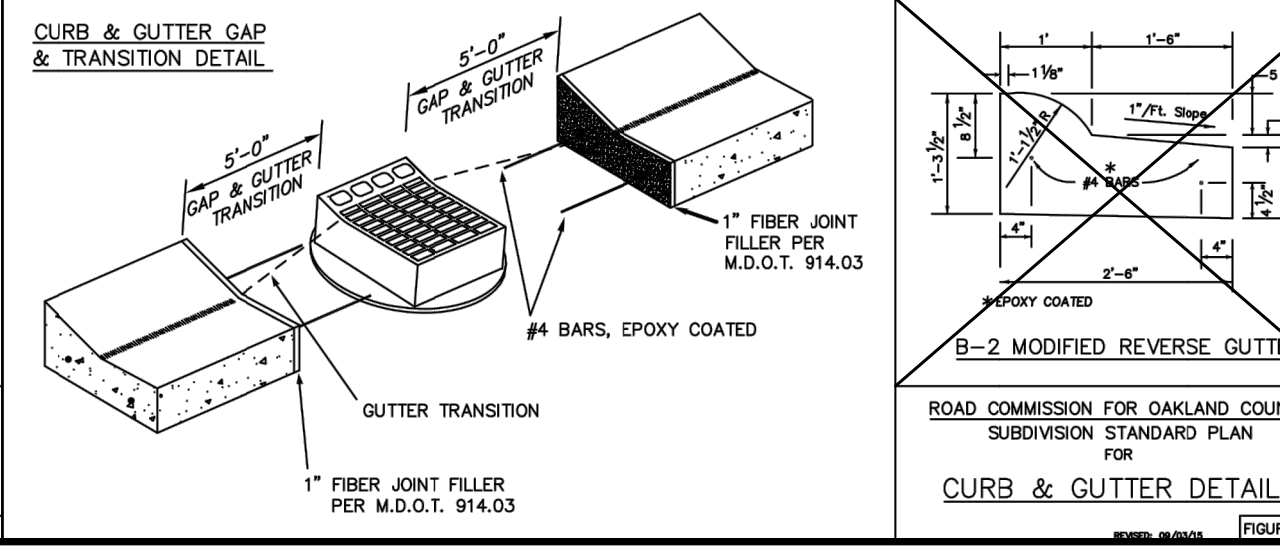
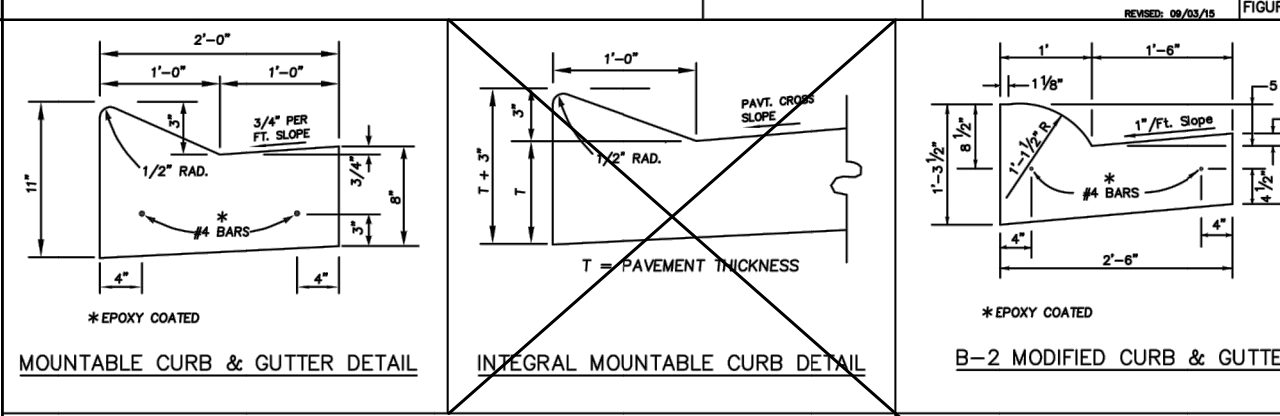
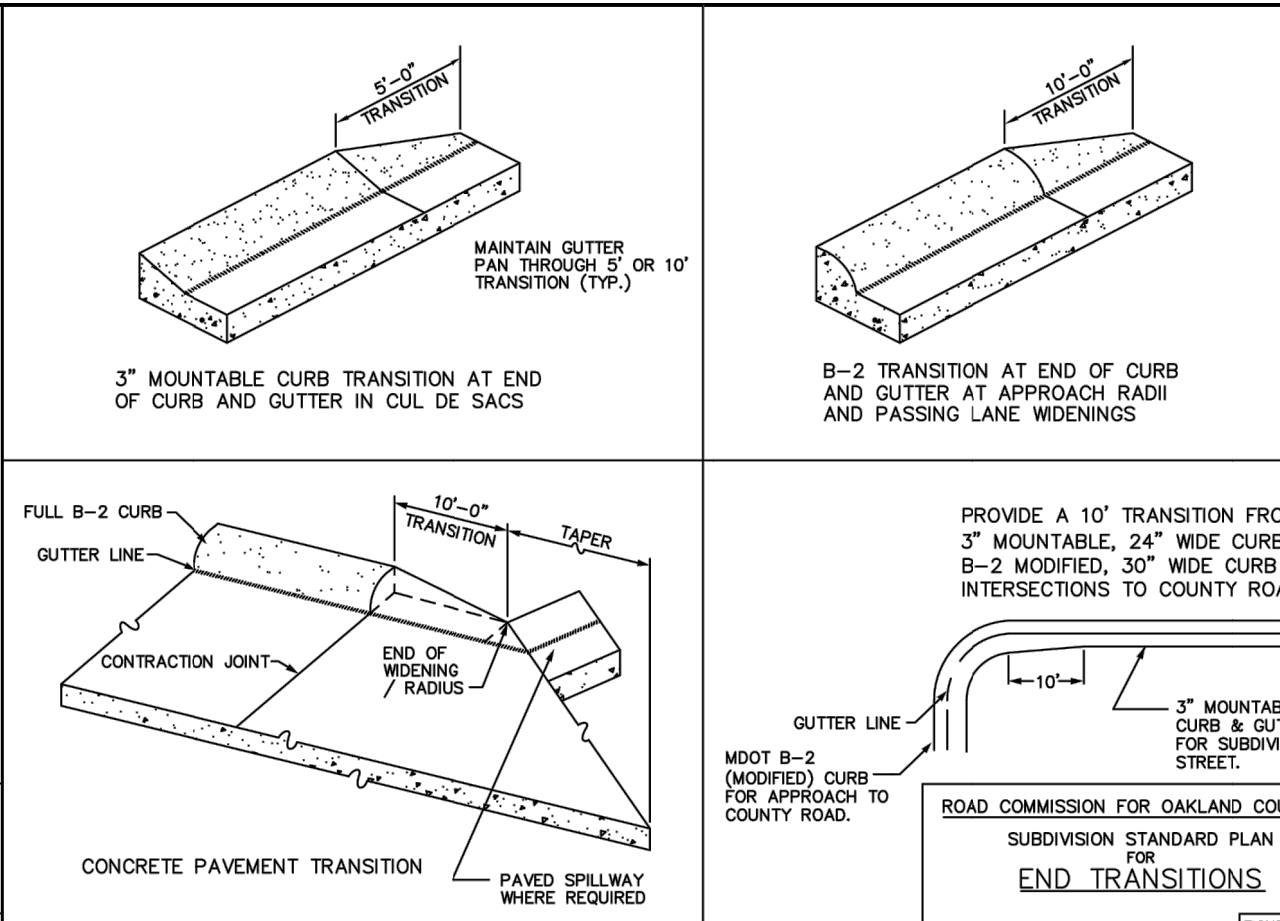
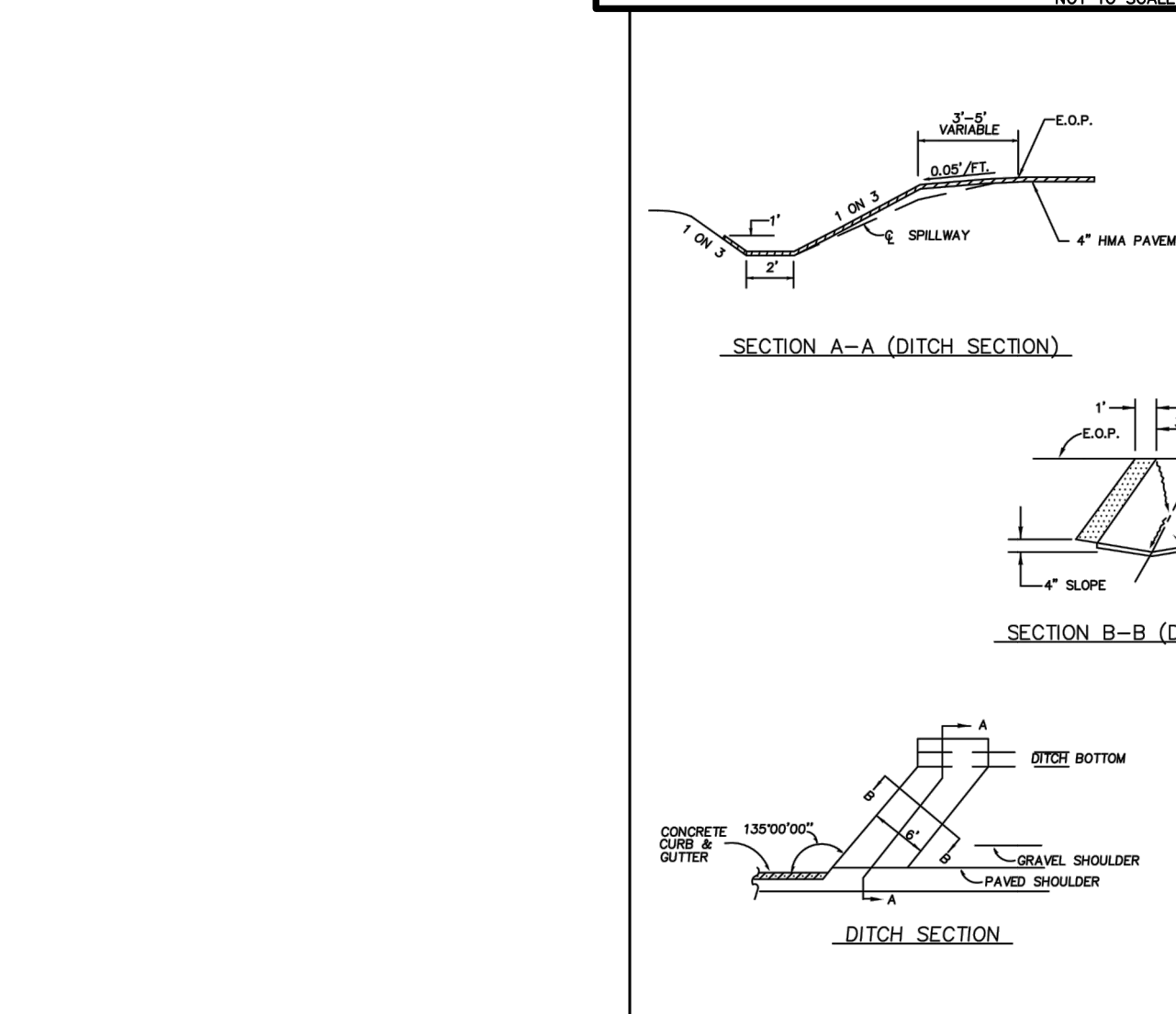
END SECTION & RIPRAP DETAIL
NOT TO SCALE



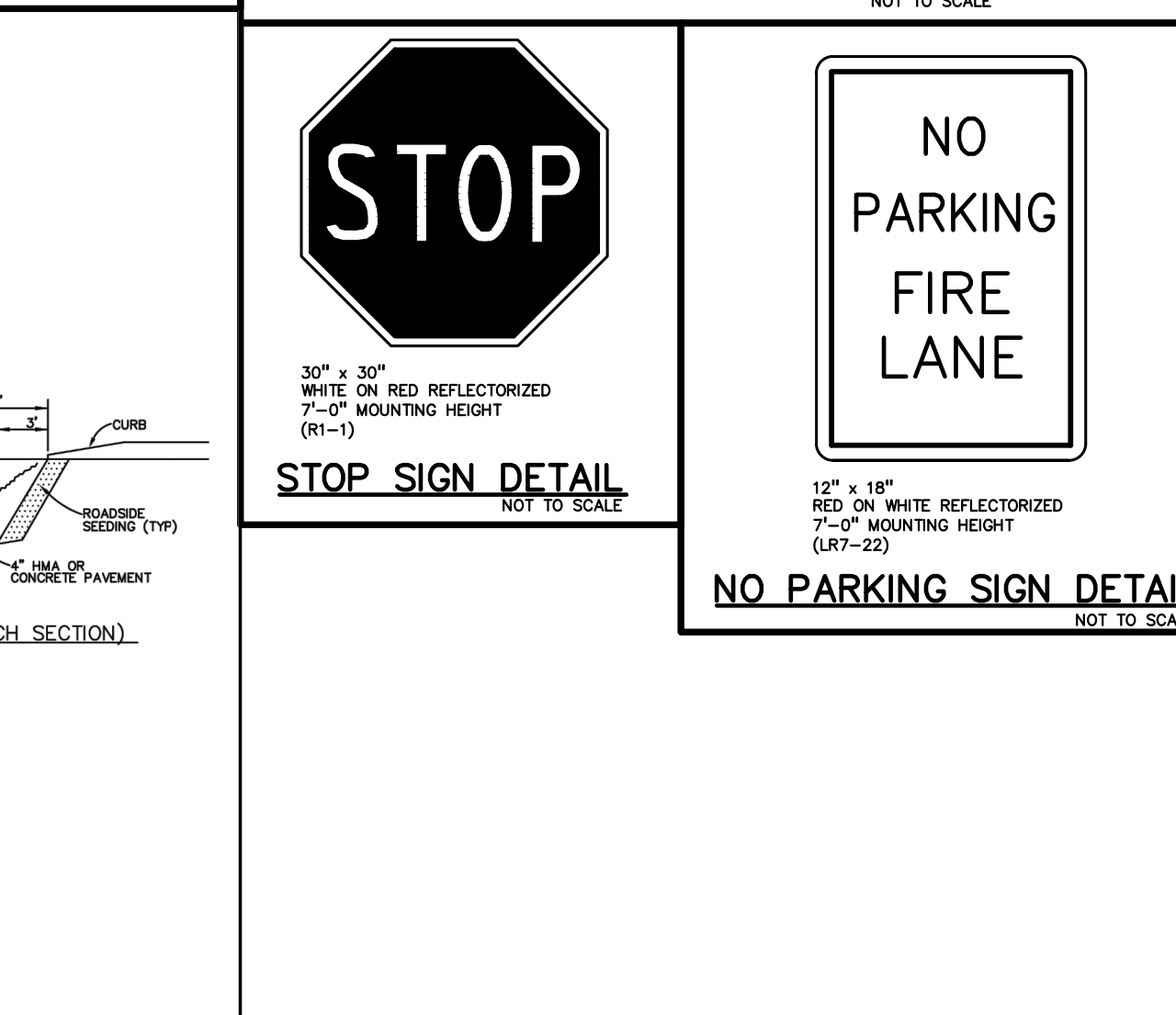
CONCRETE SIDEWALK
NOT TO SCALE



R.C.O.C. ASPHALT APPROACH
NOT TO SCALE



R.C.O.C. ASPHALT APPROACH
NOT TO SCALE



NO.	DATE	DESCRIPTION
1	09-13-20	REVISED FINAL PUD
2	12-15-20	REVISED FOR NOVEMBER 13, 2020 TWP REVIEW
3	10-05-20	REVISED FOR ADDED E.V.A.
4	08-17-20	REVISED FOR MAY 6, 2020 P.C. MEETINGS
5	08-17-20	REVISED FOR MAY 6, 2020 P.C. MEETINGS

REVISIONS

CAUTION!!
THE LOCATION AND ELEVATIONS OF EXISTING UNDERDRAINS UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS GIVEN EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

3 FULL WORKING DAYS BEFORE YOU DIG CALL 811
Know what's below
Call before you dig
MISS Dig System, Inc.
1-800-482-7171 www.missdig.net
(101-4861)



PEA, Inc.
2430 Rochester Ct, Ste 100
Troy, MI 48063-1872
t: 248.689.9090
f: 248.689.1044
www.peainc.com

FRANKLIN RIDGE HOMES, LLC
30180 ORCHARD LAKE ROAD, SUITE 150
PARKINGTON HILLS, MICHIGAN 48354

NOTES AND DETAILS
SILVERBELL POINTE
PART OF THE SE 1/4 OF SECTION 28 & NE 1/4 SECTION 33, T40N, R10E
ORION TOWNSHIP, OAKLAND COUNTY, MICHIGAN

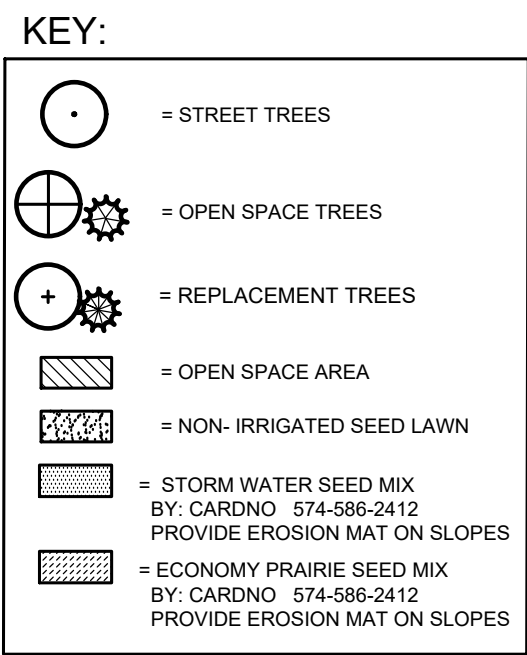
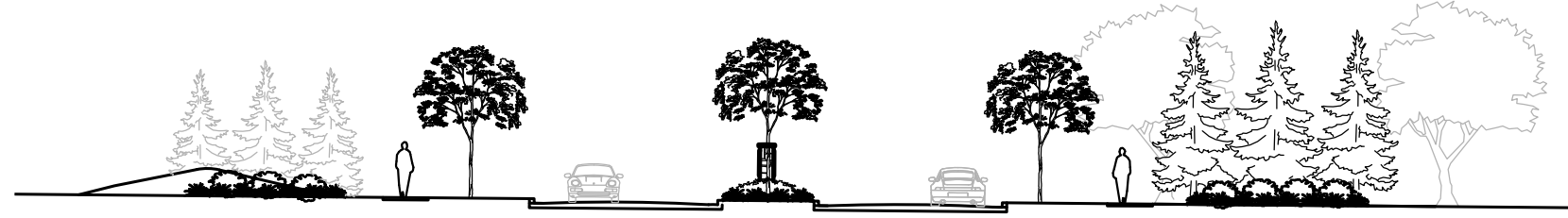
DES. TMK DN. TMK SUR. KTR JBT

ORIGINAL ISSUE DATE:
MARCH 17, 2020

PEA JOB NO. 2018-150

SCALE: 1" = 120'

DRAWING NUMBER:
C-10.0

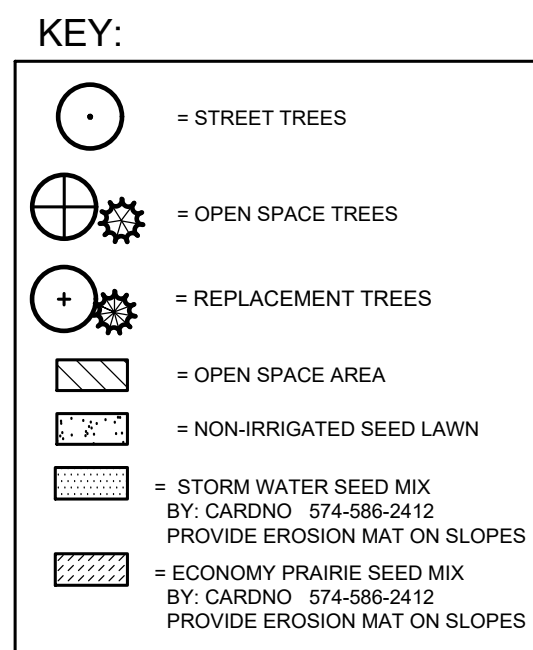


Economy Prairie Seed Mix CARDNO 574E-586-2412 cardnonativeplantnursery.com	
<u>Botanical Name</u>	<u>Common Name</u>
Permanent Grasses/Sedges/Rushes:	
<i>Andropogon gerardii</i>	Big Bluestem
<i>Buteloua curtipendula</i>	Side Oats Grama
<i>Carex spp.</i>	Prairie Sedge Mix
<i>Elymus canadensis</i>	Canada Wild Rye
<i>Panicum virgatum</i>	Switch Grass
<i>Schizachyrium scoparium</i>	Little Bluestem
<i>Sorghastrum nutans</i>	Indian Grass
Temporary Cover:	
<i>Avena sativa</i>	Common Oat
<i>Lolium multiflorum</i>	Annual Rye
Forbs & Shrubs:	
<i>Asclepias syriaca</i>	Common Milkweed
<i>Asclepias tuberosa</i>	Butterfly Weed
<i>Chamaecrista fasciculata</i>	Partridge Pea
<i>Coreopsis lanceolata</i>	Sand Coreopsis
<i>Echinacea purpurea</i>	Broad-leaved Purple Coneflower
<i>Heliopsis helianthoides</i>	False Sunflower
<i>Lupinus perennis</i>	Wild Lupine
<i>Monarda fistulosa</i>	Wild Bergamot
<i>Penstemon digitalis</i>	Foxglove Beard Tongue
<i>Pycnanthemum virginianum</i>	Common Mountain Mint
<i>Ratibida pinnata</i>	Yellow Coneflower
<i>Rudbeckia hirta</i>	Black-Eyed Susan
<i>Solidago speciosa</i>	Showy Goldenrod
<i>Symphoricarichum laeve</i>	Smooth Blue Aster
<i>Symphoricarichum novae-angliae</i>	New England Aster

GENERAL PLANTING NOTES:

1. LANDSCAPE CONTRACTOR SHALL VISIT SITE, INSPECT EXISTING SITE CONDITIONS AND REVIEW PROPOSED PLANTING AND RELATED WORK. IN CASE OF DISCREPANCY BETWEEN PLAN AND PLANT LIST, PLAN SHALL GOVERN QUANTITIES. CONTACT LANDSCAPE ARCHITECT WITH ANY CONCERNS.
2. CONTRACTOR SHALL VERIFY LOCATIONS OF ALL ON SITE UTILITIES PRIOR TO BEGINNING CONSTRUCTION ON ANY PHASE OF WORK. ELECTRIC, GAS, TELEPHONE, CABLE TELEVISION MAY BE LOCATED BY CALLING MISS DGI 1-800-482-7171. ANY DAMAGE OR INTERRUPTION OF SERVICE SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. CONTRACTOR SHALL COORDINATE ALL RELATED ACTIVITIES WITH OTHER TRADES ON THE JOB AND SHALL REPORT ANY UNACCEPTABLE JOB CONDITIONS TO OWNER'S REPRESENTATIVE PRIOR TO COMMENCING.
3. ALL PLANT MATERIAL TO BE PREMIUM GRADE NURSERY STOCK. ALL PLANT MATERIAL SHALL BE IN COMPLIANCE WITH NURSERYMAN STANDARD FOR NURSERY STOCK. ALL LANDSCAPE MATERIAL SHALL BE NORMALLY GROWN, NO. 1, GRADE.
4. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL QUANTITIES SHOWN ON LANDSCAPE PLAN PRIOR TO PRICING THE WORK.
5. THE OWNER'S REPRESENTATIVE RESERVES THE RIGHT TO REJECT ANY PLANT MATERIAL NOT MEETING SPECIFICATIONS.
6. ALL SINGLE STEM SHADE TREES TO HAVE STRAIGHT TRUNKS AND SYMMETRICAL CROWNS.
7. ALL SINGLE TRUNK SHADE TREES TO HAVE A CENTRAL LEADER. TREES WITH FORKED OR IRREGULAR TRUNKS WILL NOT BE ACCEPTED.
8. ALL MULTI STEM TREES SHALL BE HEAVILY BRANCHED AND FULLY SYMMETRICAL CROWNS. ONE SIDED TREES OR THOSE WITH THIN OR OPEN CROWNS SHALL NOT BE ACCEPTED.
9. ALL EVERGREEN TREES SHALL BE HEAVILY BRANCHED AND FULL TO THE GROUND, SYMMETRICAL IN SHAPE AND NOT SHEARED FOR THE LAST FIVE GROWING SEASONS.
10. ALL TREES TO HAVE CLAY OR CLAY LOAM BALLS, TREES WITH SAND BALLS WILL BE REJECTED.
11. NO MACHINERY IS TO BE USED WITHIN THE DRIP LINE OF EXISTING TREES; HAND GRADE ALL LAWN AREAS WITHIN THE DRIP LINE OF EXISTING TREES.
12. ALL TREE LOCATIONS SHALL BE STAKED BY LANDSCAPE CONTRACTOR AND ARE SUBJECT TO THE APPROVAL OF THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION OF THE PLANT MATERIAL.
13. IT IS MANDATORY THAT POSITIVE DRAINAGE IS PROVIDED AWAY FROM ALL BUILDINGS.
14. ALL PLANTING BEDS SHALL RECEIVE 3" SHREDED HARDWOOD BARK MULCH WITH PRE-EMERGENT SEE SPECIFICATIONS. SHREDED PALETTE AND DYED MULCH WILL NOT BE ACCEPTED.
15. ALL LANDSCAPED AREAS SHALL RECEIVE 3" COMPACTED TOPSOIL.
16. SEE SPECIFICATIONS FOR ADDITIONAL COMMENTS, REQUIREMENTS, PLANTING PROCEDURES AND WARRANTY STANDARDS.
17. FOR NON-LAWN SEED MIX AREAS, AS NOTED ON PLAN, BRUSH MOW ONCE SEASONALLY FOR INVASIVE SPECIES CONTROL.

ORIGINAL ISSUE DATE:	MARCH 17, 2020
PEA JOB NO.	2018-150
SCALE:	1" = 120'
DRAWING NUMBER:	

DECIDUOUS TREE PLANT LIST:

	QUANTITY	KEY SYMBOL	COMMON NAME	SCIENTIFIC NAME	SIZE	SPEC
✓	9	AR4	Red Maple	<i>Acer rubrum</i>	4" Cal.	B&B
	6	AR2.5	Red Maple	<i>Acer rubrum</i>	2.5" Cal.	B&B
	3	AS2.5	Sugar Maple	<i>Acer saccharum</i> 'Green Mountain'	2.5" Cal.	B&B
✓	15	BN8	River Birch	<i>Betula nigra</i>	8' Ht.	B&B
	4	CM4	Cornelian Cherry Dogwood	<i>Cornus mas</i>	4" Cal.	B&B
	14	CO2.5	Common Hackberry	<i>Celtis occidentalis</i>	2.5" Cal.	B&B
✓	15	GT2.5	Skyline Honeylocust	<i>Gleditsia triacanthos</i> 'Skyline'	2.5" Cal.	B&B
	7	GT4	Skyline Honeylocust	<i>Gleditsia triacanthos</i> 'Skyline'	4" Cal.	B&B
	9	LT2.5	Tulip Tree	<i>Liriodendron Tulipifera</i>	2.5" Cal.	B&B
✓	4	LT4	Tulip Tree	<i>Liriodendron Tulipifera</i>	4" Cal.	B&B
	12	MS2.5	Sugar Time Crab	<i>Malus</i> 'Sugar Tyme'	2.5" Cal.	B&B
	7	NS4	Sour Gum	<i>Nyssa sylvatica</i>	4" Cal.	B&B
✓	10	PA2.5	London Planetree	<i>Platanus</i> x <i>acerifolia</i>	2.5" Cal.	B&B
	13	PC4	Cleveland Select Pear	<i>Pyrus calleryana</i> 'Cleveland Select'	4" Cal.	B&B
	6	QB2.5	Swamp White Oak	<i>Quercus bicolor</i>	2.5" Cal.	B&B
✓	9	QB4	Swamp White Oak	<i>Quercus bicolor</i>	4" Cal.	B&B
	12	QR2.5	Red Oak	<i>Quercus rubra</i>	2.5" Cal.	B&B
	12	SR2.5	Japanese Tree Lilac	<i>Syringa reticulata</i>	2.5" Cal.	B&B
✓	14	TA2.5	American Linden	<i>Tilia americana</i>	2.5" Cal.	B&B
	17	TC2.5	Greenspire Linden	<i>Tilia cordata</i> 'Greenspire'	2.5" Cal.	B&B
	14	UF2.5	Frontier Elm	<i>Ulmus</i> 'Frontier'	2.5" Cal.	B&B
212		TOTAL DEC.				

EVERGREEN TREE PLANT LIST:

QUANTITY	KEY SYMBOL	COMMON NAME	SCIENTIFIC NAME	SIZE	SPEC
15	AC8	Concolor Fir	<i>Abies concolor</i>	8' Ht.	B&B
22	PA8	Norway Spruce	<i>Picea abies</i>	8' Ht.	B&B
17	PG8	Black Hills Spruce	<i>Picea glauca</i> 'Densata'	8' Ht.	B&B
15	PB8	Lacebark Pine	<i>Pinus bungeana</i>	8' Ht.	B&B
17	PN8	Austrian Pine	<i>Pinus nigra</i>	8' Ht.	B&B
12	PS8	Eastern White pine	<i>Pinus strobus</i>	8' Ht.	B&B
98	TOTAL EVG.				

NO.	BY	CHK	DESCRIPTION	DATE
1	TMKB		REVISIONS PER MAY 6, 2020 PC MEETING	05-31-20
2	TMKB		REVISIONS FOR ADDED EVA	10-05-20
3	TMKB		REVISIONS PER NOVEMBER 13, 2020 TWP REVIEW	12-15-20
4	KPT		AMENDED FINAL PUD	06-13-22

CAUTION!!
THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

THIS DRAWING AND DESIGN ARE THE PROPERTY OF
PEA, INC. THEY ARE SUBMITTED ON THE CONDITION
THAT THEY ARE NOT TO BE USED, REPRODUCED, OR
COPIED, IN WHOLE OR IN PART, OR USED FOR
FURNISHING INFORMATION TO OTHERS, WITHOUT THE
PRIOR WRITTEN CONSENT OF PEA, INC. ALL COMMON
LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE
HEREBY SPECIFICALLY RESERVED. © 2020 PEA, INC.

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOE SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT INCLUDING, BUT NOT LIMITED TO, THE PROTECTION OF EXISTING PERSONS AND PROPERTY. THE REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ALL CLAIMS, DAMAGES, LOSSES OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN

**3 FULL WORKING DAYS
BEFORE YOU DIG CALL**

811


Know what's below
Call before you dig
MISS DIG System, Inc.

1-800-482-7171 www.missdig.net
(TOLL FREE)



PEA, Inc.

2430 Rochester Ct, Ste 100
Troy, MI 48063-1872
t: 248.689.9090
f: 248.689.1044
www.peainc.com

FRANKLIN RIDGE HOMES, LLC

LANDSCAPE PLAN

SILVERBELL POINTE
PART OF THE SE 1/4 OF SECTION 28 & NE 1/4 SECTION 33
ORION TOWNSHIP OAKLAND COUNTY MICHIGAN

S.	JLE	DN.	KAD	SUR.	KTR
----	-----	-----	-----	------	-----

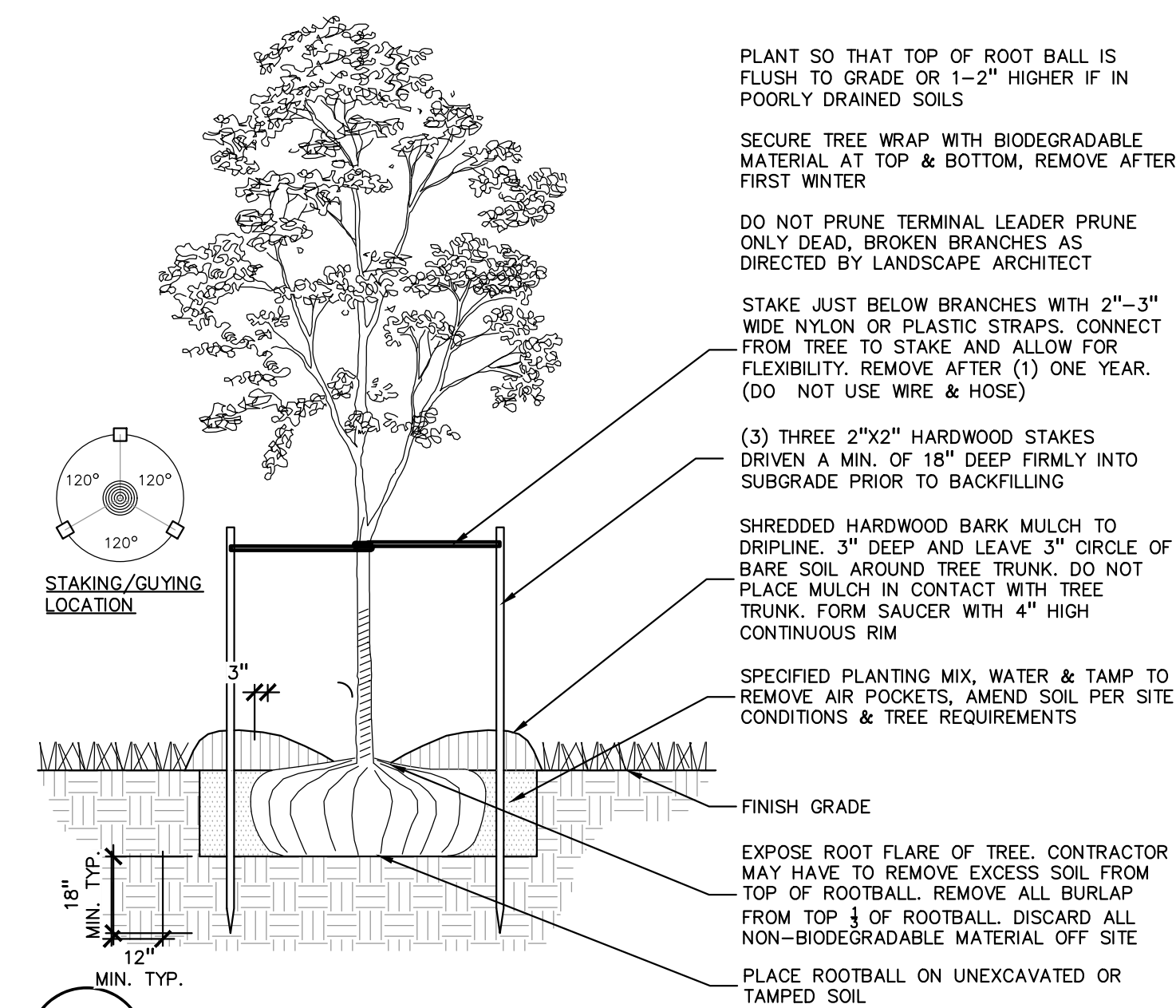
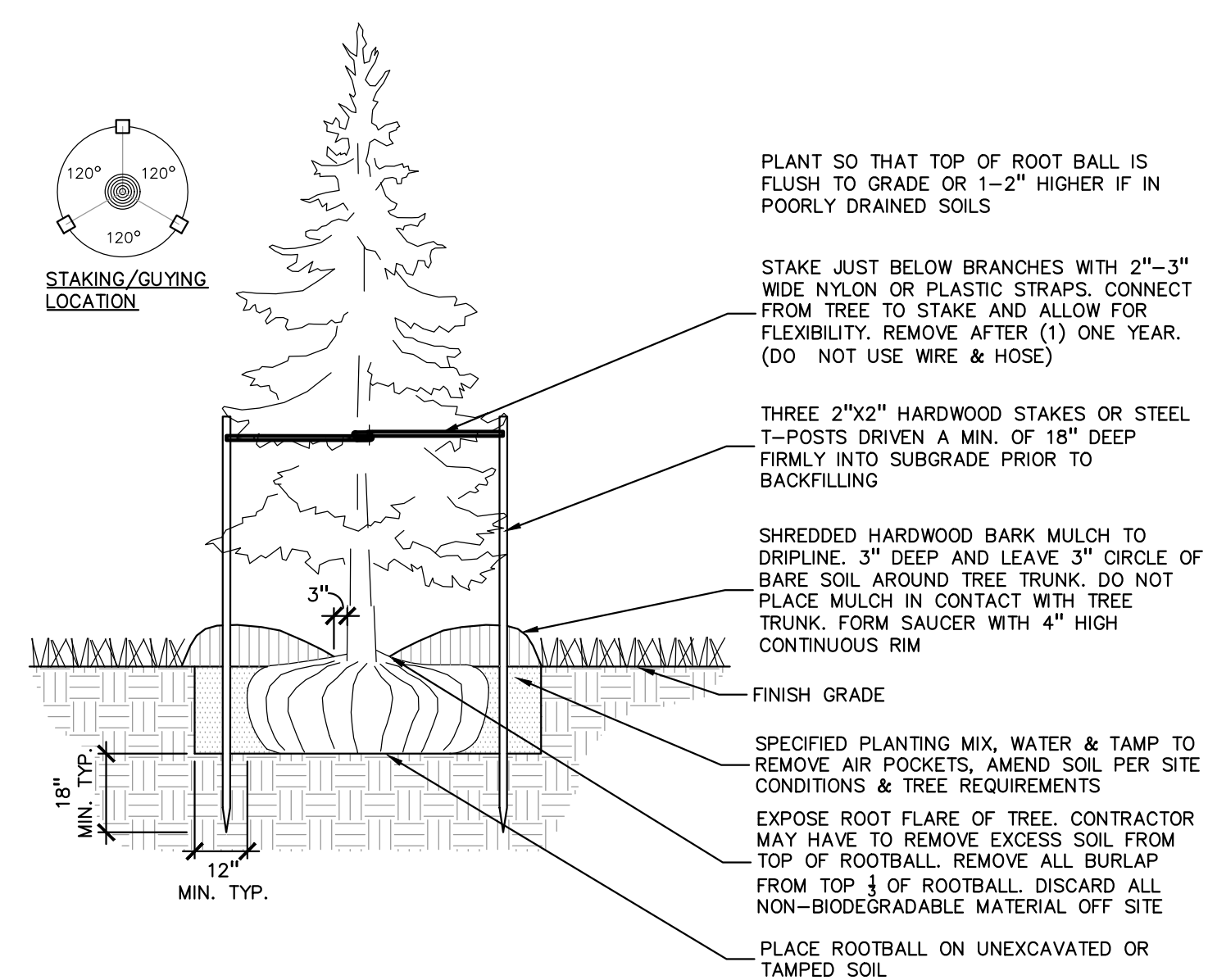
ORIGINAL ISSUE DATE:
MARCH 17, 2020

PEA JOB NO. 2018-150

SCALE: 1" = 60'

DRAWING NUMBER:

L-1.1



No.	BY	CHK	DESCRIPTION	DATE
1	TKNK	JBT	REVISIONS PER MAY 6, 2020 PC MEETING	06-31-20
2	TKNK	JBT	REVISIONS FOR ADD'D E/A	10-05-20
3	TKNK	JBT	REVISIONS PER NOVEMBER 13, 2020 TWP REVIEW	12-15-20
4	KP	JBT	AMENDED FINAL PID	06-13-22

CONFIDENTIAL - SECURITY INFORMATION

CAUTION!!
THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

THIS DRAWING AND DESIGN ARE THE PROPERTY OF
PEA, INC. THEY ARE SUBMITTED ON THE CONDITION
THAT THEY ARE NOT TO BE USED, REPRODUCED, OR
COPIED, IN WHOLE OR IN PART, OR USED FOR
FURNISHING INFORMATION TO OTHERS, WITHOUT THE
PRIOR WRITTEN CONSENT OF PEA, INC. ALL COMMON
LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE
HEREBY SPECIFICALLY RESERVED. © 2020 PEA, INC.

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF PROJECT AND TO MAINTAIN THE SAFETY OF PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD HARMLESS THE PROJECTOR HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN

**3 FULL WORKING DAYS
BEFORE YOU DIG CALL**

811
Know what's below
Call before you dig
MISS DIG System, Inc.
1-800-482-7171 www.missdig.net
(TOLL FREE)



PEA, Inc.
2430 Rochester Ct, Ste 100
Troy, MI 48083-1872
t: 248.689.9090
f: 248.689.1044
www.peainc.com

FRANKLIN RIDGE HOMES, LLC
 39109 ORCHARD LAKE ROAD, SUITE 400
 FARMINGTON HILLS, MICHIGAN 48334

LANDSCAPE DETAILS

SILVERBELL POINTE

PART OF THE SE 1/4 OF SECTION 28 & NE 1/4 SECTION 33, TOWNSHIP 33N, RANGE 1E, MERIDIAN 10W, Kalamazoo County, Michigan.

DES.	JUL	KAD	SUR.	FLO.	P.M.
PROJECTS 2018-18-150	IN	BUILDING	CONC.	FOUNDATION	LANDSCAPE DETAILS BUILDING

ORIGINAL ISSUE DATE:
MARCH 17, 2020

PEA JOB NO. 2018-150

SCALE: 1" = 60'

DRAWING NUMBER:

L-1.2

FINAL PLANNED UNIT DEVELOPMENT (PUD) PLANS FOR

SILVERBELL POINTE

PART OF SE AND SW 1/4 OF SECTION 28 TOGETHER WITH PART OF THE NE AND NW 1/4 OF SECTION 33, T. 4N., R. 10E.

ORION TOWNSHIP, OAKLAND COUNTY, MICHIGAN

PROPERTY DESCRIPTION:

(Combined parcel as surveyed by PEA Inc.)

Part of the southeast and southwest 1/4 of Section 28, together with part of the northeast and northwest 1/4 of Section 33, Town 4 North, Range 10 East, Orion Township, Oakland County, Michigan being more particularly described as:

Commencing at the South 1/4 corner of said Section 28, thence N00°54'08"E, 1037.64 feet along the north-south 1/4 line of said section to the south line of Silverbell Road (66' wide) and the Point of Beginning; thence along said south line N81°37'08"E, 336.39 feet; thence S00°54'11"W, 1087.57 feet to the east-west 1/4 line of said section; thence along said line S89°44'45"E, 999.50 feet; thence S00°20'21"E, 1319.24 feet to the north line of "Supervisor's Plat of Lakeview Subdivision" as recorded in Liber 53, Page 21, Oakland County Records; thence along said north line, N89°37'34"W, 293.09 feet; thence N00°10'08"W, 119.60 feet; thence the following four courses along the waters edge of Mud Lake, S64°19'49"W, 74.39 feet and N70°02'23"W, 24.20 feet and S81°31'02"W, 81.02 feet and N81°09'09"W, 121.30 feet to the northerly extension of the west line of Lot 12 of said supervisor's plat; thence along said extension, S00°10'08"E, 100.45 feet to the aforementioned north line of said supervisor's plat; thence along said north line, N89°37'34"W, 768.31 feet to a 3/8" iron in a 4" square concrete monument; thence continuing along said north line, N89°55'57"W, 363.34 feet to the east line of Joslyn Road (66' wide) as recorded in Liber 36264, Page 120, Oakland County Records; thence along said east line, 509.14 feet along the arc of a curve to the left having a radius of 1903.83 feet and a chord that bears N05°17'23"W, 507.63 feet to the east line of the Canadian National Rail Road Right-of-Way (50' wide); thence the following two courses along said east line, 580.44 feet along the arc of a curve to the left having a radius of 3299.18 feet and a chord that bears N03°05'37"W, 579.69 feet and N08°08'02"W, 1187.11 feet to the south line of said Joslyn Road; thence along said south line, N81°37'17"E, 644.53 feet to the Point of Beginning.

Containing 73.419 acres of land, more or less

LEGAL DESCRIPTION – PROPOSED PARK

(Combined parcel as surveyed by PEA Inc.)

Part of the southeast and southwest 1/4 of Section 28, Town 4 North, Range 10 East, Orion Township, Oakland County, Michigan being more particularly described as:

Commencing at the South 1/4 corner of said Section 28, thence N00°54'08"E, 1037.65 feet along the north-south 1/4 line of said section to the south line of Silverbell Road (66' wide); thence along said south line S81°37'14"W, 204.52 feet to the Point of Beginning thence S08°08'02"E, 396.00 feet; thence S81°37'14"W, 440.00 feet to the east line of the Canadian National Rail Road Right-of-Way (50' wide); thence along said east line N08°08'02"W, 396.00 feet to the south line of the aforementioned Silverbell Road; thence along said south line, N81°37'14"E, 440.00 feet to the Point of Beginning.

Containing 4.000 acres of land, more or less

LEGAL DESCRIPTION – OVERALL CONDO

(Combined parcel as surveyed by PEA Inc.)

Part of the southeast and southwest 1/4 of Section 28, together with part of the northeast and northwest 1/4 of Section 33, Town 4 North, Range 10 East, Orion Township, Oakland County, Michigan being more particularly described as:

Commencing at the South 1/4 corner of said Section 28, thence N00°54'08"E, 1037.65 feet along the north-south 1/4 line of said section to the south line of Silverbell Road (66' wide) and the Point of Beginning; thence along said south line N81°37'14"E, 336.39 feet; thence S00°54'10"W, 1088.15 feet to the east-west 1/4 line of said section; thence along said line S89°44'45"E, 999.50 feet; thence S00°20'21"E, 1319.24 feet to the north line of "Supervisor's Plat of Lakeview Subdivision" as recorded in Liber 53, Page 21, Oakland County Records; thence along said north line, N89°37'34"W, 293.09 feet; thence N00°10'08"W, 119.60 feet; thence the following four courses along the waters edge of Mud Lake, S64°19'49"W, 74.39 feet and N70°02'23"W, 24.20 feet and S81°31'02"W, 81.02 feet and N81°09'09"W, 121.30 feet to the northerly extension of the west line of Lot 12 of said supervisor's plat; thence along said extension, S00°10'08"E, 100.45 feet to the aforementioned north line of said supervisor's plat; thence along said north line, N89°37'34"W, 768.31 feet to a 3/8" iron in a 4" square concrete monument; thence continuing along said north line, N89°55'57"W, 363.34 feet to the east line of Joslyn Road (66' wide) as recorded in Liber 36264, Page 120, Oakland County Records; thence along said east line, 509.14 feet along the arc of a curve to the left having a radius of 1903.83 feet and a chord that bears N05°17'23"W, 507.63 feet to the east line of the Canadian National Rail Road Right-of-Way (50' wide); thence the following two courses along said east line, 580.44 feet along the arc of a curve to the left having a radius of 3299.18 feet and a chord that bears N03°05'37"W, 579.69 feet and N08°08'02"W, 791.10 feet; thence N81°37'14"E, 440.00 feet; thence N08°08'02"W, 396.00 feet to the south line of the aforementioned Silverbell Road; thence along said south line, N81°37'14"E, 204.52 feet to the Point of Beginning.

Containing 69.419 acres of land, more or less

NARRATIVE:

THE SILVERBELL POINTE PLANNED UNIT DEVELOPMENT IS PROPOSED AS SINGLE FAMILY RESIDENTIAL COMMUNITY, WHICH COMPRISES OF APPROXIMATELY 28 ACRES OF THE DEVELOPABLE AREA (74-AC FULL SITE AREA). THE PROPOSED USE WILL BE 46 DETACHED SINGLE-FAMILY, FOR SALE HOMES, ON PRIVATE STREETS.

HOMES WILL BE AT A HIGHER ELEVATION THAN MUD LAKE AND THE SURROUNDING AREAS, CREATING HOMES WITH BEAUTIFUL WATER VIEWS AND OPPORTUNITY FOR WALK-OUT LOWER LEVELS. THESE HOMES WILL BE HIGHLY DESIRABLE GIVEN THEIR HIGHLY WOODED AND SCENIC SETTING.

COMPATIBILITY WITH MASTER PLAN & ADJACENT USES:

SILVERBELL POINTE CONFORMS WITH THE TOWNSHIP MASTER PLAN'S FUTURE LAND USE AND FURTHERS THE MASTER PLAN'S IMPLEMENTATION AS THE PROPOSED DENSITY IS IN LINE WITH THE INTENDED FUTURE DENSITY REQUIREMENTS OF UP TO 3 UNITS PER ACRE. AS SILVERBELL POINTE BORDERS MUD LAKE, THE CLUSTER DEVELOPMENT ENCOURAGES THE PRESERVATION OF OPEN SPACE AREAS AND LAKE PRESERVATION.

R.C.O.C. NOTES:

CORRUGATED PLASTIC PIPE MEETING AASHTO M294, TYPE S REQUIREMENTS FOR STORM SEWERS FROM 12" TO 24" DIAMETERS, MAY BE USED IN THIS DEVELOPMENT. HOWEVER, PRIOR TO APPROVAL OF THE STORM SYSTEM OR START OF ROAD PAVING A MANUFACTURER'S CERTIFICATE OF COMPLIANCE WITH THESE REQUIREMENTS SHALL BE SUBMITTED TO THE ROAD COMMISSION OF OAKLAND COUNTY. ALSO AT LEAST FIFTY PERCENT OF THE SEWER CARRYING ROAD DRAINAGE, AS SELECTED BY THE ENGINEER, SHALL BE TESTED FOR DEFORMATION BY THE CONTRACTOR USING A NINEPOINT MANDREL. ENGINEER CERTIFICATION THAT THE PIPE HAS PASSED THESE TESTS SHALL BE SUBMITTED TO THE ROAD COMMISSION FOR OAKLAND COUNTY.

ALL SIDEWALKS, SIDEWALK RAMPS AND CURB OPENINGS SHALL BE IN ACCORDANCE WITH M.D.O.T. STANDARD PLAN R-28 AND A.D.A. REQUIREMENTS. CROSSWALKS SHALL HAVE A TRANSVERSE SLOPE NO GREATER THAN 2% WHERE THEY CROSS STREETS. SIDEWALKS THAT CROSS DRIVEWAYS SHALL MAINTAIN CROSS SLOPES NO GREATER THAN 2% WHERE THEY CROSS A DRIVEWAY IN ADDITION TO OTHER AREAS. SIDEWALK CURB RAMPS, CURB OPENINGS, LANDINGS AND TRUNCATED DOMES (DETECTABLE WARNING STRIPS) WILL BE INSPECTED BY THE R.C.O.C. FACILITIES THAT ARE NOT IN COMPLIANCE WITH A.D.A. REQUIREMENTS SHALL BE REMOVED AND REPLACED.

ANY RIGHT-OF-WAY OR EASEMENTS NEEDED TO INSTALL THE PROPOSED IMPROVEMENTS MUST BE OBTAINED PRIOR TO FINAL PLAN APPROVAL/STREET ACCEPTANCE OR CONSTRUCTION, WHICHEVER OCCURS FIRST.

MDOT COVER "C" (WITH TYPE "K" FRAME), "K", "B", "E" REQUIRED WITHIN ROAD RIGHT-OF-WAY. ALSO ALLOWED ARE EJIW 7065/NEENAH R-3034-B OR APPROVED EQUAL AND EJIW 7300/NEENAH R-3508-A2 OR APPROVED EQUAL.

THE PROPRIETOR SHALL INSURE THAT OPEN DISCHARGE OF SUMP PUMPS INTO THE ROAD RIGHT-OF-WAY DOES NOT OCCUR.

VERIFICATION OF TOWNSHIP APPROVAL FOR SANITARY SEWER AND WATER MAIN TESTS MUST BE SUBMITTED AND FOUND ACCEPTABLE BY THE R.C.O.C., PRIOR TO ANY CONCRETE PAVING OR ASPHALT BEING PLACED.

PROPER SIGNING IS REQUIRED BEFORE ANY WORK IN R.O.W. IS STARTED.

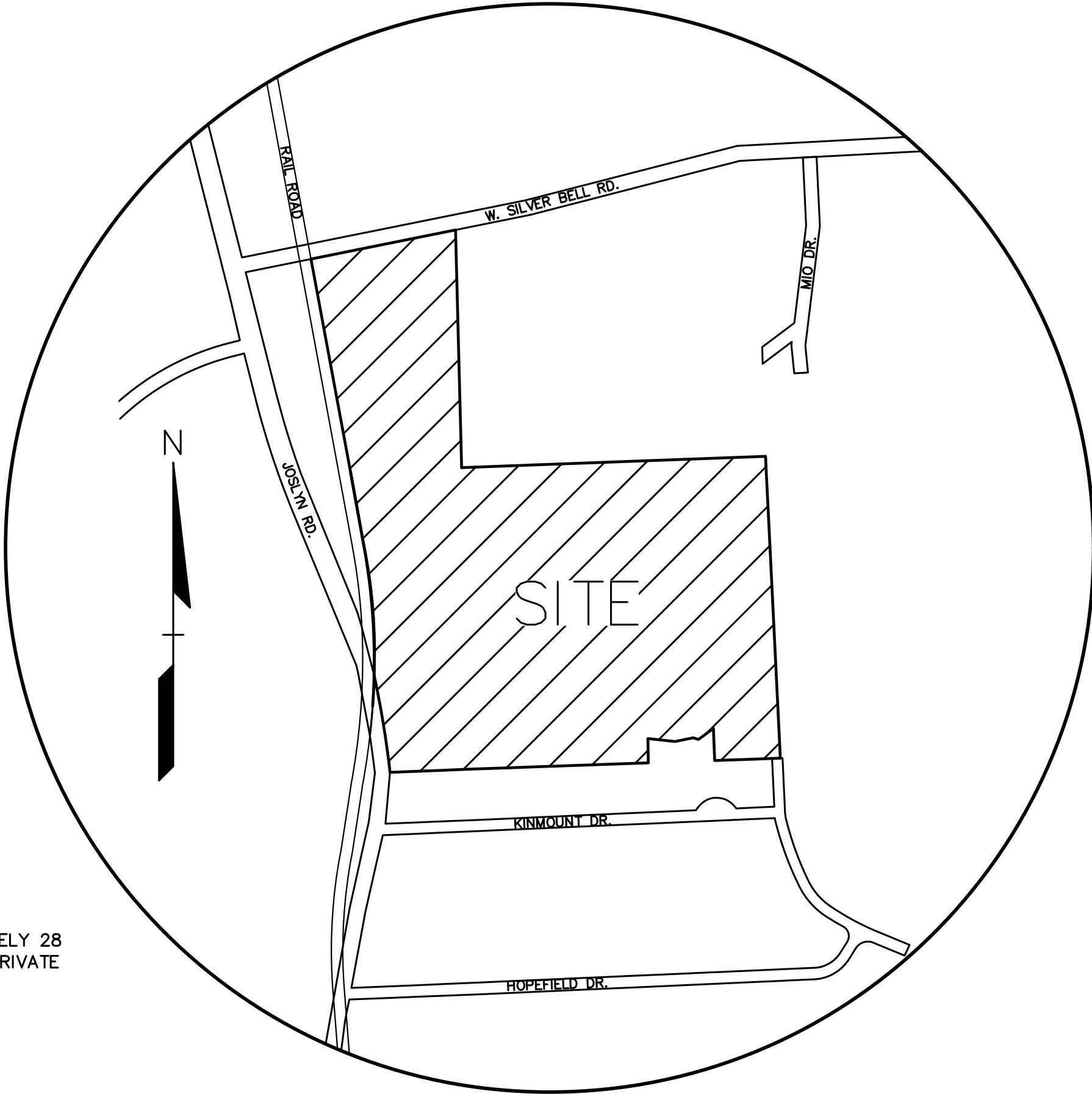
LANE CLOSURES RESTRICTED TO 9-3 MONDAY – FRIDAY.

MAINTAIN TWO-WAY TRAFFIC AT ALL TIMES.

FLAG PERSON REQUIRED FOR TEMPORARY ONE LANE ROADS.

GENERAL NOTES:

- SINGLE FAMILY RESIDENTIAL ROADS SHALL BE PRIVATE.
- ALL WORK WITHIN THE JOSLYN ROAD RIGHT-OF-WAY SHALL BE PERMITTED BY R.C.O.C.



LOCATION MAP

NO SCALE

OWNER/APPLICANT/DEVELOPER:

FRANKLIN RIDGE HOMES, LLC
30180 ORCHARD LAKE ROAD, SUITE 150
FARMINGTON HILLS, MI 48334
CONTACT: DAVID STEUER
PHONE: (248) 790-4481
EMAIL: DAVID@STEUERGROUP.COM

CIVIL ENGINEER:

PEA, INC.
2430 ROCHESTER CT, SUITE 100
TROY, MI 48083
CONTACT: JOHN B. THOMPSON, PE
PHONE: (248) 689-9090 EXT. 1109
FAX: (248) 689-1044
EMAIL: JTHOMPSON@PEAGROUP.COM

LANDSCAPE ARCHITECT:

PEA, INC.
45 W. GRAND RIVER AVE, STE. 501
DETROIT, MI 48226
CONTACT: KIM DIETZEL
PHONE: (313) 769-5755
EMAIL: KDIEZEL@PEAGROUP.COM

INDEX OF DRAWINGS:

- C-0.0 COVER SHEET
- C-1.1 BOUNDARY SURVEY
- C-1.2 TOPOGRAPHIC SURVEY – WEST
- C-1.3 TOPOGRAPHIC SURVEY – EAST
- C-1.4 TOPOGRAPHIC SURVEY – NORTH
- C-1.5 R.O.W. TOPO SURVEY AND DEMO PLAN
- C-2.0 OVERALL SITE PLAN
- C-2.1 DIMENSION AND PAVING PLAN
- C-2.2 FIRE ACCESS ROUTE
- C-3.1 ROAD PROFILES – STA. 0+00 TO 11+00
- C-3.2 ROAD PROFILES – STA. 11+00 TO 21+00
- C-3.3 ROAD PROFILES – STA. 21+00 TO 25+67
- C-4.1 GRADING PLAN – NORTH
- C-4.2 GRADING PLAN – WEST
- C-4.3 GRADING PLAN – SOUTH
- C-4.4 GRADING DETAIL
- C-4.5 R.O.W. GRADING AND DIMENSION PLAN
- C-5.0 SOIL EROSION CONTROL PLAN
- C-6.0 OVERALL UTILITY PLAN
- C-6.1 R.O.W. UTILITY PLAN
- C-7.1 SANITARY SEWER AND WATER MAIN PLAN – NORTH
- C-7.2 SANITARY SEWER AND WATER MAIN PLAN – WEST
- C-7.3 SANITARY SEWER AND WATER MAIN PLAN – SOUTH
- C-8.1 STORM SEWER PLAN – NORTH
- C-8.2 STORM SEWER PLAN – WEST
- C-8.3 STORM SEWER PLAN – SOUTH
- C-8.4 STORM SEWER PLAN – CENTER
- C-8.5 DETENTION POND CALCULATIONS
- C-8.6 STORM SEWER CALCULATIONS
- C-9.0 DRAINAGE AREA PLAN
- C-10.0 NOTES AND DETAILS

- L-1.0 LANDSCAPE PLAN
- L-1.1 LANDSCAPE PLAN
- L-1.2 LANDSCAPE DETAILS
- L-2.1 LANDSCAPE SPECIFICATIONS
- L-2.2 LANDSCAPE SPECIFICATIONS
- T-0.0 TREE REMOVAL OVERLAY
- T-1.0 TREE PRESERVATION PLAN
- T-1.1 TREE PRESERVATION PLAN
- T-1.2 TREE LIST
- T-1.3 TREE LIST
- T-1.4 TREE LIST
- T-1.5 TREE LIST
- T-1.6 TREE LIST
- T-1.7 TREE LIST
- T-1.8 TREE LIST

ORION TOWNSHIP STANDARD SANITARY SEWER DETAILS (2 SHEETS)
ORION TOWNSHIP STANDARD WATER MAIN DETAILS (2 SHEETS)
OAKLAND COUNTY SOIL EROSION & SEDIMENTATION DETAIL SHEET
OAKLAND COUNTY STORM DRAIN NOTES & DETAILS

PERMITS / APPROVAL TABLE:

	DATE OF 1ST SUBMITTAL	APPROVAL DATE	PERMIT NUMBER	EXPIRATION DATE
TOWNSHIP REVIEW – PRELIMINARY PUD	02/15/2019	05/06/2019		
TOWNSHIP REVIEW – FINAL PUD	11/14/2019			
ORION TOWNSHIP – SESC PERMIT				
ORION TOWNSHIP – ENGINEERING	10/20/2020			
MDEQ – NPDES (NOC)				
MDEQ – WETLAND PART 301 (FILE #XX-XX-XXX)	10/14/2020			
MDEQ – SANITARY PERMIT				
MDEQ – WATER PERMIT				
RCOC – UTILITY/GRADING/APPROACH PERMIT	12/15/2020			



NO.	BY	CHK.	DESCRIPTION	DATE
1	THANK	JBT	REVISIONS PER NOVEMBER 13, 2020 TWP REVIEW	12-15-20
2	THANK	JBT	REVISIONS FOR ADDED EVA	10-05-20
3	THANK	JBT	REVISIONS FOR MAY 6, 2020 P.C. MEETING	05-20-20

NO.	BY	CHK.	DESCRIPTION	DATE
1	THANK	JBT	REVISIONS PER NOVEMBER 13, 2020 TWP REVIEW	12-15-20
2	THANK	JBT	REVISIONS FOR ADDED EVA	10-05-20
3	THANK	JBT	REVISIONS FOR MAY 6, 2020 P.C. MEETING	05-20-20

CAUTION!!
THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS GIVEN FOR THE ACCURACY OF THE INFORMATION. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

THIS DRAWING AND DESIGN ARE THE PROPERTY OF PEA, INC. THEY ARE SUBMITTED ON THE CONDITION THAT THEY ARE NOT TO BE USED, REPRODUCED, OR COPIED IN WHOLE OR IN PART, OR USED FOR FURNISHING INFORMATION TO OTHERS, WITHOUT THE PRIOR WRITTEN CONSENT OF PEA, INC. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED. © 2020 PEA, INC.

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERAL ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL, INDIVIDUAL AND/OR FIRM, HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

3 FULL WORKING DAYS BEFORE YOU DIG CALL

811
Know what's below
Call before you dig
Miss Dig System, Inc.
1-800-482-7171 www.missdig.net
TOLL FREE

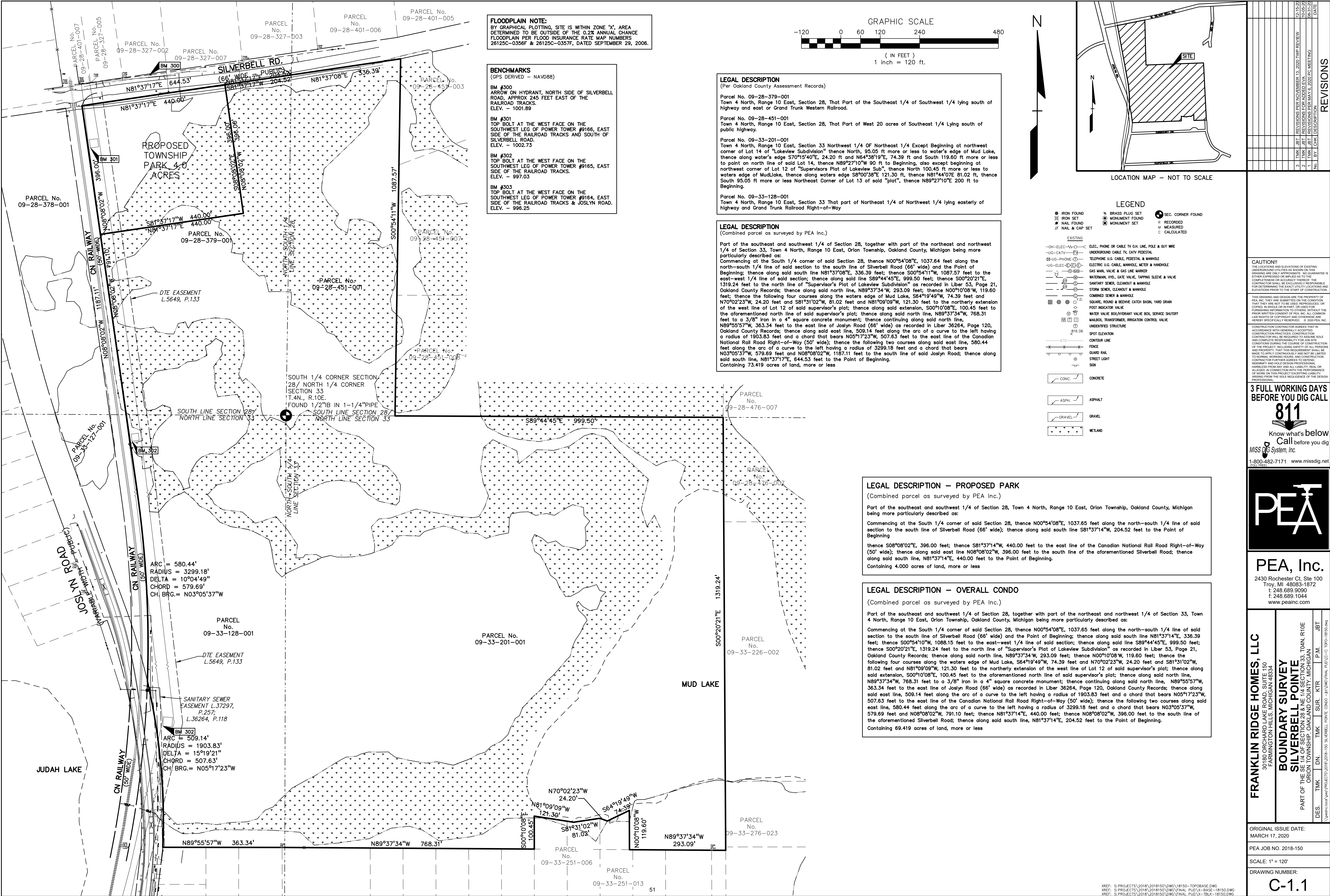


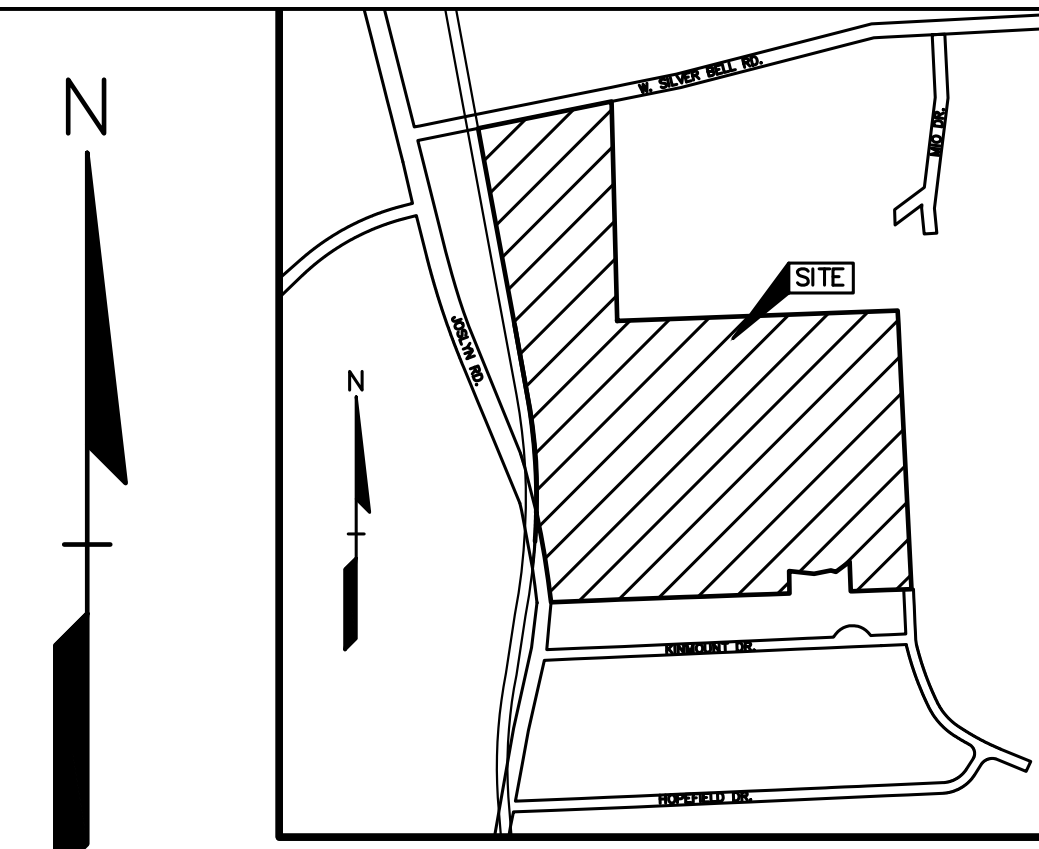
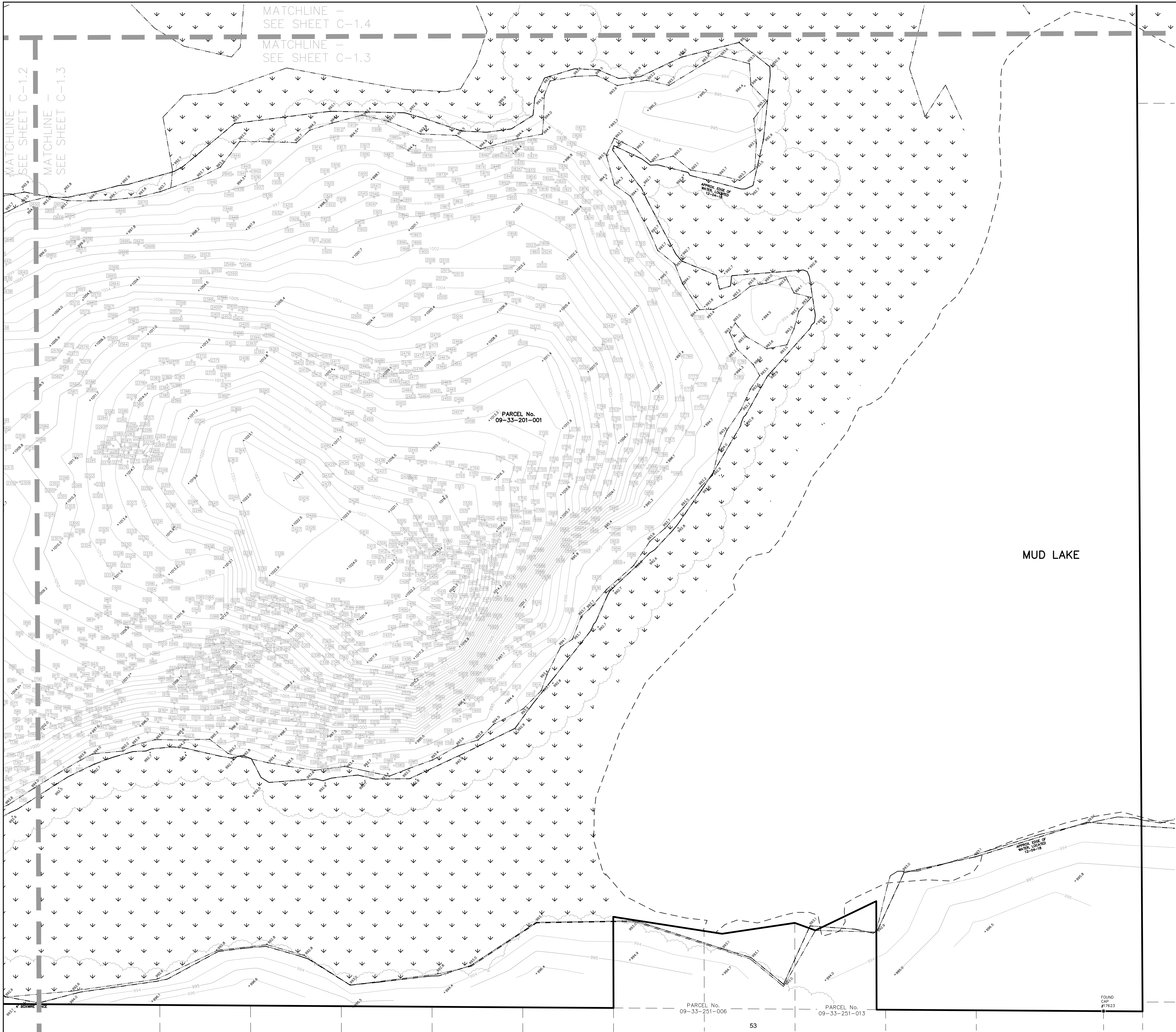
PEA, Inc.

2430 Rochester Ct, Ste 100
Troy, MI 48083-1872
t: 248.689.9090
f: 248.689.1044
www.peainc.com

FRANKLIN RIDGE HOMES, LLC 30180 ORCHARD LAKE ROAD, SUITE 150 FARMINGTON HILLS, MICHIGAN 48334	COVER SHEET SILVERBELL POINTE PART OF THE SE 1/4 OF SECTION 28 & NE 1/4 SECTION 33, TOWN 4 NORTH, RANGE 10 EAST, ORION TOWNSHIP, OAKLAND COUNTY, MICHIGAN	DES. THW DN. THW SUR. KTR P.M. JBT
---	---	------------------------------------

ORIGINAL ISSUE DATE: MARCH 17, 2020
PEA JOB NO. 2018-150
SCALE: N.T.S.
DRAWING NUMBER: C-0.0





LEGEND

● IRON FOUND
⊗ IRON SET
● NAIL FOUND
⊗ NAIL & CAP SET

⊗ BRASS PLUG SET
⊗ MONUMENT FOUND
⊗ MONUMENT SET

⊗ SEC. CORNER FOUND
R RECORDED
M MEASURED
C CALCULATED

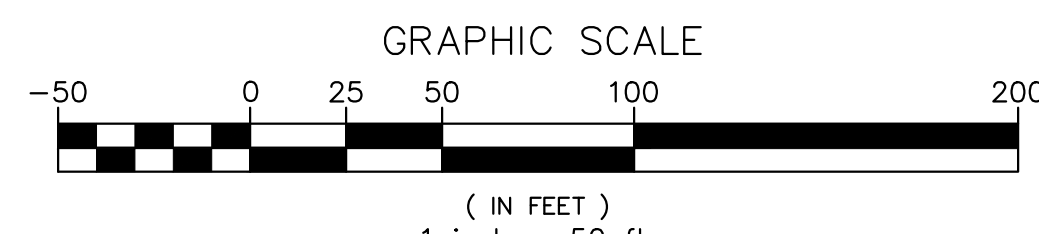
EXISTING

—OH-ELEC-VA— ELEC. PHONE OR CABLE TV O.H. LINE, POLE & GUY WIRE
—UG-CATV— UNDERGROUND CABLE TV, CATV PEDESTAL
—UG-PHONE— TELEPHONE U.G. CABLE, PEDESTAL & MANHOLE
—UG-ELEC-HE— ELECTRIC U.G. CABLE, MANHOLE, METER & HANDHOLE
—GAS MAIN, VALVE & GAS LINE MARKER
—WATERMAIN, HYD. GATE VALVE, TAPPING SLEEVE & VALVE
—SANITARY SEWER, CLEANOUT & MANHOLE
—STORM SEWER, CLEANOUT & MANHOLE
—COMBINED SEWER & MANHOLE
—SQUARE, ROUND & BEHNE CATCH BASIN, YARD DRAIN
—POST INDICATOR VALVE
—WATER VALVE BOX/HYDRANT VALVE BOX, SERVICE SHUTOFF
—MAILBOX, TRANSFORMER, IRRIGATION CONTROL VALVE
—UNIDENTIFIED STRUCTURE

SPOT ELEVATION
670
CONTOUR LINE
GUARD RAIL
STREET LIGHT
SIGN

CONC. CONCRETE
ASPH. ASPHALT
GRAVEL GRAVEL
WETLAND

REFER TO SHEET C-1.1 FOR LEGAL DESCRIPTION.
REFER TO SHEET T-1.0 FOR TREE SURVEY



REVISIONS	
NO.	DATE
1	12-15-22
2	10-05-22
3	08-13-22

CAUTION!!
THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

THIS DRAWING AND DESIGN ARE THE PROPERTY OF PEA, INC. THEY ARE SUBMITTED TO THE CONTRACTOR FOR THEIR REVIEW AND COMMENT ONLY. THEY ARE NOT TO BE USED, REPRODUCED, OR COPIED IN WHOLE OR IN PART, OR USED FOR FURNISHING INFORMATION TO OTHERS, WITHOUT THE PRIOR WRITTEN CONSENT OF PEA, INC. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED. © 2022 PEA, INC.

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR SHALL BE RESPONSIBLE FOR ASSESSING SOIL AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFINE, INDICATE AND HOLD DESIGN PROFESSIONAL, INDEPENDENT FROM ANY AND ALL LIABILITY, HOLD OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

3 FULL WORKING DAYS BEFORE YOU DIG CALL 811
Know what's below
Call before you dig
MISS Dig System, Inc.
1-800-482-7171 www.missdig.net
(1031-REEL)

PEA, Inc.
2430 Rochester Ct. Ste 100
Troy, MI 48063-1872
t: 248.689.9090
f: 248.689.1044
www.peainc.com

FRANKLIN RIDGE HOMES, LLC
30180 ORCHARD LAKE ROAD, SUITE 150
FARMINGTON HILLS, MICHIGAN 48334

TOPOGRAPHIC SURVEY - EAST
PART OF THE SE 1/4 OF SECTION 28 & NE 1/4 SECTION 33, T40N, R10E
ORION TOWNSHIP, OAKLAND COUNTY, MICHIGAN

DES.	TMK	DN.	TMK	SUR.	KTR	P.M.	JBT

ORIGINAL ISSUE DATE:
MARCH 17, 2020

PEA JOB NO. 2018-150

SCALE: 1" = 50'

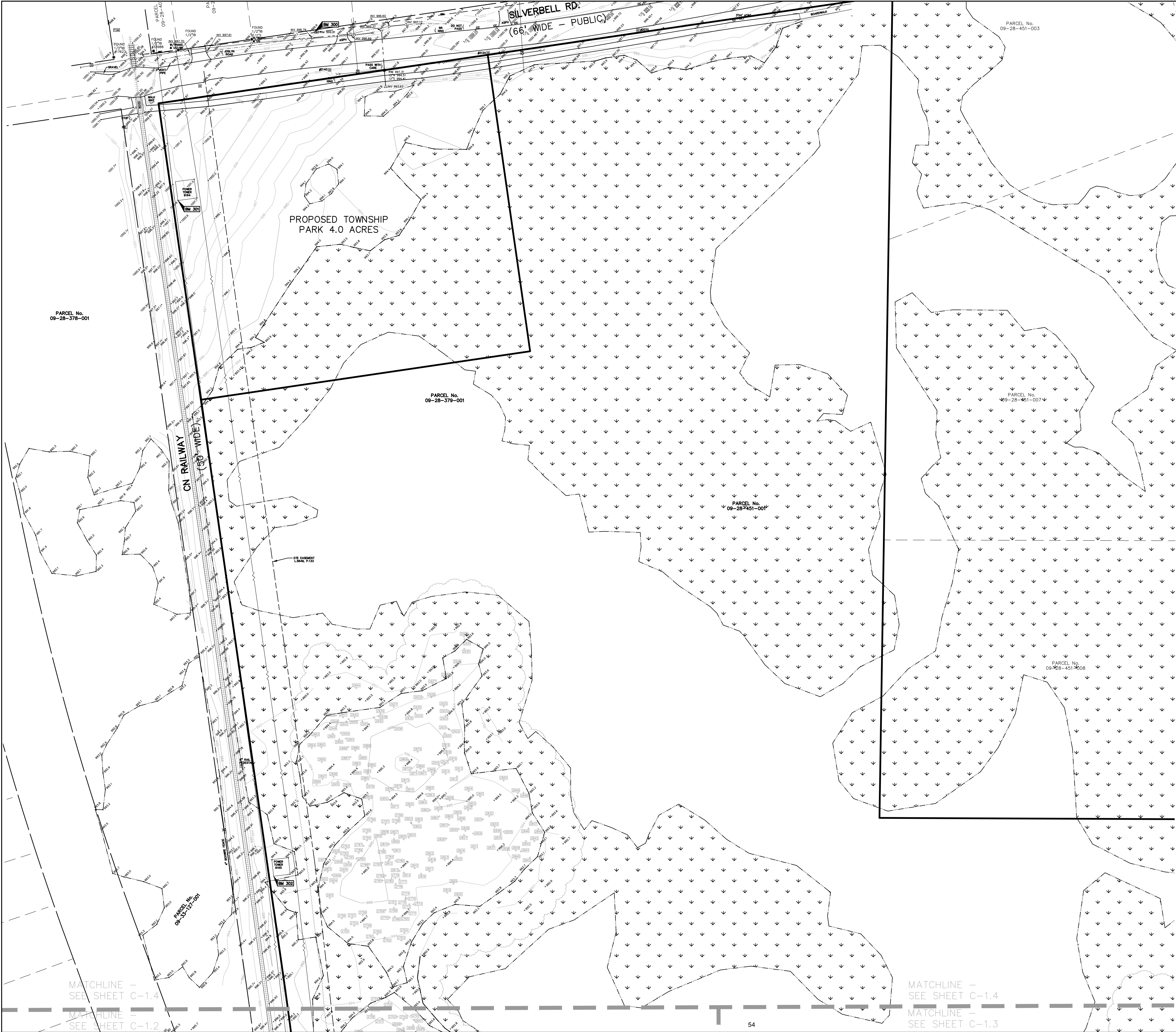
DRAWING NUMBER:
C-1.3

FOUND CAP #17623

PARCEL No. 09-33-251-006
PARCEL No. 09-33-251-013

53

XREF: S:\PROJECTS\2018\2018150\DWG\18150-TOPOBASE.DWG
XREF: S:\PROJECTS\2018\2018150\DWG\FINAL_PUD\X-BASE-18150.DWG
XREF: S:\PROJECTS\2018\2018150\DWG\FINAL_PUD\X-TLK-18150.DWG



LEGEND

● IRON FOUND

⊗ IRON SET

⊗ NAIL FOUND

⊗ NAIL & CAP SET

⊗ BRASS PLUG SET

⊗ MONUMENT FOUND

⊗ MONUMENT SET

⊗ SEC. CORNER FOUND

⊗ RECORDED

⊗ MEASURED

⊗ CALCULATED

EXISTING

—OH-ELEC—ELEC. PHONE OR CABLE TV O.H. LINE, POLE & GUY WIRE

—UG-CATV—UNDERGROUND CABLE TV, CATV PEDESTAL

—UG-PHONE—TELEPHONE U.G. CABLE, PEDESTAL & MANHOLE

—UG-ELEC—ELECTRIC U.G. CABLE, MANHOLE, METER & HANDHOLE

—GAS MAIN, VALVE & GAS LINE MARKER

—WATERMAIN, HYD. DATE, VALVE, TAPPING SLEEVE & VALVE

—SANITARY SEWER, CLEANOUT & MANHOLE

—STORM SEWER, CLEANOUT & MANHOLE

—COMBINED SEWER & MANHOLE

⊗ SQUARE, ROUND & BEHNE CATCH BASIN, YARD DRAIN

⊗ POST MONITOR VALVE

⊗ WATER VALVE BOX/HYDRANT VALVE BOX, SERVICE SHUTOFF

⊗ MAILBOX, TRANSFORMER, IRRIGATION CONTROL VALVE

⊗ UNIDENTIFIED STRUCTURE

⊗ SPOT ELEVATION

—CONTOUR LINE

—FENCE

—GUARD RAIL

—STREET LIGHT

—SIGN

—CONC.—CONCRETE

—ASPH.—ASPHALT

—GRAVEL—GRAVEL

—WETLAND

REFER TO SHEET C-1.1 FOR LEGAL DESCRIPTION.

REFER TO SHEET T-1.0 FOR TREE SURVEY

GRAPHIC SCALE

—60 0 30 60 120 240—

(IN FEET)

1 inch = 60 ft.

NO.	DATE	DESCRIPTION
1	12-15-20	TMK JBT REVISIONS PER NOVEMBER 13, 2020 TMP REVIEW
2	10-05-20	TMK JBT REVISIONS FOR ADDRESS E.V.A.
3	08-13-20	TMK JBT REVISIONS PER MAY 6, 2020 PC MEETING
4	08-13-20	TMK JBT CORN DISSEMINATION

REVISIONS

CAUTION!!

THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

THIS DRAWING AND DESIGN ARE THE PROPERTY OF PEA, INC. THEY ARE SUBMITTED ON THE CONDITION THAT THEY ARE NOT TO BE USED, REPRODUCED, OR COPIED IN WHOLE OR IN PART, OR USED FOR FURNISHING INFORMATION TO OTHERS, WITHOUT THE PRIOR WRITTEN CONSENT OF PEA, INC. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED. © 2020 PEA, INC.

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFINE, INDENTIFY AND HOLD DESIGN PROFESSIONAL, FURNISHER FROM ANY AND ALL LIABILITY, NOW OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPT LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

3 FULL WORKING DAYS BEFORE YOU DIG CALL 811

Know what's below
Call before you dig

MISS DIG System, Inc.
1-800-482-7171 www.missdig.net
(1021-4861)

PEA, Inc.
2430 Rochester Ct, Ste 100
Troy, MI 48063-1872
t: 248.689.9090
f: 248.689.1044
www.peainc.com

DES.	TMK	DN.	TMK	SUR.	KTR	P.M.	JBT
FRANKLIN RIDGE HOMES, LLC 30180 ORCHARD LAKE ROAD, SUITE 150 FARMINGTON HILLS, MICHIGAN 48334							
TOPOGRAPHIC SURVEY - NORTH							
PART OF THE SE 1/4 OF SECTION 28 & NE 1/4 SECTION 33, T40N, R10E ORION TOWNSHIP, OAKLAND COUNTY, MICHIGAN							

ORIGINAL ISSUE DATE:
MARCH 17, 2020

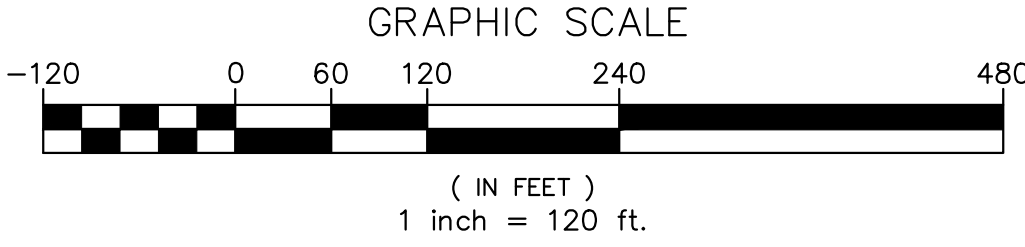
PEA JOB NO. 2018-150

SCALE: 1" = 60'

DRAWING NUMBER:
C-1.4

XREF: S:\PROJECTS\2018\2018150\DWG\18150-TOPBASE.DWG
XREF: S:\PROJECTS\2018\2018150\DWG\FINAL_PUD\X-BASE-18150.DWG
XREF: S:\PROJECTS\2018\2018150\DWG\FINAL_PUD\X-TBLK-18150.DWG

54



SITE DATA

PROPRIETORS NAME:

FRANKLIN RIDGE HOMES, LLC
30180 ORCHARD LAKE ROAD, SUITE 150
FARMINGTON HILLS, MI 48334
PHONE: 248-790-4481
CONTACT: DAVID STEUER

LEGAL DESCRIPTION:

REFER TO COVER SHEET
TOTAL AREA = 73.42 ACRES
PARK DONATION AREA = 4.00 ACRES
NET PROPERTY AREA = 69.42 ACRES

AREA:

DEVELOPABLE AREA TOTAL = 28 AC
PRESERVATION AREA = 49 AC

EXISTING ZONING:

SE SUBURBAN ESTATES
PUD PLANNED UNIT DEVELOPMENT

DESCRIPTION OF PROPOSED USE: THE SILVERBELL POINTE PLANNED UNIT DEVELOPMENT IS PROPOSED AS A SINGLE FAMILY RESIDENTIAL PROJECT. THE PROPOSED USE WILL BE 46 DETACHED SINGLE-FAMILY, FOR SALE HOMES, ON PRIVATE STREETS.

THE PROPOSED DEVELOPMENT WILL BE COMPLETED BY THE APPLICANT, A MICHIGAN BASED HOME BUILDER. THE APPLICANT HAS COMPLETED AND IS UNDER CONSTRUCTION WITH SEVERAL HIGH QUALITY RESIDENTIAL DEVELOPMENTS IN AND AROUND ORION TOWNSHIP.

HOMES TO BE A BLEND OF RANCH, 1-1/2 STORY AND COLONIAL HOMES RANGING FROM 2000-SF TO 4000-SF. BUILDING MATERIALS SHALL BE A MIX OF BRICK, ASPHALT SHINGLES, PLANK SIDING WITH VARIETY OF COLOR PALATES AND DURABLE LOW-MAINTENANCE FREE MATERIALS. AT LEAST 50% OF GARAGES WILL BE SIDE ENTRY OR RECESSED. IT IS ANTICIPATED THAT ALL HOMES WILL HAVE SIDE ENTRY GARAGES.

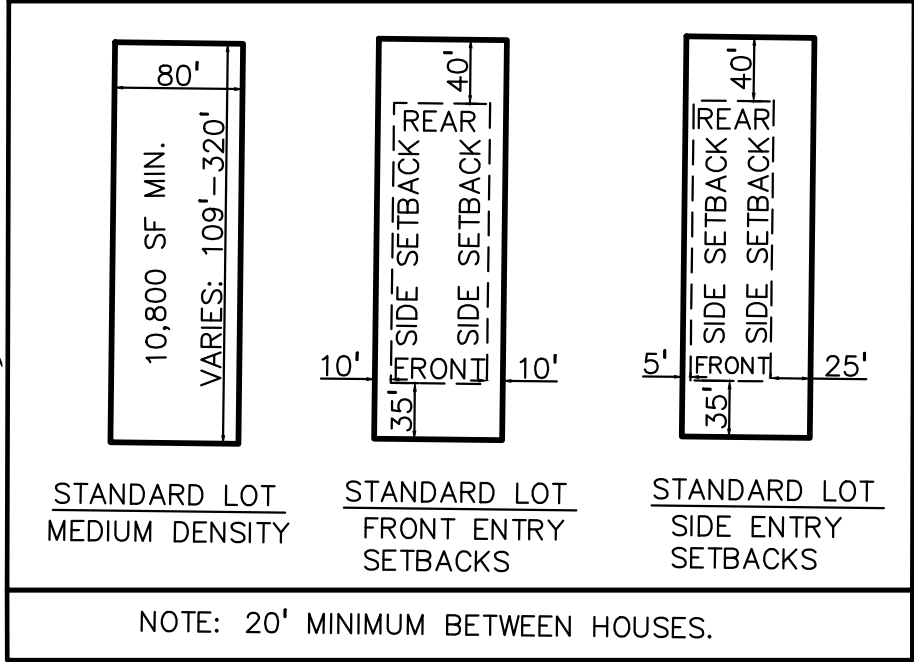
NATURAL FEATURES:

TOPOGRAPHY: THE SITE EXHIBITS ROLLING TOPOGRAPHIC RELIEF WITH A STEEP DROP OFF TO THE WETLAND AREA ASSOCIATED WITH MUD LAKE. WHILE GRADING WILL BE REQUIRED, EXISTING SLOPES SHOULD NOT BE SIGNIFICANT OBSTACLES FOR THE PROPOSED DEVELOPMENT.

WOODLANDS: SIGNIFICANT VEGETATION LIES WITHIN THE CENTRAL PORTIONS OF THE SITE. A WOODLANDS TREE SURVEY IN ACCORDANCE WITH SECTION 27.12 WILL BE SUBMITTED AS REQUIRED. THE APPLICANT WILL COMPLY WITH THE WOODLANDS PRESERVATION REGULATIONS CONTAINED WITHIN THE ZONING ORDINANCE.

WETLANDS: A LARGE WETLAND AREA LIES AROUND THE DEVELOPABLE PROPERTY. WETLAND PERMIT APPLICATIONS WILL BE SUBMITTED TO BOTH THE TOWNSHIP AND THE MDEQ AS REQUIRED. TOTAL WETLAND FILL: ±0.8 AC

SOILS: THE SOILS ON-SITE INCLUDE 14B AND 14C OAKVILLE FINE SAND 0% TO 18% SLOPES, 53A TEDROW LOAMY SAND 0% TO 3% SLOPES, AND 27 HOUGHTON AND ADRIAN MUCKS.



GUARANTEED OPEN SPACE:

PER ORION TOWNSHIP ZONING ORDINANCE

MINIMUM STANDARD OPEN SPACE REQUIRED
RESIDENTIAL USES = 15%

DEVELOPABLE SITE AREA = 28 AC

OPEN SPACE (NIC DETENTION AND WETLANDS)

AREA 'A'	\pm	1.28	AC
AREA 'B'	\pm	1.23	AC
AREA 'C'	\pm	1.19	AC
AREA 'D'	\pm	1.76	AC
AREA 'E'	\pm	0.28	AC

TOTAL 5.74 AC
% OPEN SPACE PROVIDED = 20%

OPEN SPACE AREAS A, B, C, AND D WILL BE PASSIVE OPEN SPACE AREAS THAT PROVIDE A NATURAL BUFFER AND OPEN SPACE AREA E WILL BE ACTIVE OPEN SPACE THAT PROVIDES PARK SPACE AND LAKE ACCESS.

[illegible]

CAUTION!!
THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND

THIS DRAWING AND DESIGN ARE THE PROPERTY OF
PEIA, INC. THEY ARE SUBMITTED ON THE CONDITION
THAT THEY ARE NOT TO BE USED, REPRODUCED, OR
COPIED, IN WHOLE OR IN PART, OR USED FOR
FURNISHING INFORMATION TO OTHERS, WITHOUT THE
PRIOR WRITTEN CONSENT OF PEIA, INC. ALL COMMON
LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE
HEREBY SPECIFICALLY RESERVED. © 2020 PEIA, INC.

ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING THE ACTIONS AND PROCEEDINGS, THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

**3 FULL WORKING DAYS
BEFORE YOU DIG CALL**

811
Know what's below
Call before you dig
MISS DIG System, Inc.
1-800-482-7171 www.missdig.net
(TOLL FREE)

PEA, Inc.
2430 Rochester Ct, Ste 100
Troy, MI 48083-1872
t: 248.689.9090
f: 248.689.1044
www.peainc.com

FRANKLIN RIDGE HOMES, LLC
3000 ORCHARD LAKE ROAD, SUITE 150
FARMINGTON HILLS, MICHIGAN 48334

OVERALL SITE PLAN

SILVERBELL POINTE

PART OF THE SE 1/4 OF SECTION 28 & NE 1/4 SECTION 33, T04N, R 10E, S01E, 2ND P.M.,
ORION TOWNSHIP, OAKLAND COUNTY, MICHIGAN

DES.	TWK	DN.	SUR.	KTR	P.M.
Vandalia Local Gen. Plan (VLCAT) 2018-B-150, SILVERBELL POINTE - 347.94 AC. TRACT, PLY(C)-2.0 SITE-NE					

ORIGINAL ISSUE DATE:
MARCH 17, 2020

PEA JOB NO. 2018-150

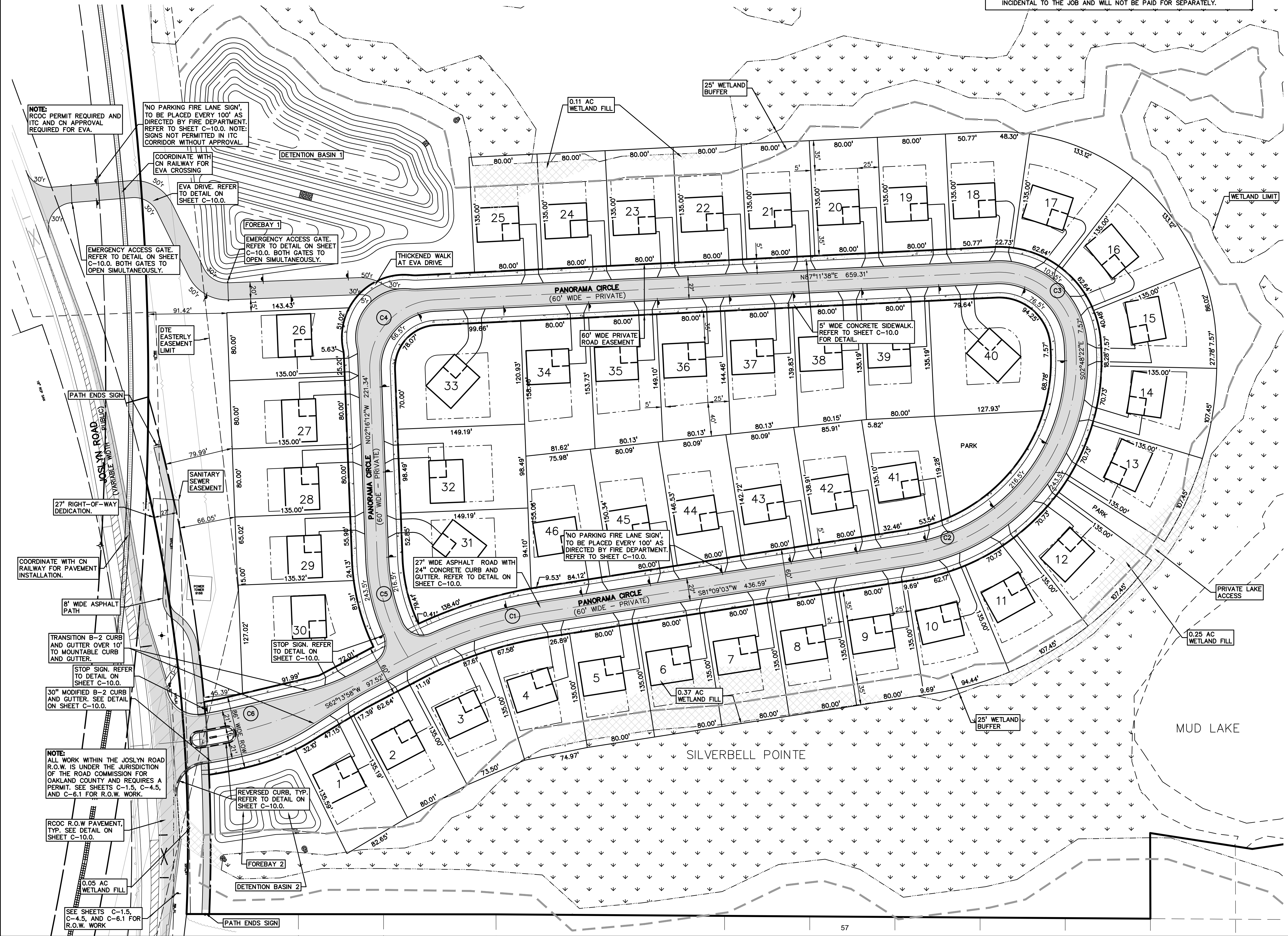
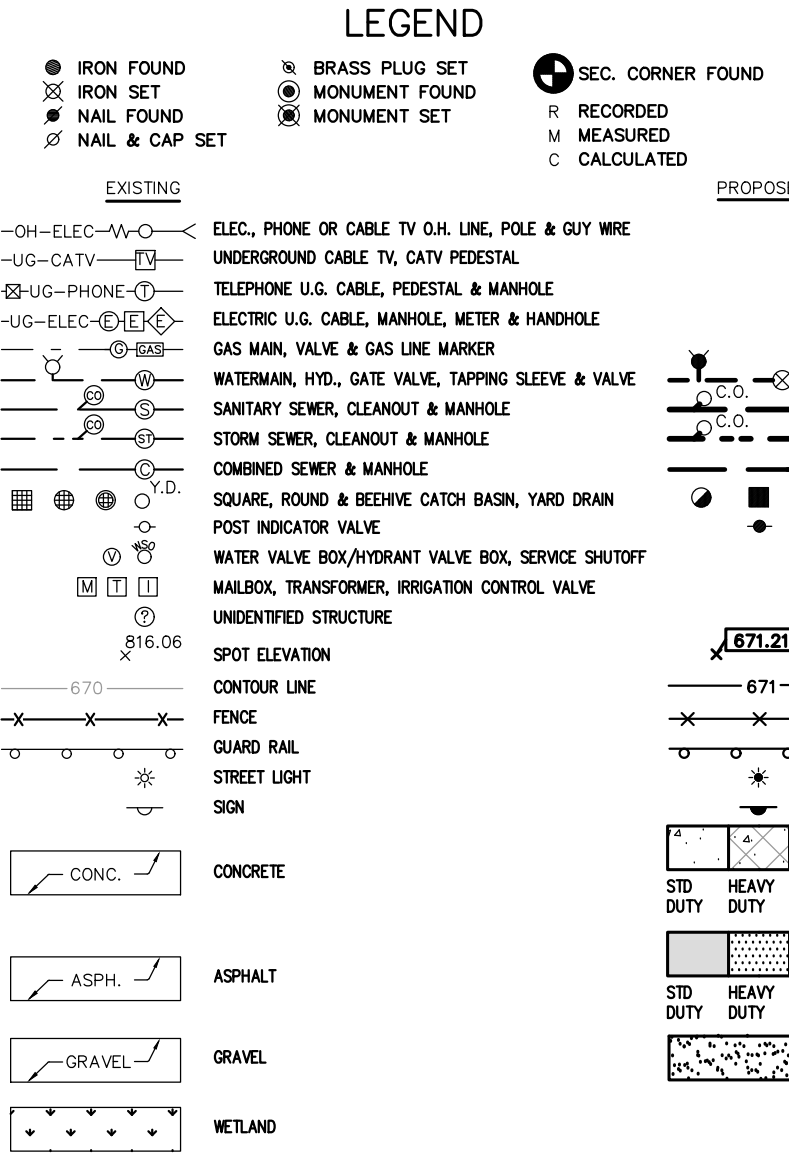
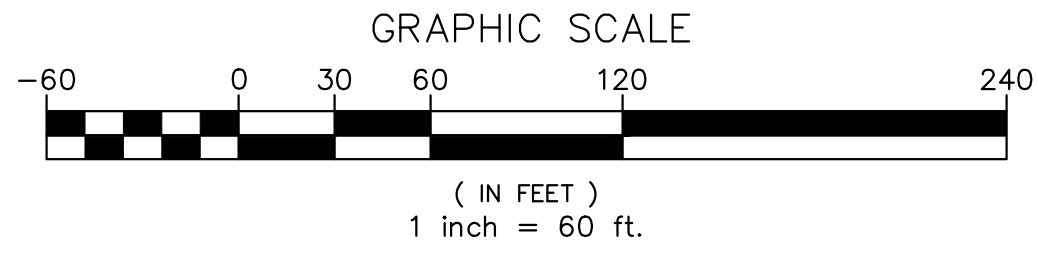
SCALE: 1" = 120'

DRAWING NUMBER:

C-2.0

XREF: S:PROJECTS\2018\2018150\DWG\18150-TOPOBASE.DWG
XREF: S:PROJECTS\2018\2018150\DWG\FINAL PUD\X-BASE-18150.DWG
XREF: S:PROJECTS\2018\2018150\DWG\FINAL PUD\X-TRIK-18150.DWG

- GENERAL NOTES:**
THESE NOTES APPLY TO ALL CONSTRUCTION ACTIVITIES ON THIS PROJECT.
- ALL DIMENSIONS SHOWN ARE TO BACK OF CURB, FACE OF SIDEWALK, OUTSIDE FACE OF BUILDING, PROPERTY LINE, CENTER OF MANHOLE/CATCH BASIN OR CENTERLINE OF PIPE UNLESS OTHERWISE NOTED.
 - REFER TO SHEET C-10.0 FOR ON-SITE PAVING DETAILS.
 - REFER TO SHEET C-10.0 FOR ON-SITE SIDEWALK RAMP DETAILS.
 - 'NO PARKING-FIRE LANE' SIGNS SHALL BE POSTED ALONG ALL FIRE LANES AT 100 FOOT INTERVALS OR AS DIRECTED BY THE FIRE OFFICIAL.
 - ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH OXFORD TOWNSHIP CURRENT STANDARDS AND REGULATIONS.
 - THE CONTRACTOR SHALL NOTIFY THE TOWNSHIP ENGINEER AND/OR THE AUTHORITY HAVING JURISDICTION 3 BUSINESS DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.
 - ANY WORK WITHIN THE STREET OR HIGHWAY RIGHTS-OF-WAY SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THE AGENCIES HAVING JURISDICTION AND SHALL NOT BEGIN UNTIL ALL NECESSARY PERMITS HAVE BEEN ISSUED FOR THE WORK.
 - IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ADJUST THE TOP OF ALL EXISTING AND PROPOSED STRUCTURES (MANHOLES, CATCH BASINS, INLETS, GATE WELLS ETC.) WITHIN GRADED AND/OR PAVED AREAS TO FINAL GRADE SHOWN ON THE PLANS. ALL SUCH ADJUSTMENTS SHALL BE INCIDENTAL TO THE JOB AND WILL NOT BE PAID FOR SEPARATELY.



Parcel Area Table		Parcel Area Table	
PARCEL NO.	AREA (S.F.)	PARCEL NO.	AREA (S.F.)
1	10,908	24	10,800
2	10,840	25	10,800
3	11,732	26	10,848
4	11,518	27	10,800
5	10,800	28	10,800
6	10,800	29	10,803
7	10,800	30	15,831
8	10,800	31	16,198
9	10,800	32	14,695
10	11,880	33	17,413
11	12,027	34	12,601
12	12,027	35	12,113
13	12,027	36	11,742
14	12,027	37	11,372
15	12,670	38	11,001
16	13,214	39	10,815
17	13,214	40	17,832
18	11,648	41	11,050
19	10,800	42	10,960
20	10,800	43	11,265
21	10,800	44	11,570
22	10,800	45	11,875
23	10,800	46	12,913

Curve Table					
Curve #	Length	Radius	Delta	Chord Direction	Chord Length
C1	165.09	500.00	18°55'05"	S71° 41' 31"W	164.34
C2	337.03	230.00	83°57'25"	S39° 10' 20"W	307.67
C3	141.37	90.00	90°00'00"	S47° 48' 22"E	127.28
C4	124.91	80.00	89°27'49"	N42° 27' 43"E	112.61
C5	122.12	230.00	30°25'18"	N17° 28' 51"W	120.69
C6	160.89	500.00	18°26'10"	S71° 27' 03"W	160.19

SYMBOLS: EROSION CONTROL:

WETLAND FILL LIMIT

REFER TO WETLAND PERMIT XX (IN PROCESS)

DATE	BY	REVISIONS
12-15-20	JBT	REVISIONS PER NOVEMBER 13, 2020 TWP REVIEW
10-05-20	JBT	REVISIONS FOR ADDED EVA
08-13-20	JBT	REVISIONS PER MAY 6, 2020 PC MEETING
07-17-20	JBT	DATE DISSEMINATION

CAUTION!!
THE LOCATION AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS GIVEN FOR THE ACCURACY OF THESE UTILITIES. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

THIS DRAWING AND DESIGN ARE THE PROPERTY OF PEA, INC. THEY ARE LOANED TO THE CONTRACTOR FOR THE PROJECT ONLY. THEY ARE NOT TO BE REPRODUCED, COPIED, IN WHOLE OR IN PART, OR USED FOR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF PEA, INC. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED. © 2020 PEA, INC.

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE RESPONSIBLE FOR OBTAINING SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFINE, INDUSTRY AND HOLD DESIGN PROFESSIONAL LIABILITY FROM ANY AND ALL LIABILITY, LOSS OR ALLEGED IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPT LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

3 FULL WORKING DAYS BEFORE YOU DIG CALL

811

Know what's below
Call before you dig

MISS Dig System, Inc.
1-800-482-7171 www.missdig.net
(TOLL FREE)



PEA, Inc.
2430 Rochester Ct, Ste 100
Troy, MI 48063-1872
t: 248.689.9090
f: 248.689.1044
www.peainc.com

FRANKLIN RIDGE HOMES, LLC
30180 ORCHARD LAKE ROAD, SUITE 150
PARKMAN HILLS, MICHIGAN 48354

DIMENSION AND PAVING PLAN
SILVERBELL POINTE
PART OF THE SE 1/4 OF SECTION 28 & NE 1/4 SECTION 33, T40N, R10E
ORION TOWNSHIP, OAKLAND COUNTY, MICHIGAN

DES. TMM DN. TMM SUR. KTR P.M. JBT
S:\PROJECTS\2018\2018150\DWG\18150-150\DWG\18150-150.DWG

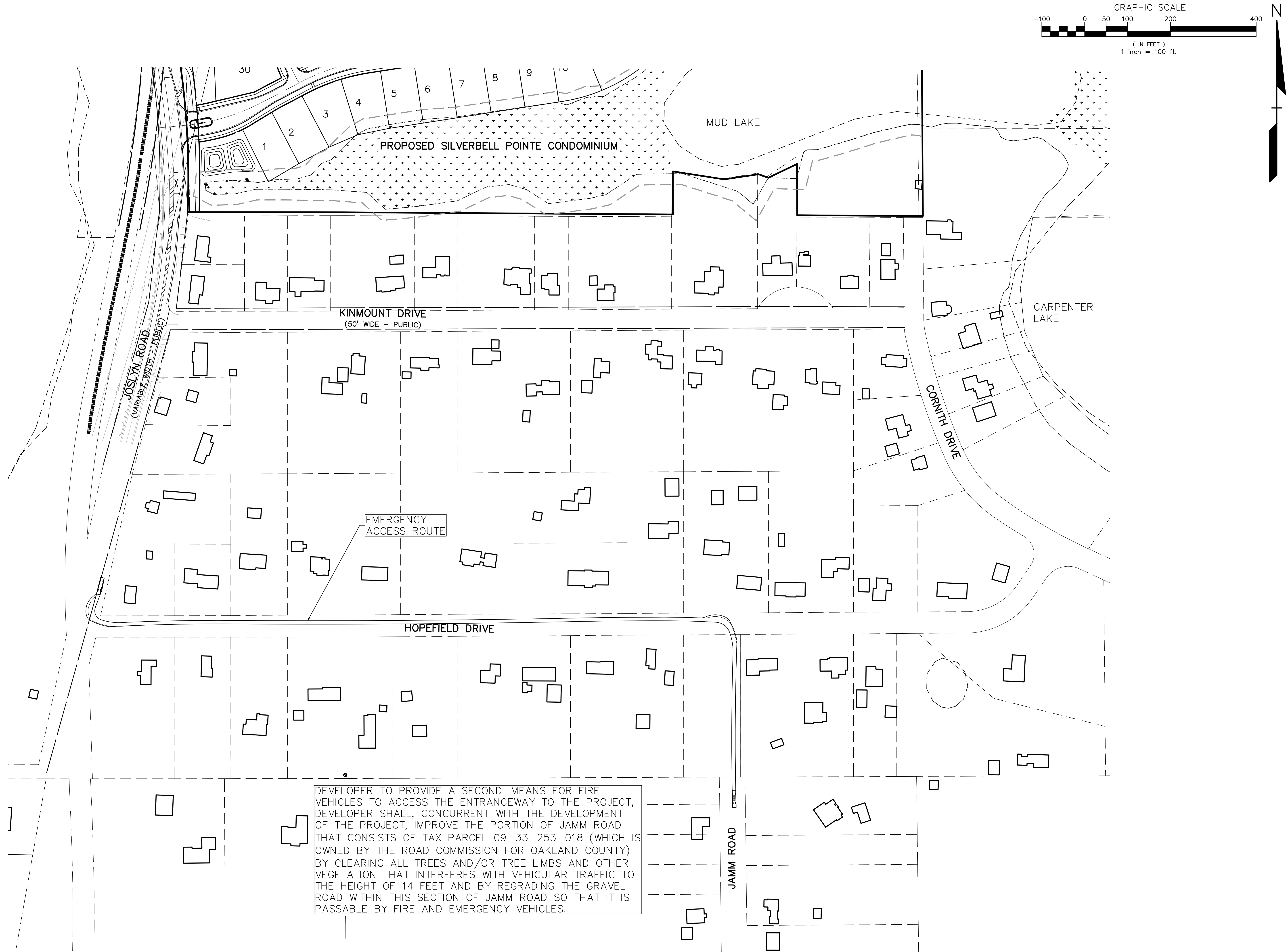
ORIGINAL ISSUE DATE:
MARCH 17, 2020

PEA JOB NO. 2018-150

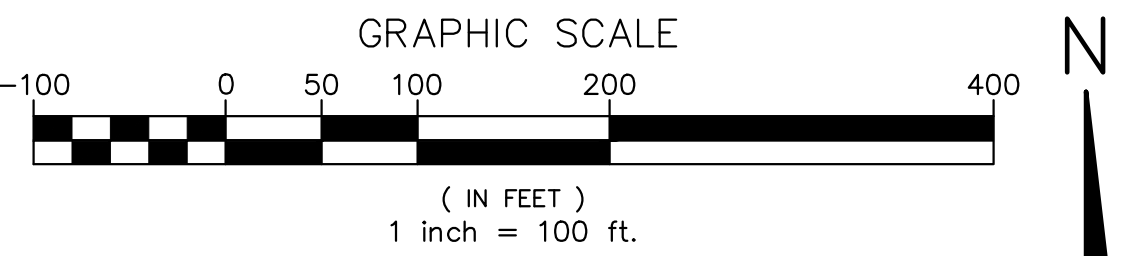
SCALE: 1" = 60'

DRAWING NUMBER:
C-2.1

XREF: S:\PROJECTS\2018\2018150\DWG\18150-150\DWG\18150-150.DWG
XREF: S:\PROJECTS\2018\2018150\DWG\18150-150\DWG\18150-150.DWG
XREF: S:\PROJECTS\2018\2018150\DWG\18150-150\DWG\18150-150.DWG



DEVELOPER TO PROVIDE A SECOND MEANS FOR FIRE VEHICLES TO ACCESS THE ENTRANCEWAY TO THE PROJECT, DEVELOPER SHALL, CONCURRENT WITH THE DEVELOPMENT OF THE PROJECT, IMPROVE THE PORTION OF JAMM ROAD THAT CONSISTS OF TAX PARCEL 09-33-253-018 (WHICH IS OWNED BY THE ROAD COMMISSION FOR OAKLAND COUNTY) BY CLEARING ALL TREES AND/OR TREE LIMBS AND OTHER VEGETATION THAT INTERFERES WITH VEHICULAR TRAFFIC TO THE HEIGHT OF 14 FEET AND BY REGRADING THE GRAVEL ROAD WITHIN THIS SECTION OF JAMM ROAD SO THAT IT IS PASSABLE BY FIRE AND EMERGENCY VEHICLES.



NO.	DATE	DESCRIPTION
1	12-15-20	TMK JBT REVISIONS PER NOVEMBER 13, 2020 TMP REVIEW
2	10-05-20	TMK JBT REVISIONS FOR ADDED EVA
3	08-13-20	TMK JBT REVISIONS PER MAY 6, 2020 PC MEETING

CAUTION!!
 THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

THIS DRAWING AND DESIGN ARE THE PROPERTY OF PEA, INC. THEY ARE SUBMITTED ON THE CONDITION THAT THEY ARE NOT TO BE USED, REPRODUCED, OR COPIED IN WHOLE OR IN PART, OR USED FOR FURNISHING INFORMATION TO OTHERS, WITHOUT THE PRIOR WRITTEN CONSENT OF PEA, INC. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED. © 2020 PEA, INC.

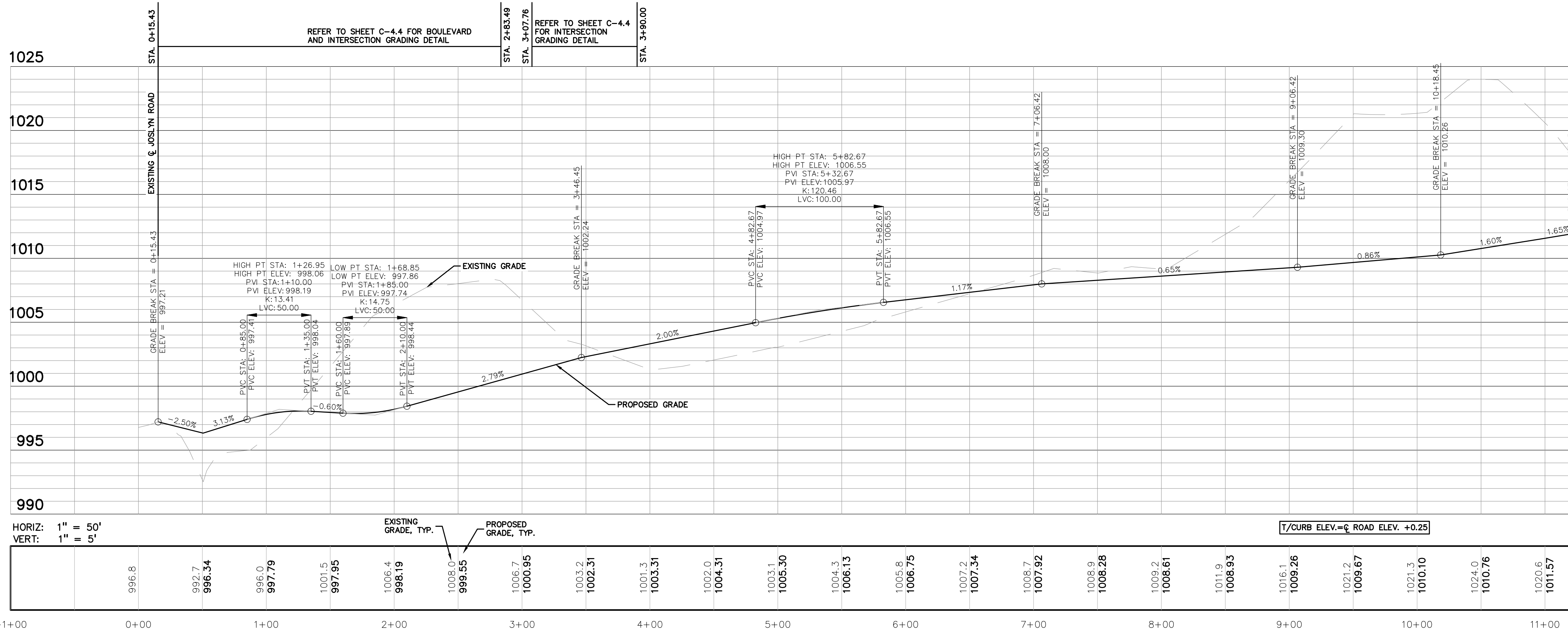
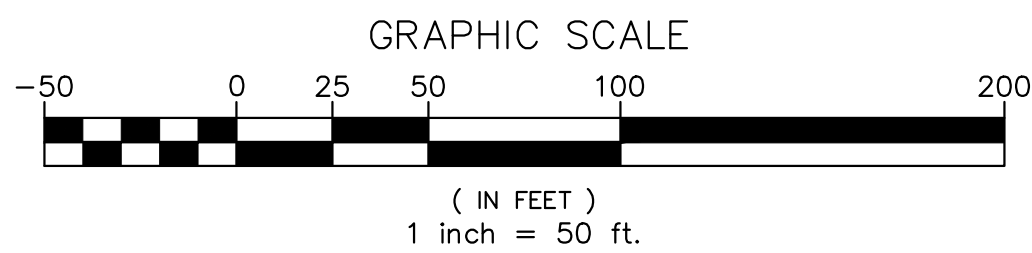
CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, LOSS OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPT LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

3 FULL WORKING DAYS BEFORE YOU DIG CALL 811
 Know what's below
 Call before you dig
 MISS Dig System, Inc.
 1-800-482-7171 www.missdig.net
 (TOLL FREE)

PEA, Inc.
 2430 Rochester Ct, Ste 100
 Troy, MI 48063-1872
 t: 248.689.9090
 f: 248.689.1044
 www.peainc.com

FRANKLIN RIDGE HOMES, LLC
 30180 ORCHARD LAKE ROAD, SUITE 150
 FARMINGTON HILLS, MICHIGAN 48334
FIRE ACCESS ROUTE
SILVERBELL POINTE
 PART OF THE SE 1/4 OF SECTION 28 & NE 1/4 SECTION 33, T04N, R10E
 ORION TOWNSHIP, OAKLAND COUNTY, MICHIGAN
 DES. TMK DN. TMK SUR. KTR P.M. JBT

ORIGINAL ISSUE DATE:
 MARCH 17, 2020
 PEA JOB NO. 2018-150
 SCALE: 1" = 100'
 DRAWING NUMBER:
C-2.2



NO.	DATE	DESCRIPTION
1	12-15-20	REVISIONS PER NOVEMBER 13, 2020 TYP REVIEW
2	10-05-20	REVISIONS FOR ADDED EVA
3	08-13-20	REVISIONS PER MAY 6, 2020 PC MEETING

CAUTION!!
THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS GIVEN FOR THE ACCURACY OF THE INFORMATION. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

THIS DRAWING AND DESIGN ARE THE PROPERTY OF PEA, INC. THEY ARE LOANED TO THE CONTRACTOR THAT THEY ARE NOT TO BE USED, REPRODUCED, OR COPIED IN WHOLE OR IN PART, OR USED FOR FURNISHING INFORMATION TO OTHERS, WITHOUT THE PRIOR WRITTEN CONSENT OF PEA, INC. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED. © 2020 PEA, INC.

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR SHALL BE RESPONSIBLE FOR ASSUMING SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, LOSS OR ALLEGED IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

3 FULL WORKING DAYS BEFORE YOU DIG CALL

811
Know what's below
Call before you dig
MISS Dig System, Inc.
1-800-482-7171 www.missdig.net
(1021-4821)

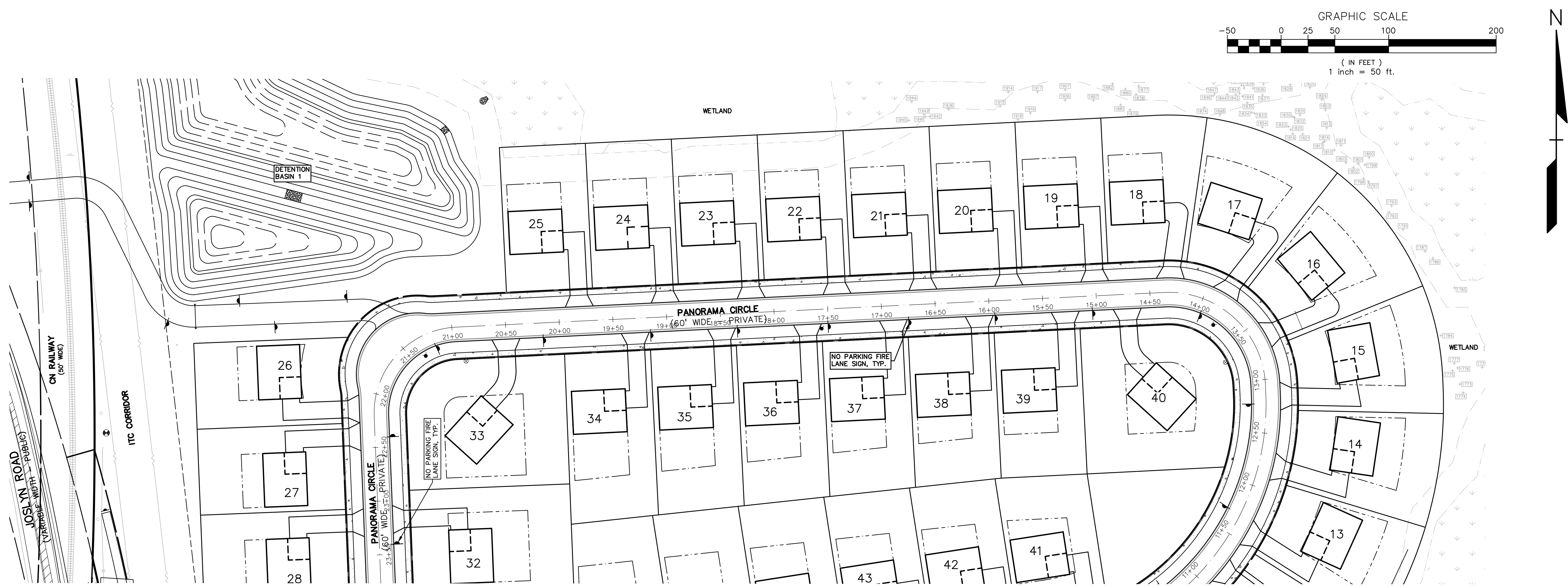


PEA, Inc.
2430 Rochester Ct, Ste 100
Troy, MI 48063-1872
t: 248.689.9090
f: 248.689.1044
www.peainc.com

FRANKLIN RIDGE HOMES, LLC
30180 ORCHARD LAKE ROAD, SUITE 150
FARMINGTON HILLS, MICHIGAN 48334
ROAD PROFILES - STA. 0+00 TO 11+00
SILVERBELL POINTE
PART OF THE SE 1/4 OF SECTION 28 & NE 1/4 SECTION 33, T40N, R10E
ORION TOWNSHIP, OAKLAND COUNTY, MICHIGAN

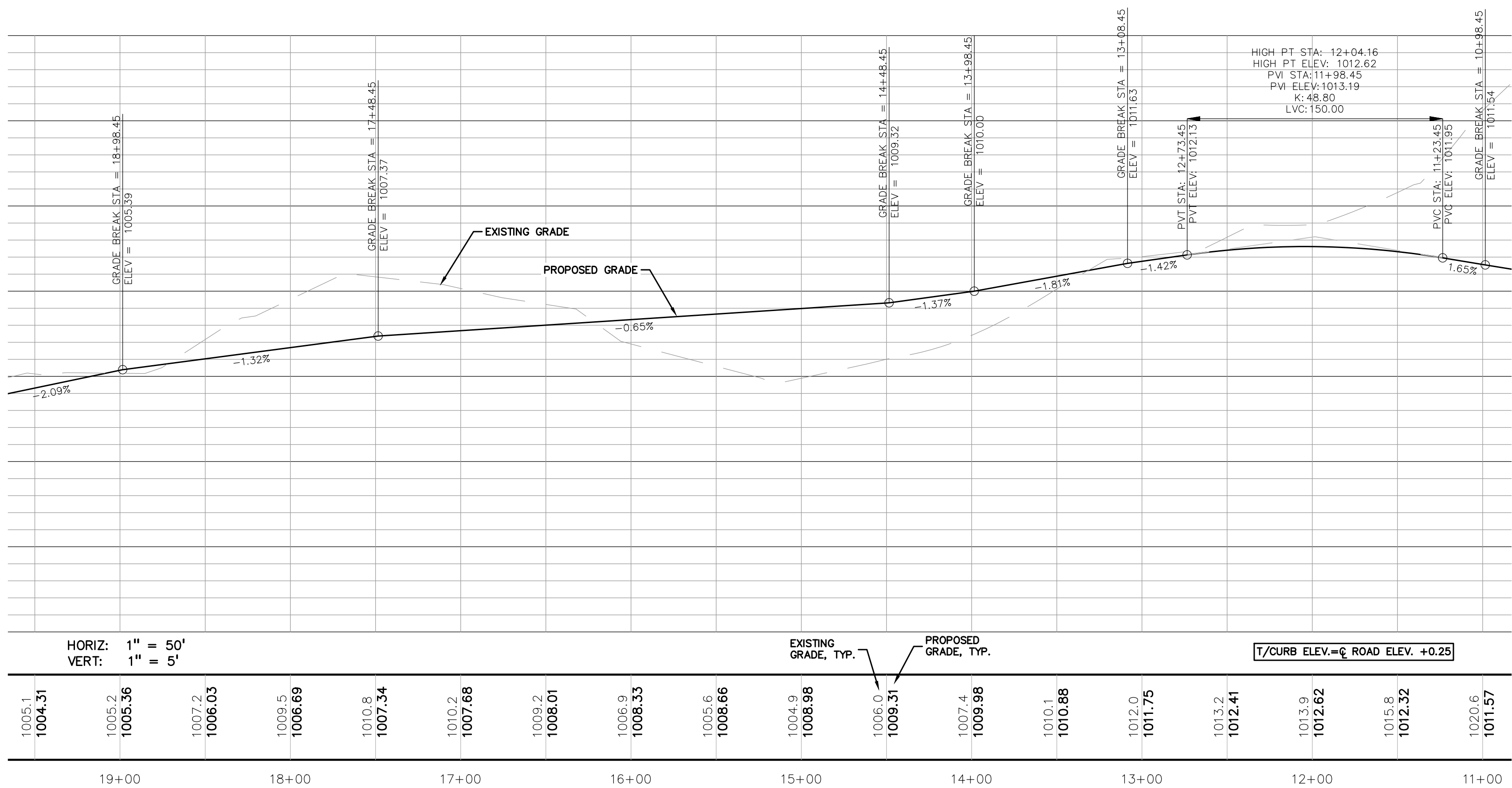
DES. TMK DN. TMK SUR. KTR P.M. JBT
ORIGINAL ISSUE DATE:
MARCH 17, 2020
PEA JOB NO. 2018-150
SCALE: 1" = 50'
DRAWING NUMBER:
C-3.1

XREF: S:\PROJECTS\2018\2018150\DWG\18150-TOPBASE.DWG
XREF: S:\PROJECTS\2018\2018150\DWG\FINAL_PUD\X-BASE-18150.DWG
XREF: S:\PROJECTS\2018\2018150\DWG\FINAL_PUD\X-TBLK-18150.DWG



SEE SHEET C-3.3 FOR CONTINUATION

SEE SHEET C-3.1 FOR CONTINUATION



REVISIONS			
No.	DATE	DESCRIPTION	BY
1	12-15-20	3. TMK JBT REVISIONS PER NOVEMBER 13, 2020 ITP REVIEW	JBT
2	10-05-20	2. TMK JBT REVISIONS FOR ADDED E.V.A.	JBT
3	08-13-20	1. TMK JBT REVISIONS PER MAY 6, 2020 P.C. MEETING	JBT
4	07-17-20	NO. 1 BT. CIVIL DESCRIPTION	JBT

CAUTION!!
THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

THIS DRAWING AND DESIGN ARE THE PROPERTY OF PEA, INC. THEY ARE LOANED TO THE CONTRACTOR THAT THEY ARE NOT TO BE USED, REPRODUCED, OR COPIED IN WHOLE OR IN PART, OR USED FOR FURNISHING INFORMATION TO OTHERS, WITHOUT THE PRIOR WRITTEN CONSENT OF PEA, INC. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED. © 2020 PEA, INC.

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL, FURNISHERS FROM ANY AND ALL LIABILITY, LOSS OR ALLEGED IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPT LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

3 FULL WORKING DAYS BEFORE YOU DIG CALL 811
Know what's below
Call before you dig
MISS Dig System, Inc.
1-800-482-7171 www.missdig.net (TOLL FREE)

PEA, Inc.
2430 Rochester Ct, Ste 100
Troy, MI 48063-1872
t: 248.689.9090
f: 248.689.1044
www.peainc.com

FRANKLIN RIDGE HOMES, LLC
30180 ORCHARD LAKE ROAD, SUITE 150
PARKMINGTON HILLS, MICHIGAN 48354

ROAD PROFILES - STA. - 11+00 TO 21+00
PART OF THE SE 1/4 OF SECTION 28 & NE 1/4 SECTION 33, T40N, R10E
ORION TOWNSHIP, OAKLAND COUNTY, MICHIGAN

DES.	TMK	DN.	TMK	SUR.	KTR	P.M.	JBT

ORIGINAL ISSUE DATE:
MARCH 17, 2020

PEA JOB NO. 2018-150

SCALE: 1" = 50'

DRAWING NUMBER:
C-3.2

XREF: S:\PROJECTS\2018\2018150\DWG\18150-TOPBASE.DWG
XREF: S:\PROJECTS\2018\2018150\DWG\FINAL_PUD\X-BASE-18150.DWG
XREF: S:\PROJECTS\2018\2018150\DWG\FINAL_PUD\X-TBLK-18150.DWG

1. CONTRACTOR TO FIELD VERIFY ALL EXISTING TREES AND BRUSH AND REMOVE ALL THAT ARE NECESSARY TO GRADE SITE.
2. ALL GRADES ARE TO TOP OF PAVEMENT UNLESS OTHERWISE NOTED.
3. THE STAGING OF CONSTRUCTION ACTIVITIES SHALL OCCUR ONLY WITHIN THE SITE BOUNDARIES. ANY CONSTRUCTION ACTIVITIES OUTSIDE OF THE SITE BOUNDARIES SHALL BE AT THE SOLE RESPONSIBILITY AND RISK OF THE CONTRACTOR.
4. ALL SOIL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL MEET THE REQUIREMENTS OF OAKLAND COUNTY EROSION CONTROL PERMIT MUST BE SECURED FROM THE COUNTY PRIOR TO CONSTRUCTION.
5. SEE ADDITIONAL GRADING AND EARTHWORK NOTES ON DETAIL SHEET C-5.0
6. REFER TO SHEET C-5.0 FOR ALL SOIL EROSION AND SEDIMENTATION CONTROL MEASURES AND NOTES.
7. ALL DISTURBED AREAS SHALL BE SEEDED AND MULCHED OR SODED IN ACCORDANCE WITH THE LANDSCAPE PLANS. PROVIDE A MINIMUM OF 3" OF TOPSOIL IN THESE AREAS UNLESS OTHERWISE NOTED.
8. THE CONTRACTOR SHALL NOTE EXISTING UNDERGROUND UTILITIES WITHIN AND ADJACENT TO THE SITE. BEFORE ANY EXCAVATION TRENCHES SHALL BE EXAMINED CRITICALLY. ANY TRENCHES HAVING TO HAVE SOFT, UNSTABLE OR UNSUITABLE BACKFILL MATERIAL. IN THE OPINION OF THE GEOTECHNICAL ENGINEER, THAT ARE TO BE WITHIN THE ZONE OF INFLUENCE OF PROPOSED FOUNDATION OR PAVEMENT SHALL BE COMPLETELY EXCAVATED AND BACKFILLED WITH SUITABLE MATERIAL.

PROPOSED SPOT GRADE ELEVATION. ALL GRADES INDICATED ARE TOP OF PAVEMENT UNLESS OTHERWISE NOTED.

PROPOSED CONTOUR LINE

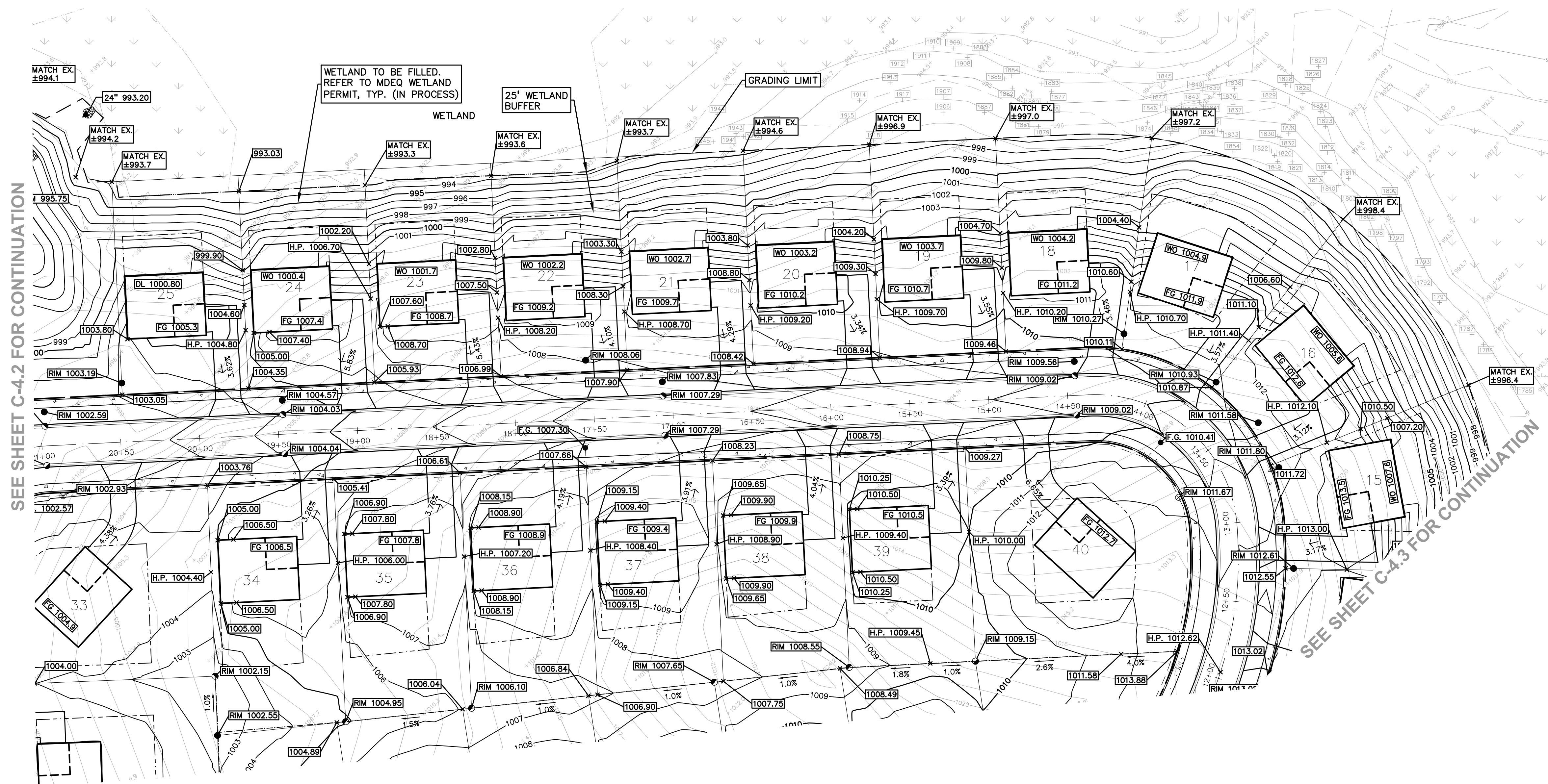
THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPORTING OR EXPORTING ALL MATERIALS AS REQUIRED TO PROPERLY GRADE THIS PROJECT TO THE FINISHED ELEVATIONS SHOWN ON THE APPROVED PLANS. THE CONTRACTOR SHALL MAKE THEIR OWN DETERMINATION OF CUT AND FILL QUANTITIES AND ALLOW FOR REMOVAL OF EXCESS OR IMPORTATION OF ADDITIONAL MATERIAL AT NO ADDITIONAL COST TO THE OWNER.

REFER TO SHEETS C-3.1 TO C-3.3 FOR ROAD PROFILES.

DAYLIGHT = DL = 4.5' BELOW FINISH GRADE
WALKOUT = WO = 7' BELOW FINISH GRADE

NOTE: THE LOWEST REAR YARD GRADE
SHALL BE 996.90. ALL BASEMENT GRADES
SHALL BE 1 FT ABOVE THE LAKE

<ul style="list-style-type: none"> IRON FOUND IRON SET NAIL FOUND NAIL & CAP SET 	<ul style="list-style-type: none"> BRESS PLUG SET MONUMENT FOUND MONUMENT SET 	<ul style="list-style-type: none"> SEC. CORNER FOUND R RECORDED M MEASURED C CALCULATED 	PROPOSED
<p>—OH—ELEC—W—</p> <p>—UG—CATV—</p> <p>—UG—PHONE—</p> <p>—UG—ELEC—ELEC—</p> <p> </p> <p> </p> <p> </p>	<p>ELEC. PHONE OR CABLE TV, O.S. LINE, POLE & WIRE</p> <p>UNDERGROUND CABLE TV, CATV FEEDTAIL</p> <p>TELEPHONE U.S. CABLE, FEEDTAIL & MANHOLE</p> <p>ELECTRIC U.S. CABLE, MANHOLE, METER & MANHOLE</p> <p>GAS MAIN, VALVE & GAS LINE MARKER</p> <p>WATERMAIN, HYD. GATE VALVE, TAPPING SLEEVE & VALVE</p> <p>SANITARY SEWER, CLEANOUT & MANHOLE</p> <p>STORM SEWER, CLEANOUT & MANHOLE</p> <p>COMBINED SEWER & MANHOLE</p> <p>SQUARE, ROUND & RECTANG. CATCH BASIN, YARD DRAIN</p> <p>POST INDICATOR VALVE</p> <p>WATER VALVE BOX/HYDRANT VALVE BOX, SERVICE SHUTOFF</p> <p>MILBOX, TRANSFORMER, IRRIGATION CONTROL VALVE</p> <p>UNIDENTIFIED STRUCTURE</p> <p>SPOT ELEVATION</p> <p>CONTOUR LINE</p> <p>FENCE</p> <p>GUARD RAIL</p> <p>STREET LIGHT</p> <p>SIGN</p> <p>CONC.</p> <p>ASPH.</p> <p>GRAVEL</p> <p>WETLAND</p>	<p> </p> <p> </p> <p> </p> <p> </p> <p> </p> <p> </p> <p> </p>	<p> </p> <p> </p> <p> </p> <p> </p> <p> </p> <p> </p> <p> </p>



SEE SHEET C-4.2 FOR CONTINUATION

CAUTION!!
THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

THIS DRAWING AND DESIGN ARE THE PROPERTY OF
PEA, INC. THEY ARE SUBMITTED ON THE CONDITION
THAT THEY ARE NOT TO BE USED, REPRODUCED, OR
COPIED, IN WHOLE OR IN PART, OR USED FOR
FURNISHING INFORMATION TO OTHERS, WITHOUT THE
PRIOR WRITTEN CONSENT OF PEA, INC. ALL COMMON
LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE
HEREBY SPECIFICALLY RESERVED. © 2020 PEA, INC.

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE RESPONSIBILITY FOR THE PROTECTION OF JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO HOLD AND INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

**8 FULL WORKING DAYS
BEFORE YOU DIG CALL**

811
Know what's below
Call before you dig
MISS DIG System, Inc.
1-800-482-7171 www.missdig.net
(TOLL FREE)



PEA, Inc.
2430 Rochester Ct, Ste 100
Troy, MI 48083-1872
t: 248.689.9090
f: 248.689.1044
www.peainc.com

F-FRANKLIN RIDGE HOMES, LLC
30180 ORCHARD LAKE ROAD, SUITE 150
FARMINGTON HILLS, MICHIGAN 48334

GRADING PLAN - NORTH
SILVERBELL POINTE
PART OF THE **SILVERBELL POINTE** SUBDIVISION, 14.36 ACRES, TOWNSHIP OF TOWNSHIP, OAKLAND COUNTY, MICHIGAN

DES.	TMK	DN	TMW	SUR	KTR	P.M.
Version: 10/06/2016 15:05:23 1018-100 30 SILVERBELL POINTE, CONDO - 30 SILVERBELL POINTE, CONDO - 30						

ORIGINAL ISSUE DATE:
MARCH 17, 2020

EA JOB NO. 2018-150

DRAWING NUMBER:

C-4.1

XREF: S:PROJECTS\2018\2018150\DWG\18150-TOPORBASE.DWG
XREF: S:PROJECTS\2018\2018150\DWG\FINAL PUD\X-BASE-18150.DWG
XREF: S:PROJECTS\2018\2018150\DWG\FINAL PUD\X-TBLK-18150.DWG

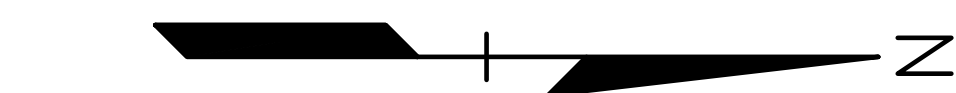
NOTE:

DAYLIGHT = DL = 4.5' BELOW FINISH GRADE
WALKOUT = WO = 7' BELOW FINISH GRADE

NOTE: THE LOWEST REAR YARD GRADE
SHALL BE 996.90. ALL BASEMENT GRADES
SHALL BE 1 FT ABOVE THE LAKE

EARTHWORK BALANCING NOTE:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPORTING OR EXPORTING ALL MATERIALS AS REQUIRED TO PROPERLY GRADE THIS PROJECT TO THE FINISHED ELEVATIONS SHOWN ON THE APPROVED PLANS. THE CONTRACTOR SHALL MAKE THEIR OWN DETERMINATION OF CUT AND FILL QUANTITIES AND ALLOW FOR REMOVAL OF EXCESS OR IMPORTATION OF ADDITIONAL MATERIAL AT NO ADDITIONAL COST TO THE OWNER.

[illegible]

REFER TO SHEET C-4.5
FOR R.O.W. GRADING

MATCH IN AT 1:
FROM EDGE OF

CN
RAILWAY
(STANDARD GAGE)

FOREBAY 2

DETENTION BASIN 2

FOREBAY 1

DETENTION BASIN 1

MATCH
±994.

24" 993.20

SEE SHEET C-4.1 FOR CONTINUATION

		3. TANK JBT		REVISIONS PER NOVEMBER 13, 2020 TWP REVIEW		12-15-22	
		1. TANK JBT		REVISIONS FOR ADDED EVA		10-05-22	
		2. TANK JBT		REVISIONS PER MAY 12, 2020 TWP MEETING		08-31-22	
		NO.		CHK		DESCRIPTION	
		NO.		CHK		DESCRIPTION	
CAUTION!! THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.							
THIS DRAWING AND DESIGN ARE THE PROPERTY OF PEA, INC. THEY ARE SUBMITTED ON THE CONDITION THAT THEY ARE NOT TO BE USED, REPRODUCED, OR COPIED, IN WHOLE OR IN PART, OR USED FOR FURNISHING INFORMATION TO OTHERS, WITHOUT THE WRITTEN CONSENT OF PEA, INC. ANY VIOLATION OF THESE RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY EXPRESSLY FORBIDDEN. © 2020 PEA, INC.							
CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS AND PROFESSIONAL CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THE PROJECT EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.							
3 FULL WORKING DAYS BEFORE YOU DIG CALL							
811							
Know what's below Call before you dig							
MISS DIG System, Inc.							
1-800-482-7171 www.missdig.net TOLLS FREE							
PEA, Inc.							
2430 Rochester Ct, Ste 100 Troy, MI 48063-1872 t: 248.689.9090 f: 248.689.1044 www.peainc.com							
FRANKLIN RIDGE HOMES, LLC							
30190, ORCHARD LAKE ROAD, SUITE 150 FARMINGTON HILLS, MICHIGAN 48334							
GRADING PLAN - WEST							
SILVERBELL POINTE							
PART OF THE SE 1/4 OF SECTION 28 & NE 1/4 SECTION 33, T04N, R10E ORION TOWNSHIP, OKLAND COUNTY, MICHIGAN							
DES	TWK	DN	TWK	SUR	KTR	P.M.	JBT
PROJECT: 2018-102158 - SILVERBELL POINTE CONDO - 3RD WORKING PLAN (C-4) GRADE - 1850.00' aeg							
ORIGINAL ISSUE DATE: MARCH 17, 2020							
PEA JOB NO. 2018-150							
SCALE: 1" = 40'							
DRAWING NUMBER: C-4.2							

R.C.O.C. NOTES:

CORRUGATED PLASTIC PIPE MEETING AASHTO M294, TYPE S REQUIREMENTS FOR STORM SEWERS FROM 12" TO 24" DIAMETERS, MAY BE USED IN THIS DEVELOPMENT. HOWEVER, PRIOR TO APPROVAL OF THE STORM SYSTEM OR START OF ROAD PAVING A MANUFACTURER'S CERTIFICATE OF COMPLIANCE WITH THESE REQUIREMENTS SHALL BE SUBMITTED TO THE ROAD COMMISSION OF OAKLAND COUNTY. ALSO AT LEAST FIFTY PERCENT OF THE SEWER CARRYING ROAD DRAINAGE, AS SELECTED BY THE ENGINEER, SHALL BE TESTED FOR DEFORMATION BY THE CONTRACTOR USING A NINEPOINT MANDREL. ENGINEER CERTIFICATION THAT THE PIPE HAS PASSED THESE TESTS SHALL BE SUBMITTED TO THE ROAD COMMISSION FOR OAKLAND COUNTY.

ALL SIDEWALKS, SIDEWALK RAMPS AND CURB OPENINGS SHALL BE IN ACCORDANCE WITH M.D.O.T. STANDARD PLAN R-28 AND A.D.A. REQUIREMENTS. CROSSWALKS SHALL HAVE A TRANSVERSE SLOPE NO GREATER THAN 2% WHERE THEY CROSS STREETS. SIDEWALKS THAT CROSS DRIVEWAYS SHALL MAINTAIN CROSS SLOPES NO GREATER THAN 2% WHERE THEY CROSS A DRIVEWAY IN ADDITION TO OTHER AREAS. SIDEWALK CURB RAMPS, CURB OPENINGS, LANDINGS AND TRUNCATED DOMES (DETECTABLE WARNING STRIPS) WILL BE INSPECTED BY THE R.C.O.C. FACILITIES THAT ARE NOT IN COMPLIANCE WITH A.D.A. REQUIREMENTS SHALL BE REMOVED AND REPLACED.

ANY RIGHT-OF-WAY OR EASEMENTS NEEDED TO INSTALL THE PROPOSED IMPROVEMENTS MUST BE OBTAINED PRIOR TO FINAL PLAN APPROVAL/STREET ACCEPTANCE OR CONSTRUCTION, WHICHEVER OCCURS FIRST.

MDOT COVER "C" (WITH TYPE "K" FRAME), "K", "B", "E" REQUIRED WITHIN ROAD RIGHT-OF-WAY. ALSO ALLOWED ARE EJIW 7065/NEENAH R-3034-B OR APPROVED EQUAL AND EJIW 7300/NEENAH R-3508-A2 OR APPROVED EQUAL.

THE PROPRIETOR SHALL INSURE THAT OPEN DISCHARGE OF PUMP PUMPS INTO THE ROAD RIGHT-OF-WAY DOES NOT OCCUR.

VERIFICATION OF TOWNSHIP APPROVAL FOR SANITARY SEWER AND WATER MAIN TESTS MUST BE SUBMITTED AND FOUND ACCEPTABLE BY THE R.C.O.C., PRIOR TO ANY CONCRETE PAVING OR ASPHALT BEING PLACED.

PROPER SIGNING IS REQUIRED BEFORE ANY WORK IN R.O.W. IS STARTED.

LANE CLOSURES RESTRICTED TO 9-3 MONDAY - FRIDAY.

MAINTAIN TWO-WAY TRAFFIC AT ALL TIMES.

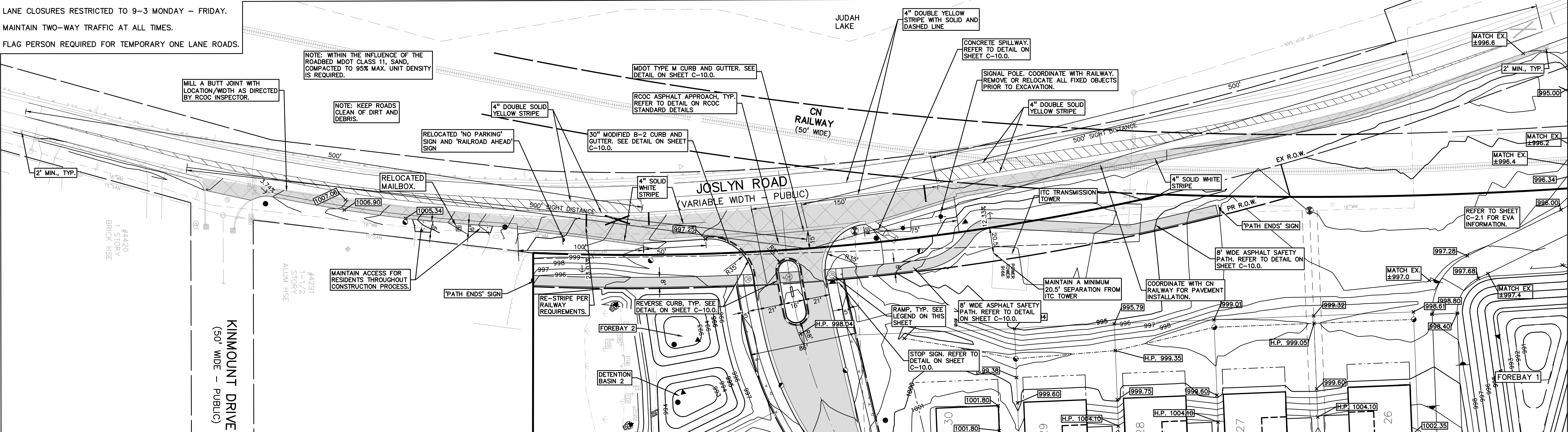
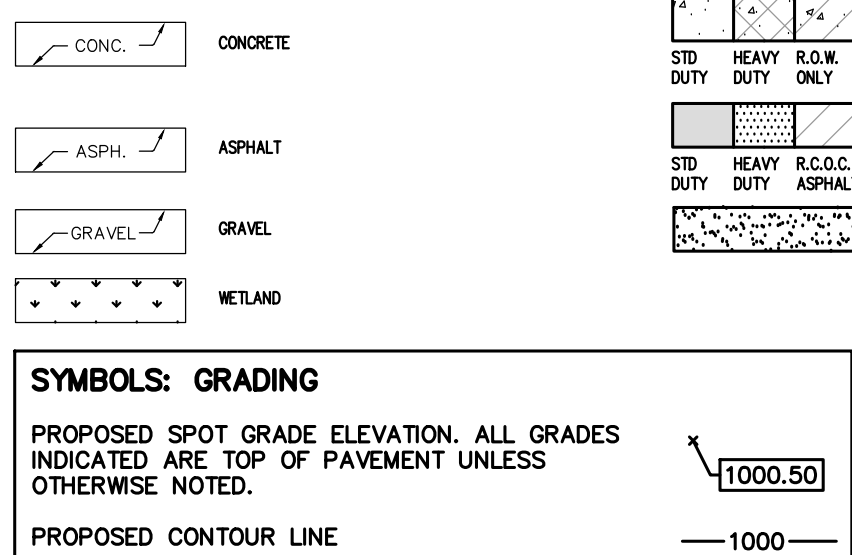
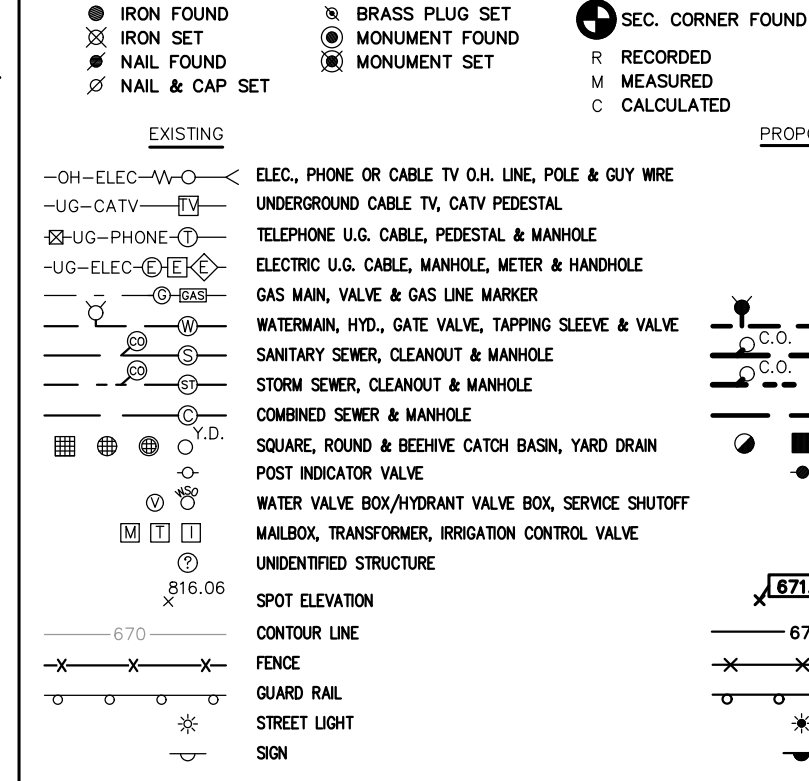
FLAG PERSON REQUIRED FOR TEMPORARY ONE LANE ROADS.

GENERAL GRADING AND EARTHWORK NOTES:

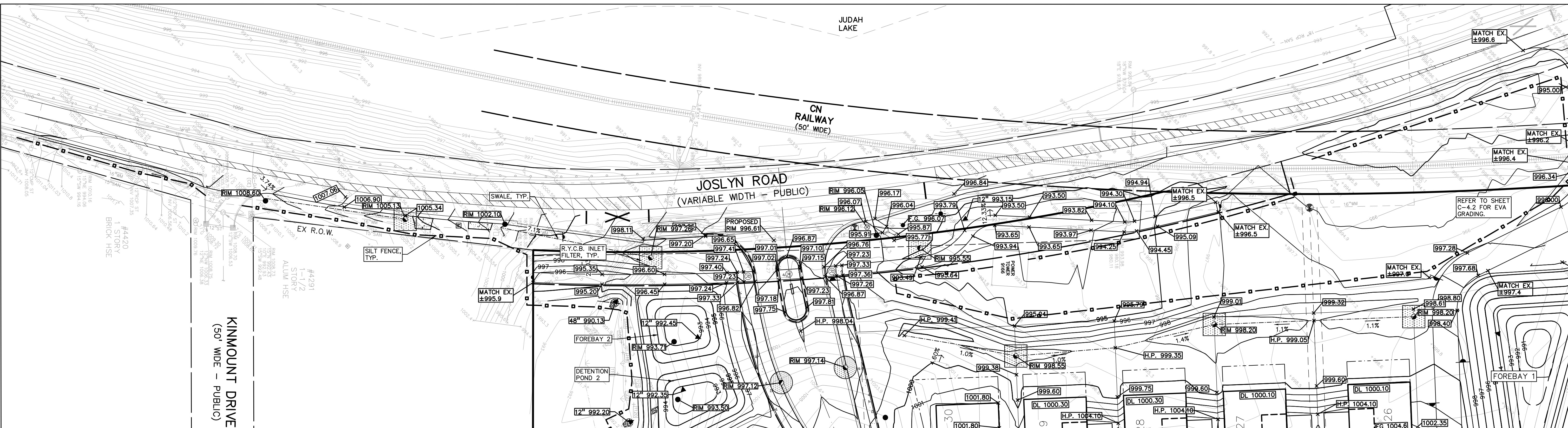
THESE NOTES APPLY TO ALL CONSTRUCTION ACTIVITIES ON THIS PROJECT

- CONTRACTOR TO FIELD VERIFY ALL EXISTING TREES AND BRUSH AND REMOVE ALL THAT ARE NECESSARY TO GRADE SITE.
- ALL GRADES ARE TO TOP OF PAVEMENT UNLESS OTHERWISE NOTED.
- THE STAGING OF CONSTRUCTION ACTIVITIES SHALL OCCUR ONLY WITHIN THE SITE BOUNDARIES. ANY CONSTRUCTION ACTIVITIES OUTSIDE OF THE SITE BOUNDARIES SHALL BE AT THE SOLE RESPONSIBILITY AND RISK OF THE CONTRACTOR.
- ALL SOIL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL MEET THE REQUIREMENTS OF OAKLAND COUNTY. AN EROSION CONTROL PERMIT MUST BE SECURED FROM THE COUNTY PRIOR TO CONSTRUCTION.
- SEE ADDITIONAL GRADING AND EARTHWORK NOTES ON DETAIL SHEET C-5.0
- REFER TO SHEET C-5.0 FOR ALL SOIL EROSION AND SEDIMENTATION CONTROL MEASURES AND NOTES.
- ALL DISTURBED AREAS SHALL BE SEEDED AND MULCHED OR SODDED IN ACCORDANCE WITH THE LANDSCAPE PLANS. PROVIDE A MINIMUM OF 3" OF TOPSOIL IN THESE AREAS UNLESS OTHERWISE NOTED.
- THE CONTRACTOR SHALL NOTE EXISTING UNDERGROUND UTILITIES WITHIN AND ADJACENT TO THE SITE. BACKFILL FOR EXISTING UTILITY TRENCHES SHALL BE EXAMINED CRITICALLY. ANY TRENCHES FOUND TO HAVE SOFT, UNSTABLE OR UNSUITABLE BACKFILL MATERIAL, IN THE OPINION OF THE GEOTECHNICAL ENGINEER, THAT ARE TO BE WITHIN THE ZONE OF INFLUENCE OF PROPOSED BUILDINGS OR PAVEMENT SHALL BE COMPLETELY EXCAVATED AND BACKFILLED WITH SUITABLE MATERIAL.

LEGEND



DIMENSION PLAN



GRADING PLAN

NO.	DATE	DESCRIPTION	BY	CHKD
1	12-15-22	REVISIONS PER NOVEMBER 13, 2020 TWP REVIEW	TMK	JBT
2	10-05-22	REVISIONS FOR ADDED EVA	TMK	JBT
3	08-17-22	REVISIONS PER MAY 6, 2020 P.C. MEETINGS	TMK	JBT
4	08-17-22	CHANGED DESCRIPTION	TMK	JBT

1	12-15-22	REVISIONS PER NOVEMBER 13, 2020 TWP REVIEW	TMK	JBT
2	10-05-22	REVISIONS FOR ADDED EVA	TMK	JBT
3	08-17-22	REVISIONS PER MAY 6, 2020 P.C. MEETINGS	TMK	JBT
4	08-17-22	CHANGED DESCRIPTION	TMK	JBT

CAUTION!!
THE LOCATION AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS GIVEN FOR THE ACCURACY OF THESE DATA. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

THIS DRAWING AND DESIGN ARE THE PROPERTY OF PEA, INC. THEY ARE NOT TO BE REPRODUCED, COPIED, REPRODUCED, OR REPRODUCED IN ANY MANNER OR FOR ANY PURPOSE WITHOUT THE WRITTEN CONSENT OF PEA, INC. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED. © 2022 PEA, INC.

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING SOLE AND COMPLETE RESPONSIBILITY FOR THE DESIGN AND CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL, INDIVIDUAL AND/OR FIRM, HARMLESS FROM AND ALL LIABILITY, LOSS OR ALLEGED IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPT LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

3 FULL WORKING DAYS BEFORE YOU DIG CALL

811
Know what's below
Call before you dig
MISS Dig System, Inc.
1-800-482-7171 www.missdig.net
(TOLL FREE)



PEA, Inc.

2430 Rochester Ct, Ste 100
Troy, MI 48063-1872
t: 248.689.9090
f: 248.689.1044
www.peainc.com

FRANKLIN RIDGE HOMES, LLC	DES.	TMK	DN	TMK	SUR	KTR	P.M.	JBT
30180 ORCHARD LAKE ROAD, SUITE 150 TAMMINGTON HILLS, MICHIGAN 48354								
R.O.W. GRADING AND DIMENSION PLAN								
PART OF THE SE 1/4 OF SECTION 28 & NE 1/4 SECTION 33, T40N, R10E ORION TOWNSHIP, OAKLAND COUNTY, MICHIGAN								

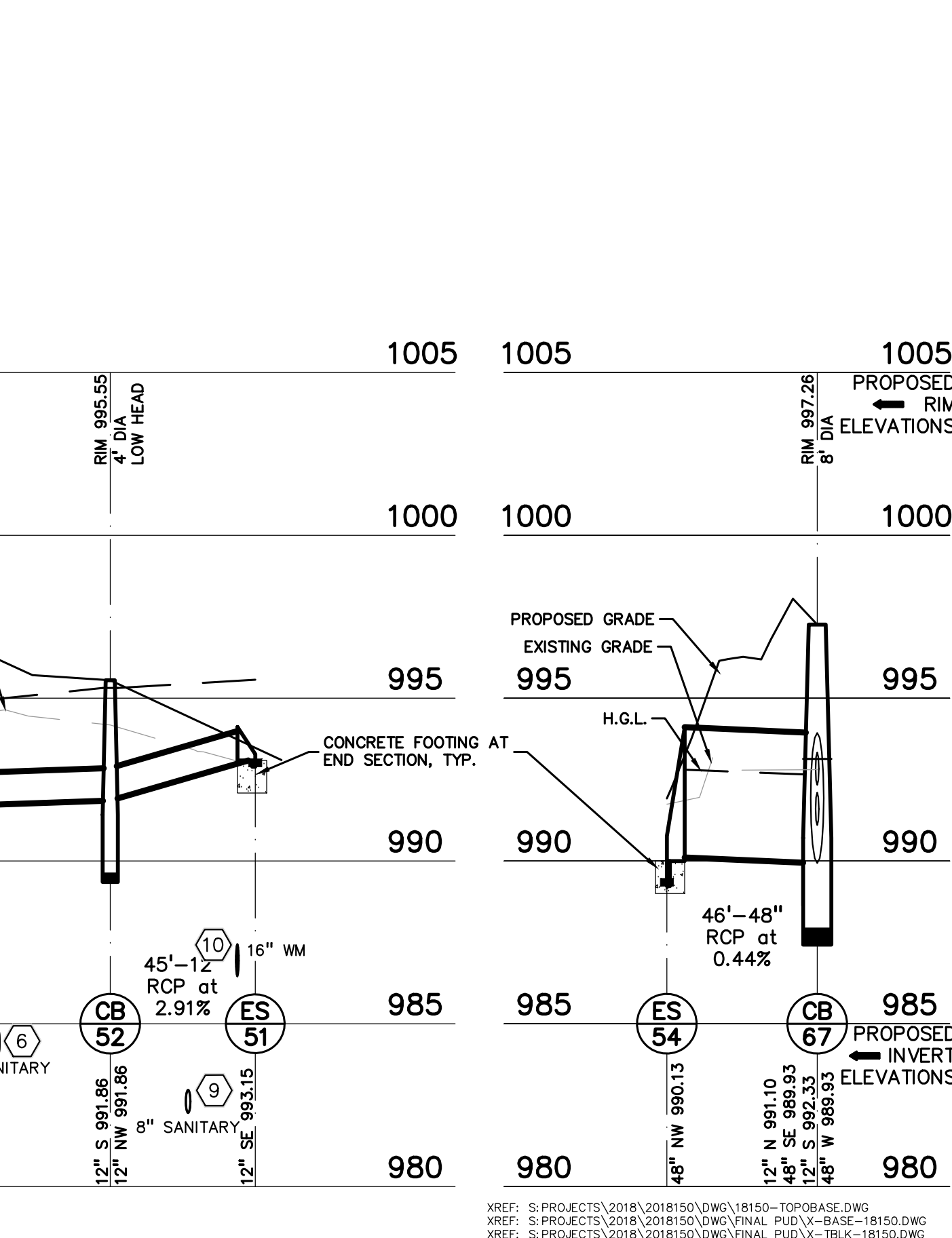
ORIGINAL ISSUE DATE:
MARCH 17, 2020

PEA JOB NO. 2018-150

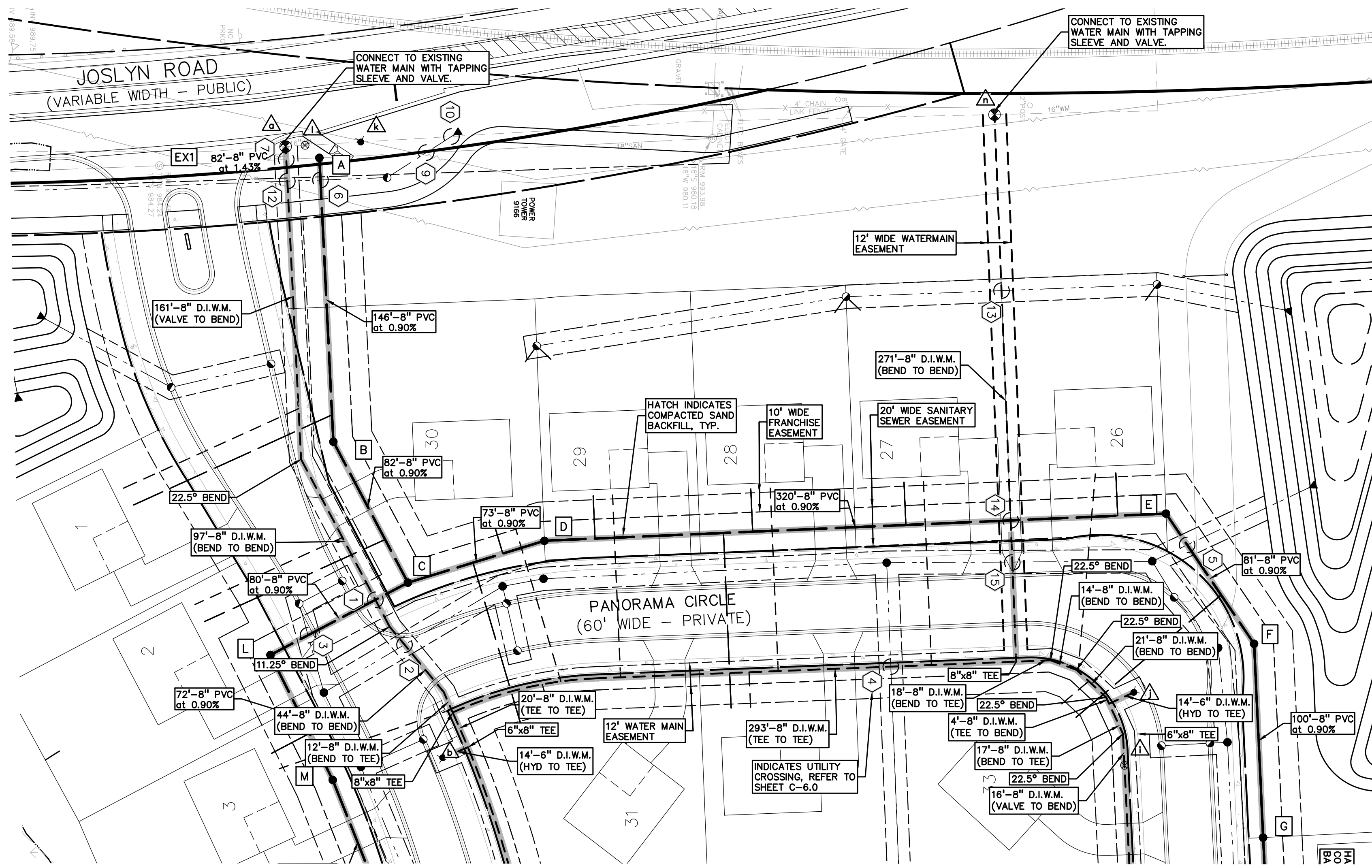
SCALE: 1" = 40'

DRAWING NUMBER:

C-4.5



ORIGINAL ISSUE DATE: MARCH 17, 2020
PEA JOB NO. 2018-150
SCALE: 1" = 40'
DRAWING NUMBER: C-6.1



SAND BACKFILL NOTE:
ALL UTILITIES UNDER PAVEMENT OR WITHIN 3' OF THE EDGE OF PAVEMENT (OR WITHIN THE 45° LINE OF INFLUENCE OF PAVEMENT) SHALL HAVE M.D.O.T. CLASS II GRANULAR BACKFILL COMPACTED TO 95% MAX. DRY DENSITY (ASTM D-1557).

NOTE:
SEE SHEET C-6.0 FOR UTILITY NOTES.

HYDRANTS	
b	HYDRANT ASSEMBLY F.G. = 1003.27
j	HYDRANT ASSEMBLY F.G. = 1002.57
k	HYDRANT ASSEMBLY F.G. = 996.07

WATER MAIN STRUCTURES	
a	TAPPING SLEEVE AND WELL RIM = 993.26
i	CV IN WELL RIM = 1002.93
l	CV IN WELL RIM = 996.12
n	TAPPING SLEEVE AND WELL RIM = 995.87

LEGEND

EXISTING

- OH-ELEC-A-O-ELEC, PHONE OR CABLE TV O.H. LINE, POLE & GUY WIRE
- UG-CATV-TV UNDERGROUND CABLE TV, CATV PEDESTAL
- UG-PHONE-P TELEPHONE U.G. CABLE, PEDESTAL & MANHOLE
- UG-ELEC-E-ELEC U.G. CABLE, MANHOLE, METER & HANDHOLE
- WATERMAIN, HYD. GATE VALVE, TAPPING SLEEVE & VALVE
- SANITARY SEWER, CLEANOUT & MANHOLE
- STORM SEWER, CLEANOUT & MANHOLE
- COMBINED SEWER & MANHOLE
- SQUARE, ROUND & BEETEE CATCH BASIN, YARD DRAIN
- POST REGULATOR VALVE
- WATER VALVE BOX, HYDRANT VALVE BOX, SERVICE SHUTOFF
- MALBOX, TRANSFORMER, BRIGATION CONTROL VALVE
- UNIDENTIFIED STRUCTURE
- SPOT ELEVATION
- CONTOUR LINE
- FENCE
- GUARD RAIL
- STREET LIGHT
- SION
- CONC. CONCRETE
- ASPH. ASPHALT
- GRAVEL GRAVEL
- WETLAND WETLAND

PROPOSED

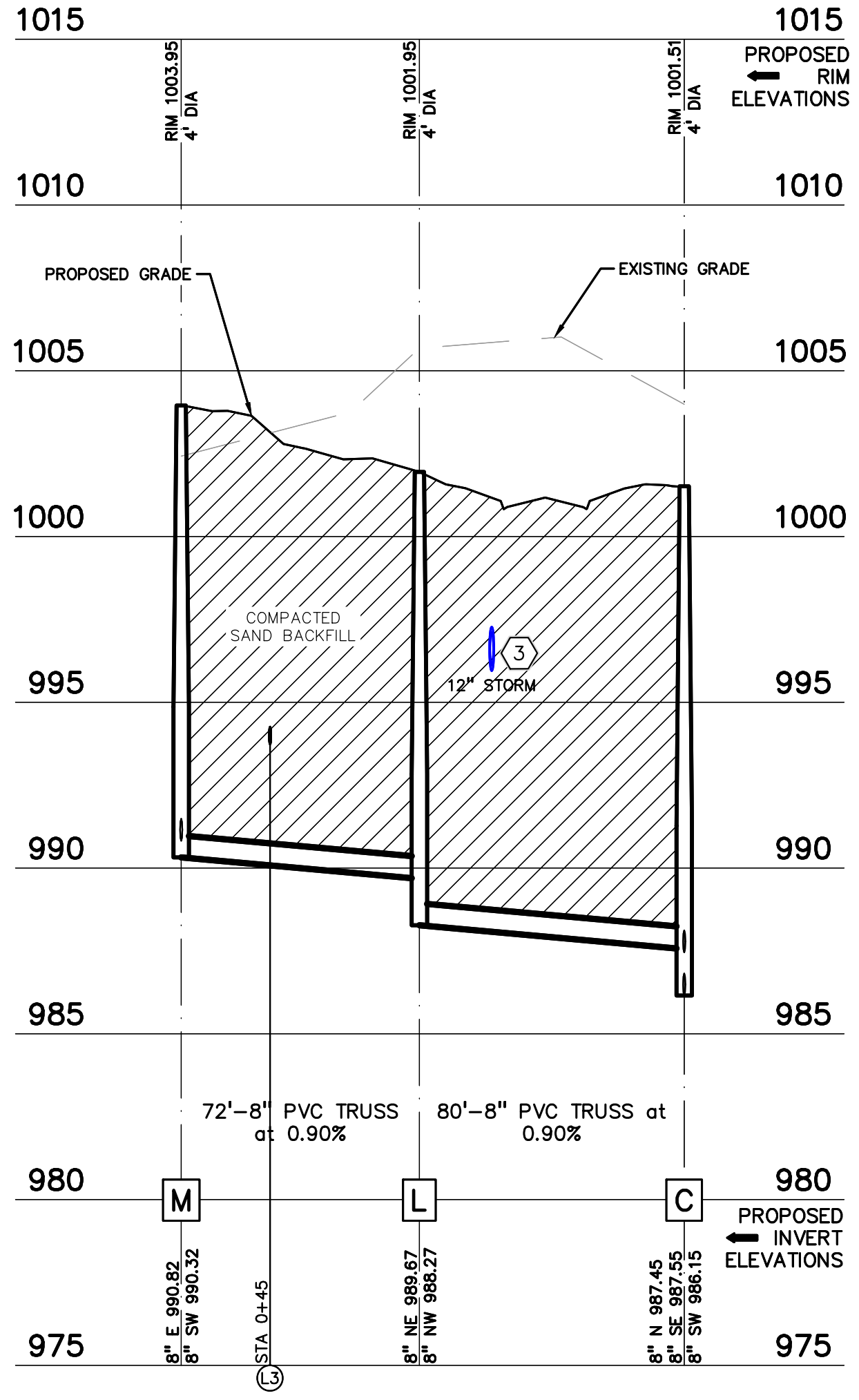
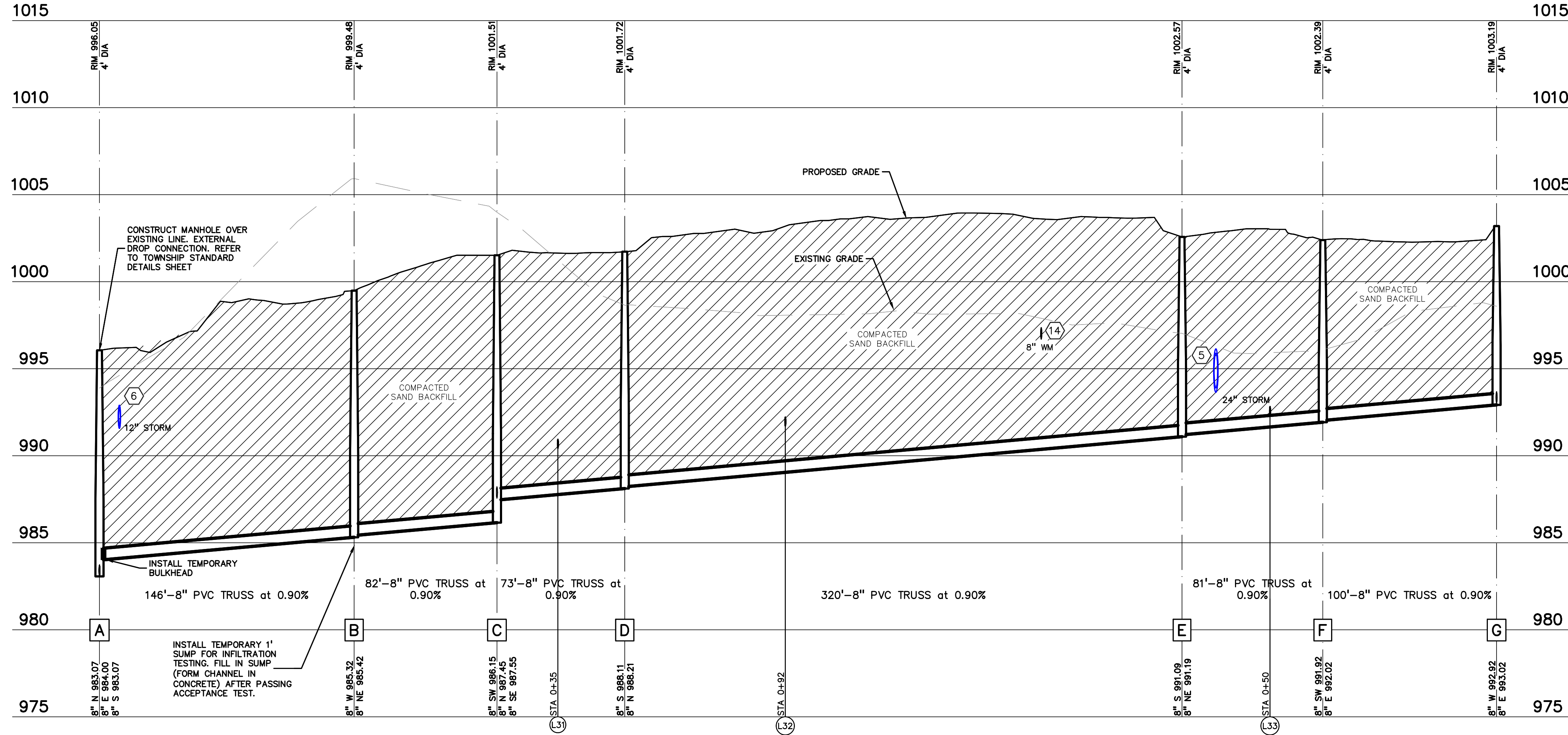
- SEC. CORNER FOUND
- RECORDED
- MEASURED
- CALCULATED
- STB HEAVY R.O.M. DUTY ONLY
- STB HEAVY R.O.C.D. DUTY ASPHALT

GRAPHIC SCALE
-40 0 20 40 80 160
(IN FEET)
1 inch = 40 ft.

SANITARY SEWER LEADS									
Unit #	Sewer Main Invert at lead	Lead Invert at Main (w/o Riser)	Lead Length (LF)	Lead Slope (%)	Lead Dia. (in)	House F.G.	Riser at Main (Ft.)	Stub Invert at Esmt.	Riser at Stub (Ft.)
L1	985.79	986.46	112	3.16%	6	1001.00		990.00	
L2	986.47	987.14	102	5.15%	6	1003.40		992.40	
L3	990.08	990.75	22	5.70%	6	1006.00	3	995.00	
L26	990.87	991.54	22	4.83%	6	1004.60	1	993.60	
L27	989.89	990.56	22	4.75%	6	1004.60	2	993.60	
L28	989.18	989.85	22	3.43%	6	1004.60	3	993.60	
L29	988.46	989.12	22	2.16%	6	1004.60	4	993.60	
L30	987.91	988.58	22	3.27%	6	1002.30	2	991.30	
L31	987.77	988.44	87	4.55%	6	1005.40	2	994.40	
L32	989.04	989.71	90	2.54%	6	1005.00	2	994.00	
L33	991.65	992.32	98	1.62%	6	1004.90		993.90	

SEE SHEET C-7.3 FOR CONTINUATION

SEE SHEET C-7.1 FOR CONTINUATION



CAUTION!!
THE LOCATION AND ELEVATIONS OF EXISTING UTILITIES SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS GIVEN FOR THE ACCURACY OF THE INFORMATION. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

THE DRAWING AND DESIGN ARE THE PROPERTY OF PEA, INC. THEY ARE LOANED TO THE CONTRACTOR FOR THEIR USE ONLY. THEY ARE NOT TO BE REPRODUCED, COPIED, REPRODUCED, OR IN ANY MANNER OR FOR ANY PURPOSE. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THE CONTRACTOR SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFINE, INDENTIFY AND HOLD DESIGN PROFESSIONAL LIABILITY FROM ANY AND ALL LIABILITY, LOSS OR ALLEGED IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

3 FULL WORKING DAYS BEFORE YOU DIG CALL

811

Know what's below
Call before you dig

MISS Dig System, Inc.
1-800-482-7171 www.missdig.net

PEA, Inc.

2430 Rochester Ct. Ste 100
Troy, MI 48063-1872
t: 248.689.9090
f: 248.689.1044
www.peainc.com

FRANKLIN RIDGE HOMES, LLC
30180 ORCHARD LAKE ROAD, SUITE 150
PARKMAN HILLS, MICHIGAN 48354

SANITARY AND WATER MAIN PLAN - WEST

SILVERBELL POINTE

PART OF THE SE 1/4 OF SECTION 28 & NE 1/4 SECTION 33, TOWNSHIP 33, RANGE 10E, ORION TOWNSHIP, OAKLAND COUNTY, MICHIGAN

DES. T.M.K. DN. T.M.K. SUR. K.T.R. P.M. J.B.T.

ORIGINAL ISSUE DATE:
MARCH 17, 2020

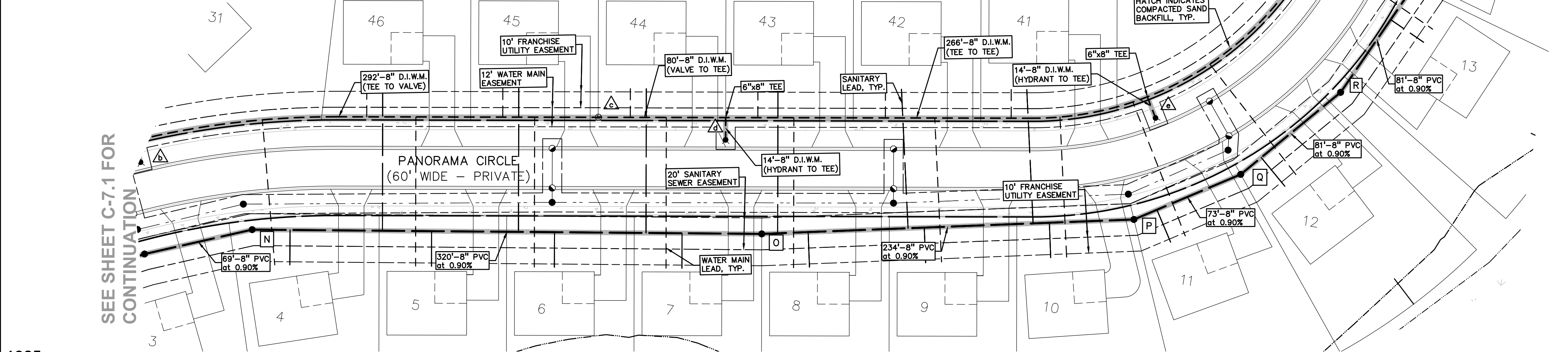
PEA JOB NO. 2018-150

SCALE: 1" = 40'

DRAWING NUMBER:
C-7.2

8/15/2018 10:50 AM S:\PROJECTS\2018\2018150\DWG\18150-TOPOBASE.DWG
8/15/2018 10:50 AM S:\PROJECTS\2018\2018150\DWG\18150-BASE-18150.DWG
8/15/2018 10:50 AM S:\PROJECTS\2018\2018150\DWG\18150-TBLK-18150.DWG

SANITARY SEWER LEADS									
Unit #	Sewer Main Invert at Lead	Lead Invert at Main (w/o Riser)	Lead Length (LF)	Lead Slope (%)	Lead Dia. (in)	House F.G.	Riser at Main (Ft.)	Stub Invert at Emt.	Riser at Stub (Ft.)
L4	991.76	992.42	22	3.96%	6	1008.20	4	997.20	
L5	992.56	993.22	22	3.96%	6	1008.90	4	997.90	
L6	993.25	993.92	22	2.20%	6	1009.40	4	996.40	
L7	993.97	994.64	22	3.47%	6	1010.40	4	999.40	
L8	994.78	995.45	22	3.88%	6	1010.30	3	999.30	
L9	995.44	996.10	22	3.60%	6	1010.90	3	999.90	
L10	996.14	996.81	22	3.14%	6	1011.50	3	1000.50	
L11	996.86	997.53	22	6.23%	6	1012.90	3	1001.90	
L12	997.63	998.29	23	5.17%	6	1013.50	3	1002.50	
L13	998.81	999.47	25	2.51%	6	1014.10	3	1003.10	
L14	999.55	1000.21	25	3.14%	6	1014.00	2	1003.00	
L15	1000.43	1001.09	25	1.63%	6	1013.50	1	1002.50	
L41	996.05	996.72	84	2.83%	6	1012.10	2	1001.10	
L42	996.35	996.01	87	2.16%	6	1010.90	2	999.90	
L43	994.61	995.28	91	2.34%	6	1010.40	2	999.40	
L44	993.77	994.43	91	2.50%	6	1009.70	2	998.70	
L45	993.05	993.71	90	3.10%	6	1009.50	2	998.50	
L46	992.28	992.94	90	2.85%	6	1008.50	2	997.50	

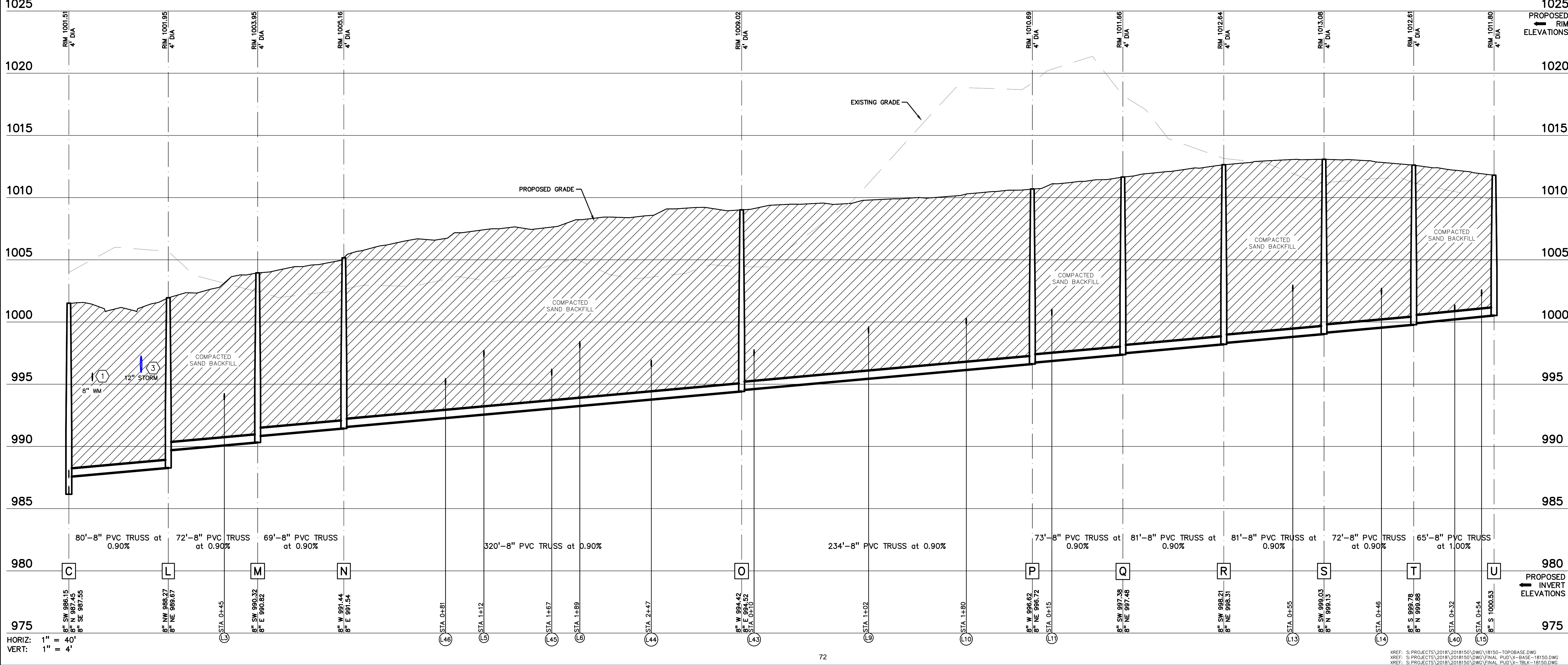
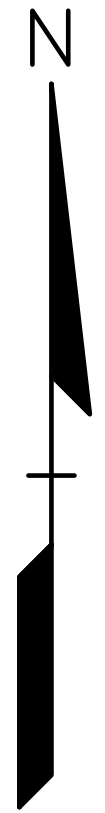
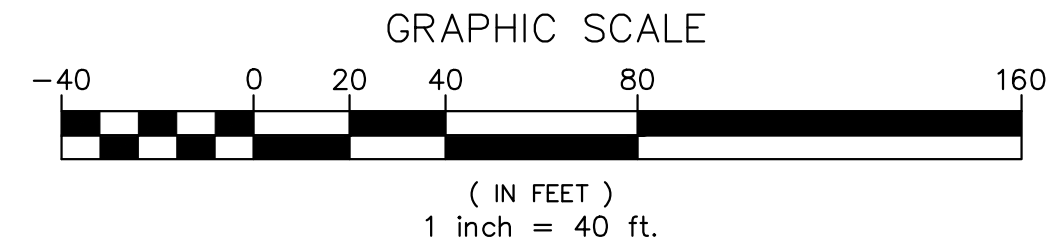


SANITARY STRUCTURES	
M	MH (4' DIA.) RIM = 1003.95 8" E 990.82 8" SW 990.32
N	MH (4' DIA.) RIM = 1005.16 8" E 991.54 8" W 991.44
O	MH (4' DIA.) RIM = 1009.02 8" E 994.52 8" W 994.42
P	MH (4' DIA.) RIM = 1010.69 8" NE 996.72 8" W 996.62
Q	MH (4' DIA.) RIM = 1011.66 8" NE 997.48 8" SW 997.38
R	MH (4' DIA.) RIM = 1012.64 8" NE 998.31 8" SW 998.21
S	MH (4' DIA.) RIM = 1013.08 8" N 999.13 8" SW 999.03
T	MH (4' DIA.) RIM = 1012.61 8" N 999.88 8" S 999.78
U	MH (4' DIA.) RIM = 1011.80 8" S 1000.53

HYDRANTS	
b	HYDRANT ASSEMBLY F.G. = 1003.27
d	HYDRANT ASSEMBLY F.G. = 1008.37
e	HYDRANT ASSEMBLY F.G. = 1010.60
WATER MAIN STRUCTURES	
c	GV IN WELL RIM = 1008.11

NOTE:
SEE SHEET C-6.0 FOR UTILITY NOTES

SAND BACKFILL NOTE:
ALL UTILITIES UNDER PAVEMENT OR WITHIN 3' OF THE EDGE OF PAVEMENT (OR WITHIN THE 45' LINE OF INFLUENCE OF PAVEMENT) SHALL HAVE M.D.O.T. CLASS II GRANULAR BACKFILL COMPACTED TO 95% MAX. DRY DENSITY (ASTM D-1557).



HORIZ: 1" = 40'
VERT: 1" = 4'

KREF: S:\PROJECTS\2018\2018150\DWG\18150-TOPOBASE.DWG
KREF: S:\PROJECTS\2018\2018150\DWG\FINAL_PUD\X-BASE-18150.DWG
KREF: S:\PROJECTS\2018\2018150\DWG\FINAL_PUD\X-TBLK-18150.DWG

REVISIONS	
NO.	DATE
1	12-15-20
2	10-05-20
3	08-13-20

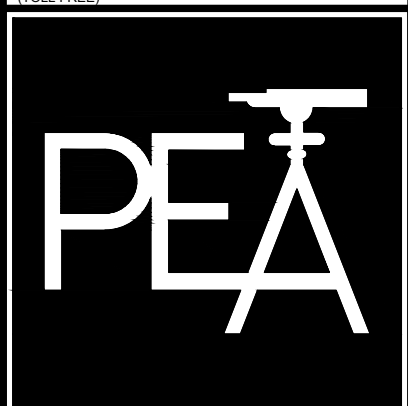
CAUTION!!
THE LOCATION AND ELEVATIONS OF EXISTING UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS GIVEN FOR THE ACCURACY OF THE INFORMATION. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

THIS DRAWING AND DESIGN ARE THE PROPERTY OF PEA, INC. THEY ARE LOANED TO THE CONTRACTOR FOR THEIR USE ONLY AND ARE NOT TO BE REPRODUCED, COPIED, OR IN ANY MANNER, OR USED FOR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF PEA, INC. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED. © 2020 PEA, INC.

CONSTRUCTION CONTRACTOR AGREES THAT IN CONNECTION WITH GENERAL ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFINE, INDUSTRY AND HOLD DESIGN PROFESSIONAL, INDUSTRY AND HOLD DESIGN PROFESSIONAL, OR ALLEGED IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

3 FULL WORKING DAYS BEFORE YOU DIG CALL

811
Know what's below
Call before you dig
MISS Dig System, Inc.
1-800-482-7171 www.missdig.net
(1021-4821)

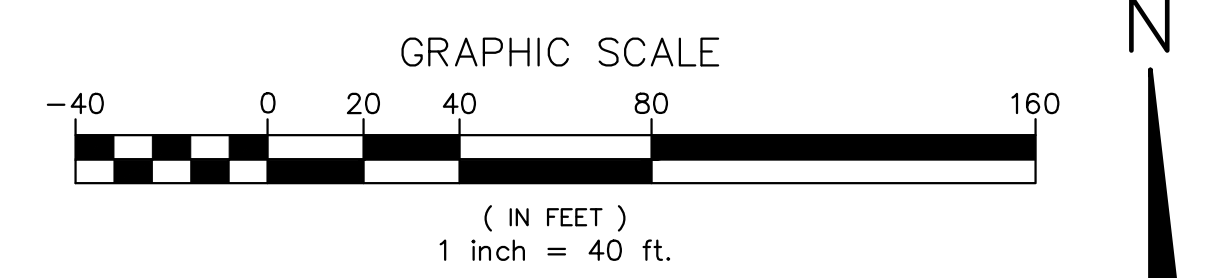
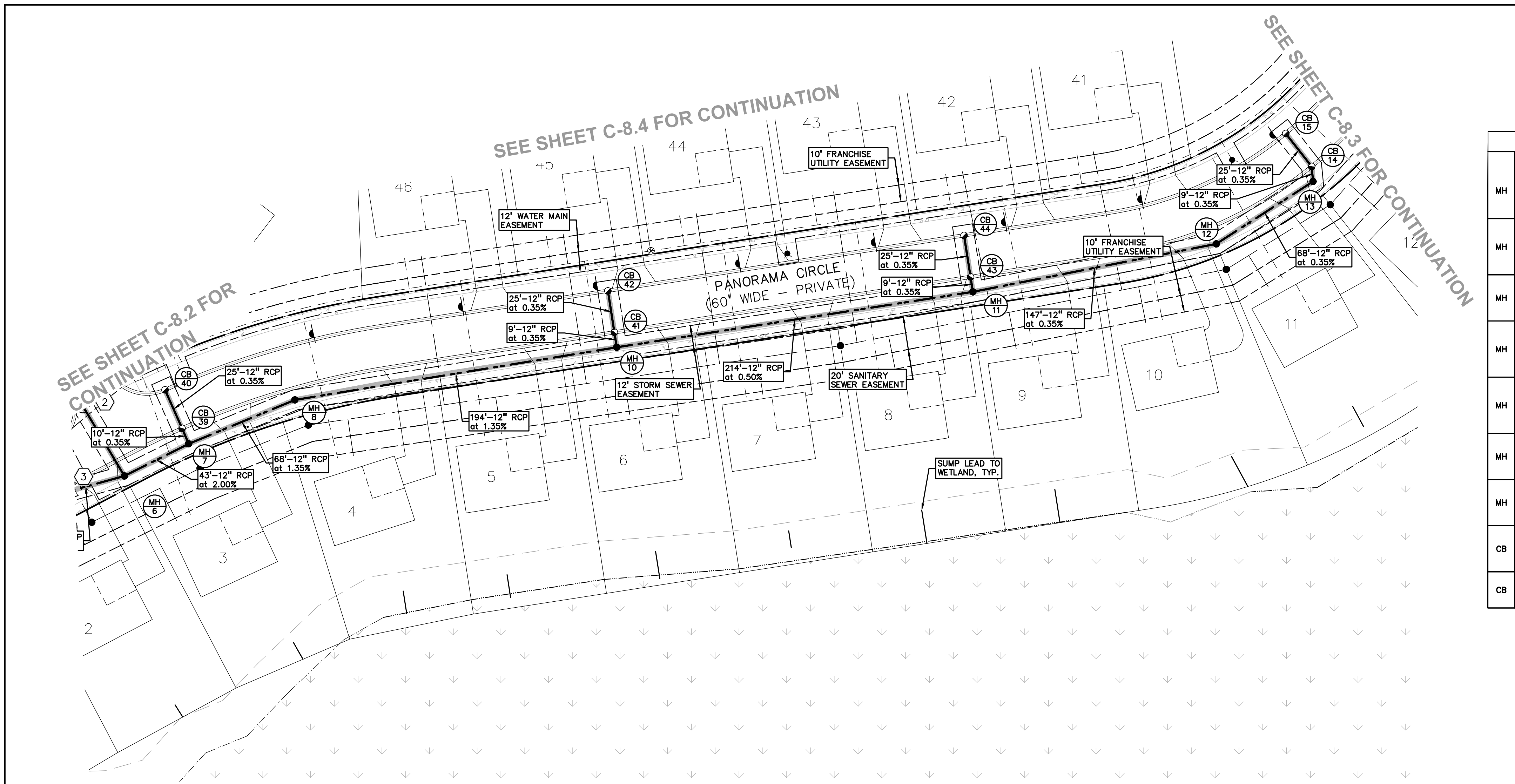


PEA, Inc.
2430 Rochester Ct. Ste 100
Troy, MI 48063-1872
t: 248.689.9090
f: 248.689.1044
www.peainc.com

FRANKLIN RIDGE HOMES, LLC
30180 ORCHARD LAKE ROAD, SUITE 150
FARMINGTON HILLS, MICHIGAN 48334
SANITARY AND WATER MAIN PLAN - SOUTH
PART OF THE SE 1/4 OF SECTION 28 & NE 1/4 SECTION 33, T40N, R10E
ORION TOWNSHIP, OAKLAND COUNTY, MICHIGAN
DES. TMM DN. TMM SUR. KTR P.M. JBT
V:\pea\hwy\proj\2018\2018150\DWG\FINAL_PUD\X-BASE-18150.DWG

ORIGINAL ISSUE DATE:
MARCH 17, 2020
PEA JOB NO. 2018-150
SCALE: 1" = 40'
DRAWING NUMBER:
C-7.3



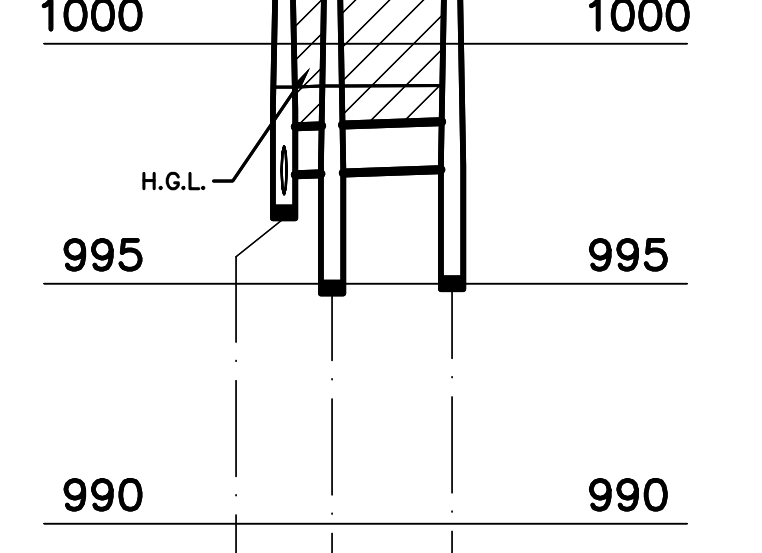
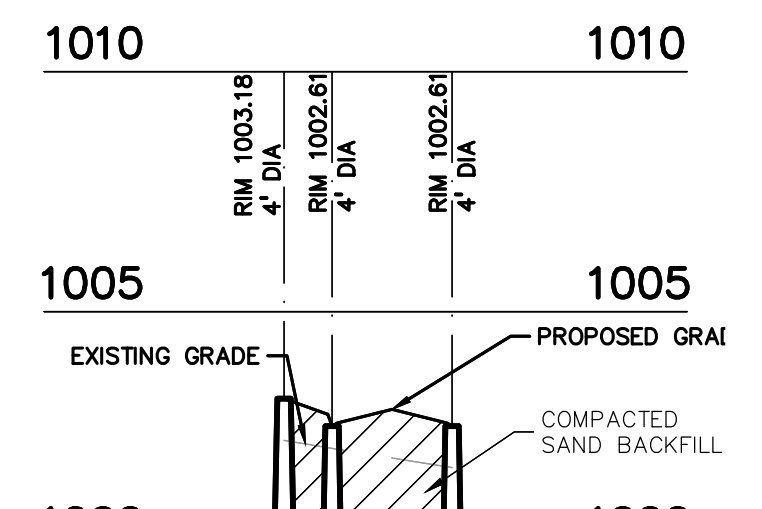
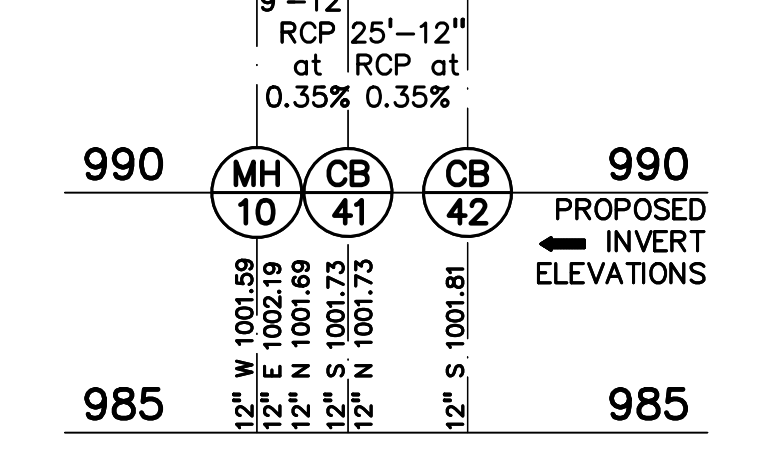
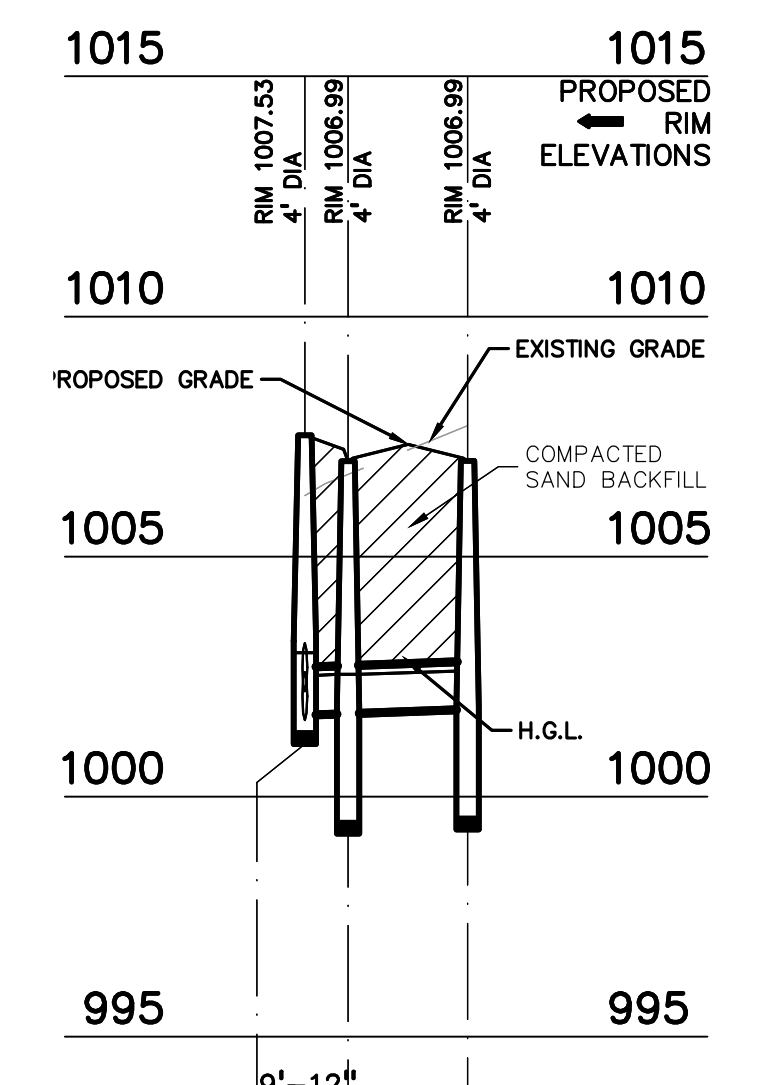
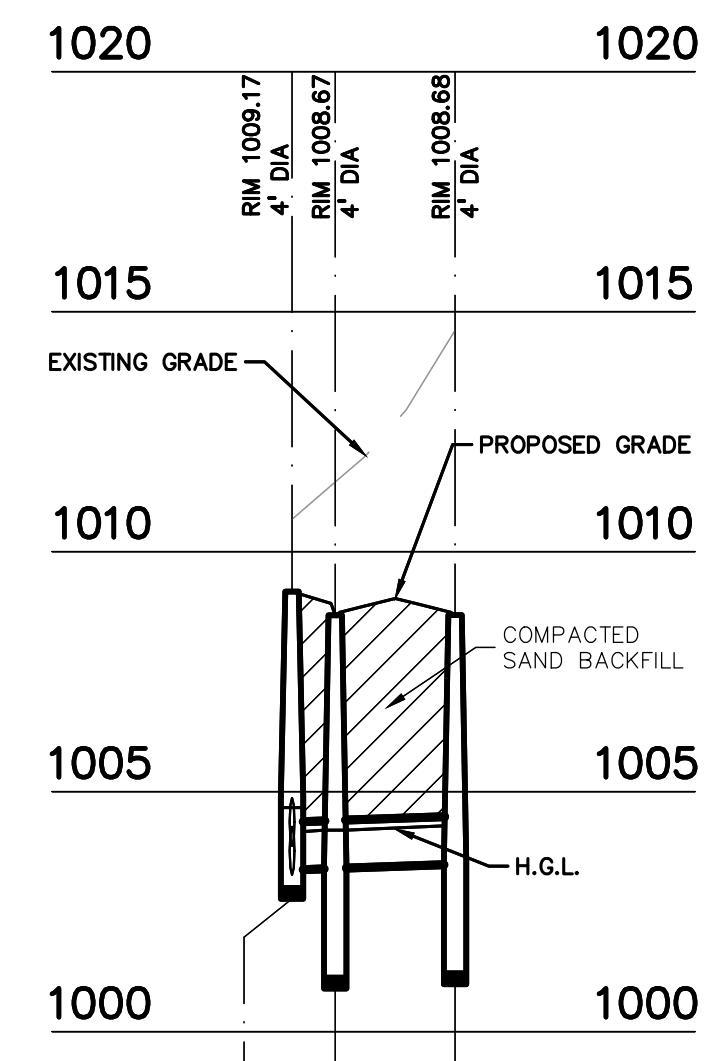
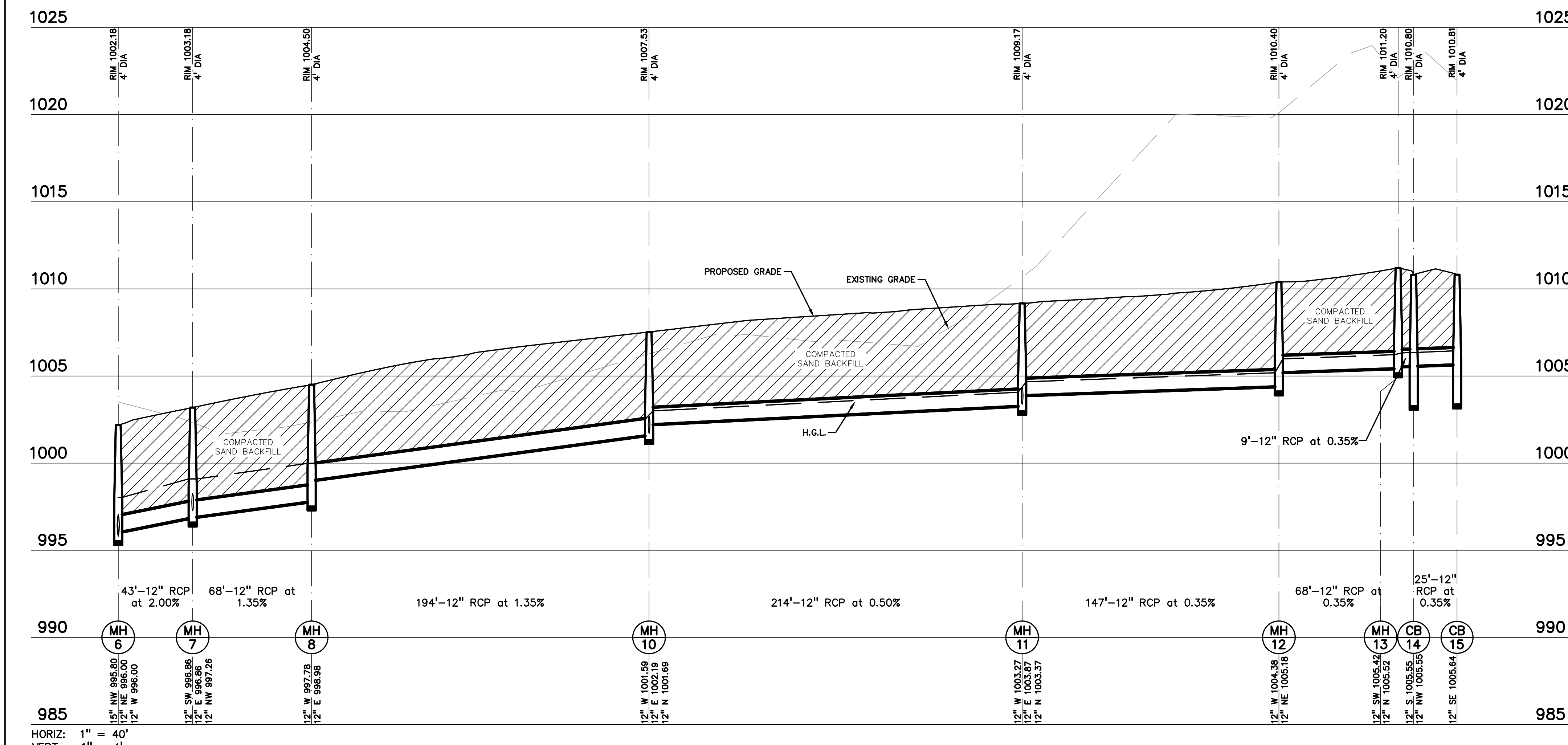


STORM STRUCTURES		STORM STRUCTURES	
MH 6	(4' DIA./0' SUMP) RIM = 1002.18 12" NE 996.00 12" W 996.00 15" NW 995.80	CB 39	(4' DIA./2' SUMP) RIM = 1002.61 12" NW 997.29 12" SE 997.29
MH 7	(4' DIA./0' SUMP) RIM = 1003.18 12" E 996.86 12" NW 997.26 12" SW 996.86	CB 40	(4' DIA./2' SUMP) RIM = 1002.61 12" SE 997.38
MH 8	(4' DIA./0' SUMP) RIM = 1004.50 12" E 998.98 12" W 997.78	CB 41	(4' DIA./2' SUMP) RIM = 1006.99 12" N 1001.73 12" S 1001.73
MH 10	(4' DIA./0' SUMP) RIM = 1007.53 12" E 1002.19 12" N 1001.69 12" W 1001.59	CB 42	(4' DIA./2' SUMP) RIM = 1006.99 12" S 1001.81
MH 11	(4' DIA./0' SUMP) RIM = 1009.17 12" E 1003.87 12" N 1003.37 12" W 1003.27	CB 43	(4' DIA./2' SUMP) RIM = 1008.67 12" N 1003.40 12" S 1003.40
MH 12	(4' DIA./0' SUMP) RIM = 1010.40 12" NE 1005.18 12" W 1004.38	CB 44	(4' DIA./2' SUMP) RIM = 1008.68 12" S 1003.48
MH 13	(4' DIA./2' SUMP) RIM = 1011.20 12" N 1005.52 12" SW 1005.42		
CB 14	(4' DIA./2' SUMP) RIM = 1010.80 12" NW 1005.55 12" S 1005.55		
CB 15	(4' DIA./2' SUMP) RIM = 1010.81 12" SE 1005.64		

NOTE:
SEE SHEET C-6.0 FOR UTILITY NOTES FOR QUANTITIES.

STORM SEWER FRAME & COVER NOTES
CATCH BASIN/INLET WITHIN CURB
USE MDOT TYPE 'C' COVER WITH MDOT 'K' FRAME
CATCH BASIN/INLET WITHIN GRASS AREAS
USE E.J.L.W. #1040 WITH TYPE '02' BEEHIVE COVER
MANHOLE
USE MDOT TYPE 'B' COVER

SAND BACKFILL NOTE:
ALL UTILITIES UNDER PAVEMENT OR WITHIN 3' OF THE EDGE OF PAVEMENT (OR WITHIN THE 45° LINE OF INFLUENCE OF PAVEMENT) SHALL HAVE M.D.O.T. CLASS II GRANULAR BACKFILL COMPACTED TO 95% MAX. DRY DENSITY (ASTM D-1557).



12-15-22	10-05-22	08-13-22	DATE
3	2	1	NO. OF REVISIONS
TMK	JB	JB	DESIGNER
TMK	JB	JB	CHECKER
TMK	JB	JB	APPROVER
TMK	JB	JB	DATE

CAUTION!!
THE LOCATIONS AND ELEVATIONS OF EXISTING UTILITIES SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS GIVEN FOR THE ACCURACY OF THE INFORMATION. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

THIS DRAWING AND DESIGN ARE THE PROPERTY OF PEA, INC. THEY ARE LOANED TO THE CONTRACTOR FOR THEIR USE ONLY AND ARE NOT TO BE REPRODUCED, COPIED, OR IN ANY MANNER OR IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN CONSENT OF PEA, INC. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED. © 2022 PEA, INC.

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR SHALL BE RESPONSIBLE FOR THE SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THAT THIS REQUIREMENT SHALL BE MADE TO APPLY TO CONTRACTORS AND NOT BE LIMITED TO NORMAL WORKING HOURS AND CONSTRUCTION. CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, LOSS OR ALLEGED IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

3 FULL WORKING DAYS BEFORE YOU DIG CALL 811
Know what's below
Call before you dig
MISS Dig System, Inc.
1-800-482-7171 www.missdig.net (TOLL FREE)

PEA, Inc.
2430 Rochester Ct, Ste 100
Troy, MI 48063-1872
t: 248.689.9090
f: 248.689.1044
www.peainc.com

FRANKLIN RIDGE HOMES, LLC
30180 ORCHARD LAKE ROAD, SUITE 150
PARKMAN HILLS, MICHIGAN 48354

STORM SEWER PLAN - SOUTH SILVERBELL POINTE
PART OF THE SE 1/4 OF SECTION 28 & NE 1/4 SECTION 33, T40N, R10E
ORION TOWNSHIP, OAKLAND COUNTY, MICHIGAN

DES.	TMK	DN.	TMK	SUR.	KTR	P.M.	JB

ORIGINAL ISSUE DATE:
MARCH 17, 2020

PEA JOB NO. 2018-150

SCALE: 1" = 40'

DRAWING NUMBER:
C-8.3

XREF: S:\PROJECTS\2018\2018150\DWG\18150-TOPBASE.DWG
XREF: S:\PROJECTS\2018\2018150\DWG\FINAL_PUD\X-BASE-18150.DWG
XREF: S:\PROJECTS\2018\2018150\DWG\FINAL_PUD\X-TBLK-18150.DWG

NOTE:
SEE SHEET C-6.0 FOR UTILITY NOTES FOR QUANTITIES.

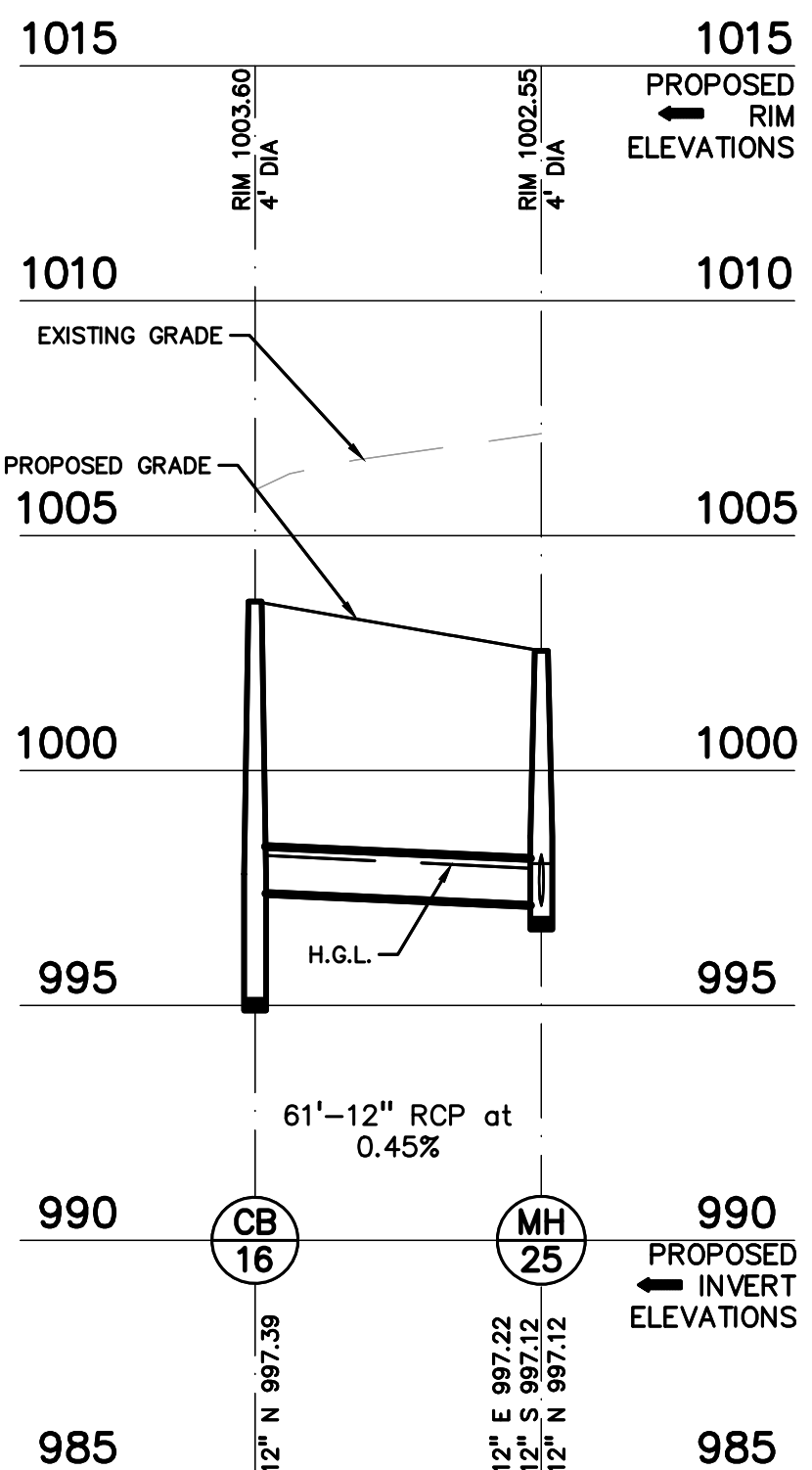
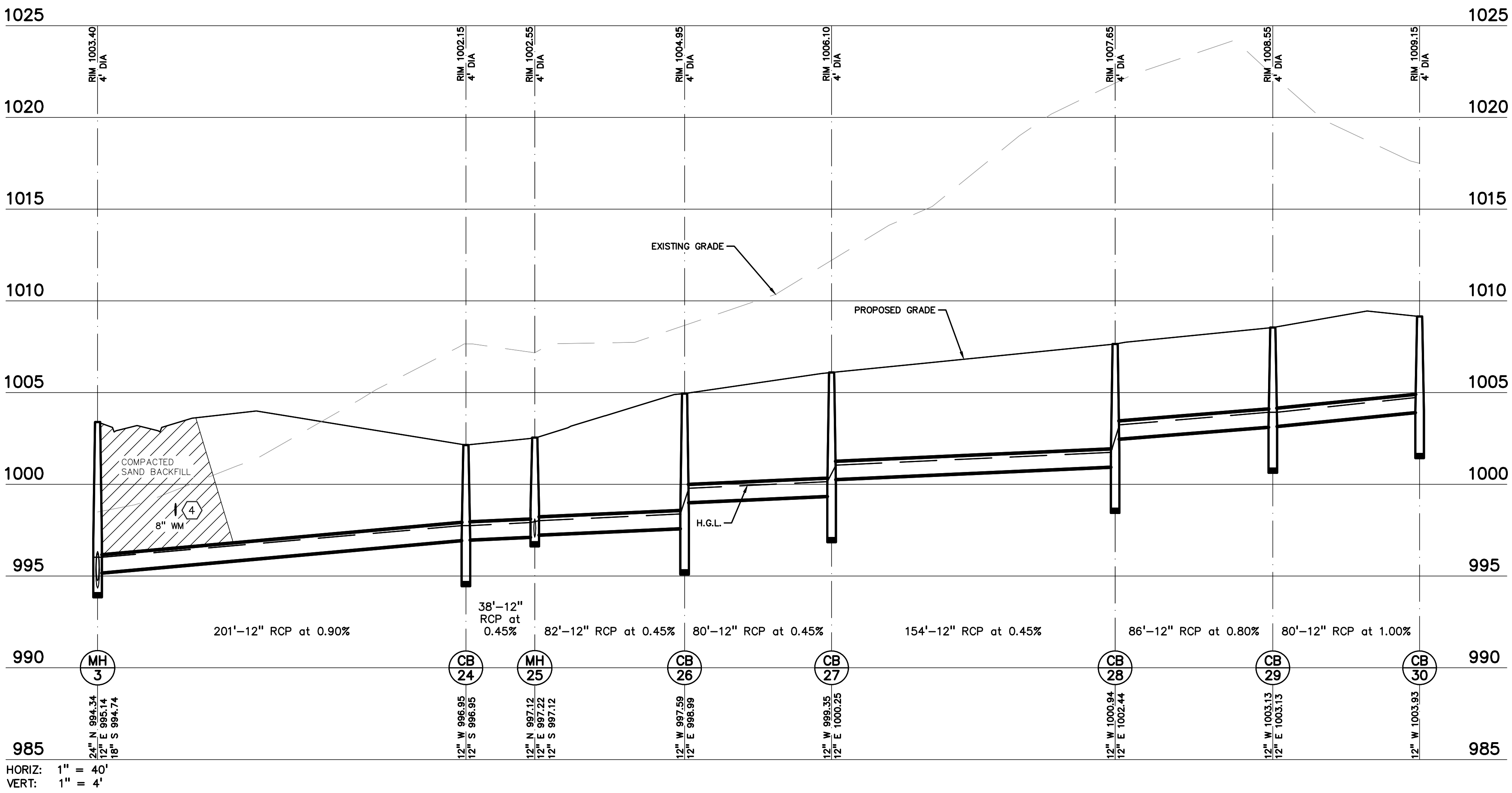
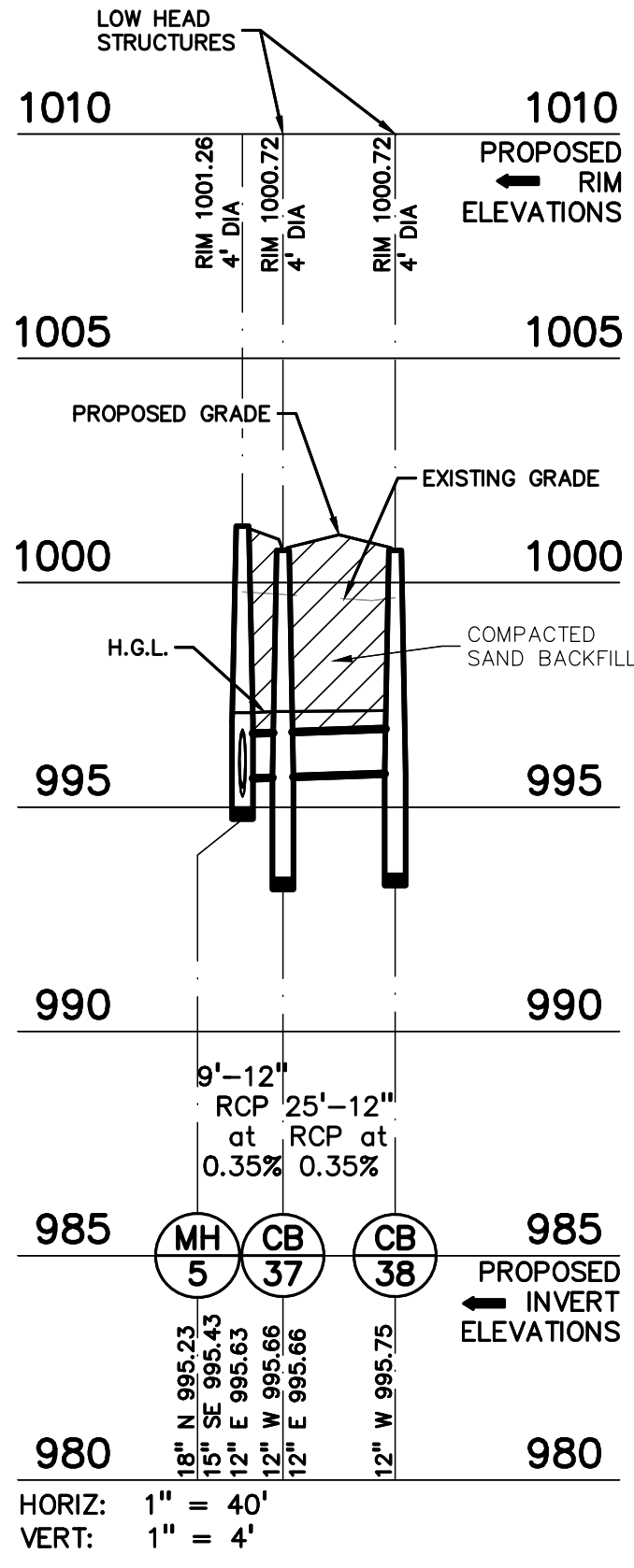
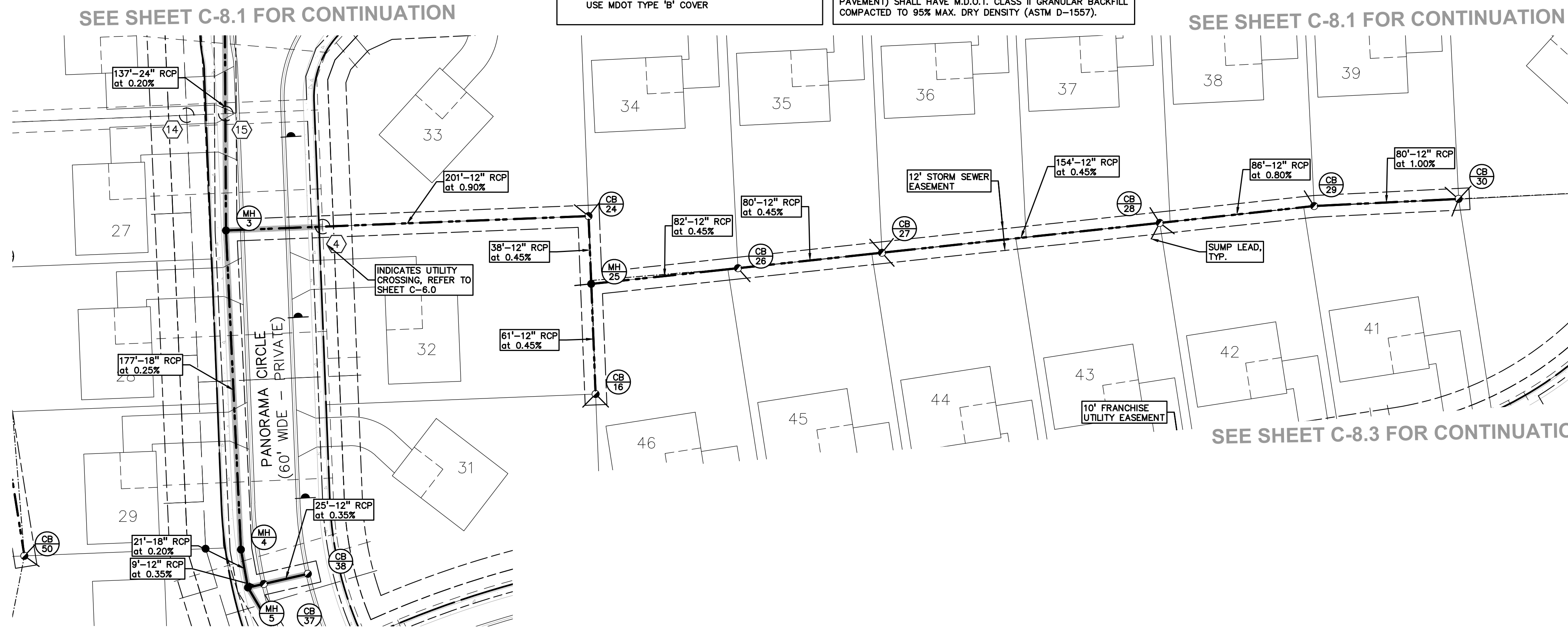
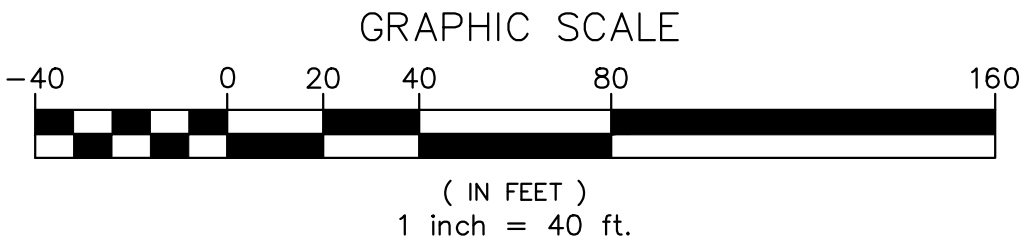
STORM SEWER FRAME & COVER NOTES

CATCH BASIN/INLET WITHIN CURB
USE MDOT TYPE 'C' COVER WITH MDOT 'K' FRAME

CATCH BASIN/INLET WITHIN GRASS AREAS
USE E.J.I.W. #1040 WITH TYPE '02' BEEHIVE COVER

MANHOLE
USE MDOT TYPE 'B' COVER

SAND BACKFILL NOTE:
ALL UTILITIES UNDER PAVEMENT OR WITHIN 3' OF THE EDGE OF PAVEMENT (OR WITHIN THE 45° LINE OF INFLUENCE OF PAVEMENT) SHALL HAVE M.D.O.T. CLASS II GRANULAR BACKFILL COMPACTED TO 95% MAX. DRY DENSITY (ASTM D-1557).



STORM STRUCTURES			
MH	3	(4' DIA./0' SUMP) RIM = 1003.40 12" E 995.14 18" S 994.74 24" N 994.34	
MH	5	(4' DIA./0' SUMP) RIM = 1001.26 15" SE 995.43 12" E 995.63 18" N 995.23	
CB	16	(4' DIA./2' SUMP) RIM = 1003.60 12" N 997.39	
CB	24	(4' DIA./2' SUMP) RIM = 1002.15 12" S 996.95 12" W 996.95	
MH	25	(4' DIA./0' SUMP) RIM = 1002.55 12" E 997.22 12" S 997.12 12" N 997.12	
CB	26	(4' DIA./2' SUMP) RIM = 1004.95 12" E 998.99 12" W 997.99	
CB	27	(4' DIA./2' SUMP) RIM = 1006.10 12" E 1000.25 12" W 999.35	
CB	28	(4' DIA./2' SUMP) RIM = 1007.65 12" E 1002.44 12" W 1000.94	
CB	29	(4' DIA./2' SUMP) RIM = 1008.55 12" E 1003.13 12" W 1003.13	
CB	30	(4' DIA./2' SUMP) RIM = 1009.15 12" E 995.66 12" W 1003.93	
CB	37	(4' DIA./2' SUMP) RIM = 1000.72 12" E 995.66 12" W 995.66	
CB	38	(4' DIA./2' SUMP) RIM = 1000.72 12" W 995.75	

REVISIONS

NO.	DATE	DESCRIPTION
1	12-15-22	1. T.M.K. J.B.T. REVISIONS PER NOVEMBER 13, 2020 TWP REVIEW
2	10-05-22	2. T.M.K. J.B.T. REVISIONS FOR ADDED E.V.A.
3	08-13-22	3. T.M.K. J.B.T. REVISIONS PER MAY 6, 2020 P.C. MEETING
4	01-11-22	4. T.M.K. J.B.T. DATE DESCRIPTION

CAUTION!!
THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

THIS DRAWING AND DESIGN ARE THE PROPERTY OF PEA, INC. THEY ARE LOANED TO THE CONTRACTOR FOR THEIR USE ONLY. THEY ARE NOT TO BE REPRODUCED, COPIED, REPRODUCED, OR REPRODUCED IN WHOLE OR IN PART, OR USED FOR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF PEA, INC. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED. © 2022 PEA, INC.

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR SHALL BE RESPONSIBLE FOR THE SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFINE, INDENTIFY AND HOLD DESIGN PROFESSIONAL, INDENTIFY AND HOLD DESIGN PROFESSIONAL, OR ALLEGED IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

3 FULL WORKING DAYS BEFORE YOU DIG CALL

811

Know what's below
Call before you dig

MISS Dig System, Inc.
1-800-482-7171 www.missdig.net (1021-4821)

PEA, Inc.
2430 Rochester Ct, Ste 100
Troy, MI 48063-1872
t: 248.689.9090
f: 248.689.1044
www.peainc.com

FRANKLIN RIDGE HOMES, LLC
30180 ORCHARD LAKE ROAD, SUITE 150
FARMINGTON HILLS, MICHIGAN 48334

STORM SEWER PLAN - CENTER
SILVERBELL POINTE
PART OF THE SE 1/4 OF SECTION 28 & NE 1/4 SECTION 33, T40N, R10E
ORION TOWNSHIP, OAKLAND COUNTY, MICHIGAN

DES. T.M.K. DN. T.M.K. SUR. K.T.R. P.M. J.B.T.

ORIGINAL ISSUE DATE:
MARCH 17, 2020

PEA JOB NO. 2018-150

SCALE: 1" = 40'

DRAWING NUMBER:
C-8.4

XREF: S:\PROJECTS\2018\2018150\DWG\18150-1-TOPOBASE.DWG
XREF: S:\PROJECTS\2018\2018150\DWG\FINAL_PUD\X-BASE-18150.DWG
XREF: S:\PROJECTS\2018\2018150\DWG\FINAL_PUD\X-TBLK-18150.DWG



* VELOCITY WOULD BE TOO LOW SO NO OVERFLOW
SPILLWAY WILL BE PROVIDED FOR POND 2



C-8.5

REVISIONS

CAUTION!!
THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY FOR INFORMATION. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

THIS DRAWING AND DESIGN ARE THE PROPERTY OF PEIA, INC. THEY ARE SUBMITTED ON THE CONDITION THAT THEY ARE NOT TO BE USED, REPRODUCED, OR COPIED, IN WHOLE OR IN PART, OR USED FOR FURNISHING INFORMATION TO OTHERS, WITHOUT THE WRITTEN CONSENT OF PEIA, INC. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED. © 2020 PEIA, INC.

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE RESPONSIBLE FOR THE SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN

**3 FULL WORKING DAYS
BEFORE YOU DIG CALL**

811

Know what's below
Call before you dig

1-800-482-7171 www.missdig.net
(TOLL FREE)

PEA

PEA, Inc.

2430 Rochester Ct, Ste 100
Troy, MI 48063-1872
t: 248.689.9090
f: 248.689.1044
www.peainc.com

FRANKLIN RIDGE HOMES, LLC
30180 FARM ROAD, SUITE 150
FARMINGTON HILLS, MICHIGAN 48334

ORIGINAL ISSUE DATE:
MARCH 17, 2020

PEA JOB NO. 2018-150

SCALE: 1" = 40'

DRAWING NUMBER:

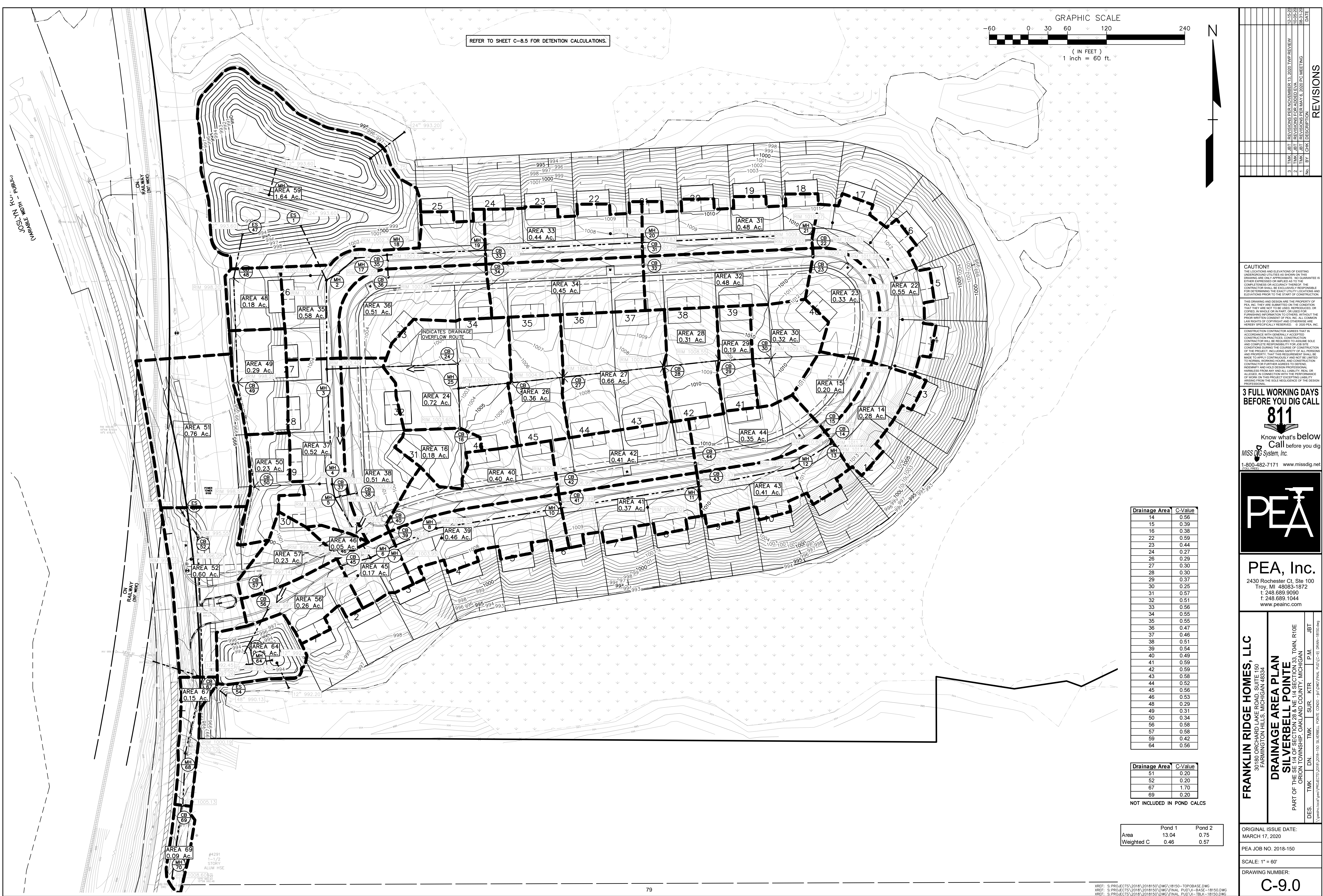
C-8.5

XREF: S:PROJECTS\2018\2018150\DWG\18150-TOPOBASE.DWG
XREF: S:PROJECTS\2018\2018150\DWG\FINAL PUD\X-BASE-18150.DWG
XREF: S:PROJECTS\2018\2018150\DWG\FINAL PUD\X-TRK-18150.DWG

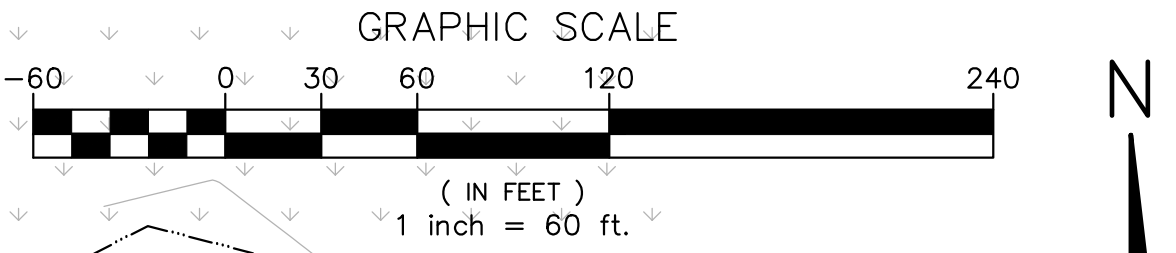
STORM SEWER SYSTEM DESIGN

I = B/(T+D)^E
C = varies
T = 20 (min.)
B = 175.0
D = 25.0
E = 1
Pipe "n" Value = 0.013

FROM STR	TO STR	AREA (A) (Acres)	COEF. C	A x C	TOTAL AREA (Ax C)	TOTAL AREA (Acres)	TIME t (min.)	INT. I (in/hr)	FLOW Q (cfs)	PIPE CAP. (cfs)	PIPE DIA. (in.)	PIPE LENGTH (ft.)	PIPE SLOPE (%)	MIN HG PER "Q"	VEL. FULL (ft./sec)	TIME FLOW (min.)	H.G.L. ELEV. UP STREAM	H.G.L. ELEV. DOWN STREAM	RIM ELEV. UP STREAM	RIM ELEV. DOWN STREAM	INVERT ELEV. UP STREAM	INVERT ELEV. DOWN STREAM	PIPE COVER UP STREAM	PIPE COVER DOWN STREAM	HGL COVER UP STREAM	HGL COVER DOWN STREAM
15	14	0.20	0.39	0.08	0.08	0.20	20.00	3.89	0.29	2.11	12	25	0.35	0.01%	2.7	0.2	1006.44	1006.35	1010.81	1010.80	1005.64	1005.55	4.00	4.09	4.37	4.45
14	13	0.28	0.56	0.16	0.23	0.47	20.20	3.87	0.90	2.11	12	9	0.35	0.06%	2.7	0.1	1006.35	1006.32	1010.80	1011.20	1005.55	1005.52	4.09	4.51	4.45	4.88
13	12	0.00	0.00	0.00	0.23	0.47	20.30	3.86	0.90	2.11	12	68	0.35	0.06%	2.7	0.4	1006.22	1005.98	1011.20	1010.40	1005.42	1005.18	4.61	4.05	4.98	4.41
12	11	0.00	0.00	0.00	0.23	0.47	20.70	3.83	0.90	2.11	12	147	0.35	0.06%	2.7	0.9	1005.18	1004.67	1010.40	1009.17	1004.38	1003.87	4.85	4.13	5.21	4.50
11	10	0.00	0.00	0.00	0.65	1.23	21.60	3.76	2.44	2.52	12	214	0.50	0.47%	3.2	1.1	1004.07	1002.99	1009.17	1007.53	1003.27	1002.19	4.73	4.16	5.10	4.53
10	8	0.00	0.00	0.00	1.11	2.02	22.70	3.67	4.08	4.14	12	194	1.35	1.31%	5.3	0.6	1002.52	999.99	1007.53	1004.50	1001.59	998.98	4.76	4.35	5.00	4.51
8	7	0.00	0.00	0.00	1.11	2.02	23.30	3.62	4.08	4.14	12	68	1.35	1.31%	5.3	0.2	999.99	999.09	1004.50	1003.18	997.78	996.86	5.55	5.16	4.51	4.09
7	6	0.00	0.00	0.00	1.55	2.87	23.50	3.61	5.60	5.04	12	43	2.00	2.47%	6.4	0.1	999.09	998.04	1003.18	1002.18	996.86	996.00	5.16	5.01	4.09	4.15
6	5	0.00	0.00	0.00	1.68	3.10	23.60	3.60	6.03	3.82	15	107	0.35	0.87%	3.1	0.6	998.04	997.10	1002.18	1001.26	995.80	995.43	4.94	4.39	4.15	4.16
5	4	0.00	0.00	0.00	2.17	4.13	24.20	3.56	7.74	4.70	18	21	0.20	0.54%	2.7	0.1	997.10	996.99	1001.26	1001.34	995.23	995.19	4.32	4.44	4.16	4.35
4	3	0.00	0.00	0.00	2.17	4.13	24.30	3.55	7.74	5.25	18	177	0.25	0.54%	3.0	1.0	996.99	996.03	1001.34	1003.40	995.19	994.74	4.44	6.94	4.35	7.37
3	2	0.00	0.00	0.00	2.98	6.88	25.30	3.48	10.38	10.12	24	137	0.20	0.21%	3.2	0.7	996.03	995.74	1003.40	1003.01	994.34	994.07	6.80	6.69	7.37	7.27
2	1	0.00	0.00	0.00	5.02	10.70	26.00	3.43	17.23	14.31	24	93	0.40	0.58%	4.6	0.3	995.74	995.20	1003.01	995.93	993.97	993.60	6.79	0.08	7.27	0.73
23	22	0.33	0.44	0.15	0.15	0.33	20.00	3.89	0.58	2.39	12	25	0.45	0.03%	3.0	0.1	1004.59	1004.48	1009.02	1009.02	1003.79	1003.68	4.06	4.17	4.42	4.53
22	21	0.55	0.59	0.32	0.47	0.88	20.10	3.88	1.82	2.39	12	9	0.45	0.26%	3.0	0.0	1004.48	1004.44	1009.02	1009.56	1003.68	1003.64	4.17	4.75	4.53	5.11
21	20	0.00	0.00	0.00	0.47	0.88	20.10	3.88	1.82	2.39	12	261	0.45	0.26%	3.0	1.4	1004.34	1003.17	1009.56	1007.83	1003.54	1002.37	4.85	4.30	5.21	4.66
20	19	0.00	0.00	0.00	0.98	1.84	21.50	3.76	3.70	6.46	15	241	1.00	0.33%	5.3	0.8	1002.47	1000.06	1007.83	1004.57	1001.47	999.06	4.93	4.08	5.36	4.52
19	18	0.00	0.00	0.00	1.48	2.73	22.30	3.70	5.49	7.64	15	151	1.40	0.72%	6.2	0.4	999.26	997.15	1004.57	1002.59	998.26	996.15	4.88	5.01	5.32	5.44
18	17	0.00	0.00	0.00	2.04	3.82	22.70	3.67	7.48	7.91	15	49	1.50	1.34%	6.5	0.1	997.15	996.49	1002.59	1002.71	996.15	995.41	5.01	5.86	5.44	6.21
17	9	0.00	0.00	0.00	2.04	3.82	22.80	3.66	7.48	7.91	15	34	1.50	1.34%	6.5	0.1	996.49	996.03	1002.71	1002.20	995.41	994.90	5.86	5.86	6.21	6.17
9	2	0.00	0.00	0.00	2.04	3.82	22.90	3.65	7.48	7.91	15	22	1.50	1.34%	6.5	0.1	996.03	995.74	1002.20	1003.01	994.90	994.57	5.86	7.00	6.17	7.27
30	29	0.32	0.25	0.08	0.08	0.32	20.00	3.89	0.31	3.56	12	80	1.00	0.01%	4.5	0.3	1004.73	1003.93	1009.15	1008.55	1003.93	1003.13	4.05	4.25	4.42	4.62
29	28	0.19	0.37	0.07	0.15	0.52	20.30	3.86	0.59	3.19	12	86	0.80	0.03%	4.1	0.4	1003.93	1003.24	1008.55	1007.65	1003.13	1002.44	4.25	4.04	4.62	4.41
28	27	0.31	0.30	0.09	0.25	0.83	20.70	3.83	0.94	2.39	12	154	0.45	0.07%	3.0	0.8	1001.74	1001.05	1007.65	1006.10	1000.94	1000.25	5.54	4.68	5.91	5.05
27	26	0.66	0.30	0.20	0.44	1.49	21.50	3.76	1.67	2.39	12	80	0.45	0.22%	3.0	0.4	1000.15	999.79	1006.10	1004.95	999.35	998.99	5.58	4.80	5.95	5.16
26	25	0.36	0.29	0.10	0.55	1.85	21.90	3.73	2.04	2.39	12	82	0.45	0.33%	3.0	0.4	998.39	998.02	1004.95	1002.55	997.59	997.22	6.20	4.16	6.56	4.53
25	24	0.00	0.00	0.00	0.61	2.03	22.30	3.70	2.27	2.39	12	38	0.45	0.41%	3.0	0.2	997.92	997.75	1002.55	1002.15	997.12	996.95	4.26	4.03	4.63	4.39
24	3	0.72	0.27	0.19	0.81	2.75	22.50	3.68	2.97	3.38	12	201	0.90	0.70%	4.3	0.8	997.75	996.03	1002.15	1003.40	996.95	995.14	4.03	7.09	4.39	7.37
50	49	0.23	0.34	0.08	0.08	0.23	20.00	3.89	0.30	2.02	12	161	0.32	0.01%	2.6	1.0	995.65	995.14	998.55	998.20	994.85	994.34	2.53	2.70	2.90	3.06
49	48	0.29	0.31	0.09	0.17	0.52	21.00	3.80	0.64	2.02	12	160	0.32	0.03%	2.6	1.0	995.14	994.63	998.20	998.20	994.34	993.83	2.70	3.21	3.06	3.57
48	47	0.18	0.29	0.05	0.22	0.70	22.00	3.72	0.82	2.02	12	70	0.32	0.05%	2.6	0.5	994.63	994.40	998.20	994.85	993.83	993.60	3.21	0.08	3.57	0.45
32	31	0.48	0.51	0.24	0.24	0.48	20.00	3.89	0.95	2.11	12	25	0.35	0.07%	2.7	0.2	1002.88	1002.80	1007.29	1007.29	1002.08	1002.00	4.04	4.13	4.41	4.50
31	20	0.48	0.57	0.27	0.52	0.96	20.20	3.87	1.99	2.11	12	9	0.35	0.31%	2.7	0.1	1002.80	1002.77	1007.29	1007.83	1002.00	1001.97	4.13	4.70	4.50	5.06
34	33	0.45	0.55	0.25	0.25	0.45	20.00	3.89	0.98	2.39	12	25	0.45	0.08%	3.0	0.1	999.61	999.50	1004.04	1004.03	998.81	998.70	4.06	4.17	4.43	4.54
33	19	0.44	0.56	0.25	0.50	0.90	20.10	3.88	1.94	2.39	12	9	0.45	0.30%	3.0	0.0	999.50	999.46	1004.03	1004.57	998.70	998.66	4.17	4.75	4.54	5.12
36	35	0.51	0.47	0.24	0.24	0.51	20.00	3.89	0.94	2.39	12	25	0.45	0.07%	3.0	0.1	997.60	997.49	1002.05	1002.05	996.80	996.69	4.08	4.20	4.45	4.57
35	18	0.58	0.55	0.31	0.56	1.09	20.10	3.88	2.16	2.39	12	9	0.45	0.37%	3.0	0.0	997.49	997.45	1002.05	1002.59	996.69	996.65	4.20	4.78	4.57	5.15
38	37	0.51	0.51	0.26	0.26	0.51	20.00	3.89	1.01	2.11	12	25	0.35	0.08%	2.7	0.2	997.15	997.13	1000.72	1000.72	995.75	995.66	3.80	3.89	3.57	3.59
37	5	0.52	0.46	0.24	0.50	1.03	20.20	3.87	1.93	2.11	12	9	0.35	0.29%	2.7	0.1	997.13	997.10	1000.72	1001.26	995.66	995.63	3.89	4.46	3.59	4.16
40	39	0.40	0.49	0.19	0.19	0.40	20.00	3.89	0.76	2.11	12	25	0.35	0.05%	2.7	0.2	999.13	999.11	1002.61	1002.61	997.38	997.29	4.06	4.15	3.49	3.50
39	7	0.46	0.54	0.25	0.44	0.86	20.20	3.87	1.71	2.11	12	10	0.35	0.23%	2.7	0.1	999.11	999.09	1002.61	1003.18	997.29	997.26	4.15	4.76	3.50	4.09
42	41	0.41	0.59	0.24	0.24	0.41	20.00	3.89	0.94	2.11	12	25	0.35	0.07%	2.7	0.2	1002.61	1002.54	1006.99	1006.99	1001.81	1001.73	4.01	4.09	4.38	4.44
41	10	0.37	0.59	0.22	0.46	0.78	20.20	3.87	1.79	2.11	12	9	0.35	0.25%	2.7	0.1	1002.54	1002.52	1006.99	1007.53	1001.73	1001.69	4.09	4.66	4.44	5.00
44	43	0.35	0.52	0.18	0.18	0.35	20.00	3.89	0.71	2.11	12	25	0.35	0.04%	2.7	0.2	1004.28	1004.20	1008.68	1008.67	1003.48	1003.40	4.03	4.11	4.39	4.48
43	11	0.41	0.58	0.23	0.42	0.76	20.20	3.87	1.62	2.11	12	9	0.35	0.21%	2.7	0.1	1004.20	1004.17	1008.67	1009.17	1003.40	1003.37	4.11	4.63	4.48	5.00
46	45	0.05	0.53	0.03	0.03	0.05	20.00	3.89	0.10	2.11	12	25	0.35	0.00%	2.7	0.2	998.04	998.04	1000.36	1000.36	996.26	996.17	2.94	3.03	2.32	2.32
45	6	0.17	0.56	0.10	0.12	0.22	20.20	3.87	0.48	2.11	12	47	0.35	0.02%	2.7	0.3	998.04	998.04	1000.36	1002.18	996.17	996.00	3.03	5.01	2.32	4.15
51	52	0.76	0.20	0.15																						



REFER TO SHEET C-8.5 FOR DETENTION CALCULATIONS.



Drainage Area	C-Value
14	0.56
15	0.39
16	0.38
22	0.59
23	0.44
24	0.27
26	0.29
27	0.30
28	0.30
29	0.37
30	0.25
31	0.57
32	0.51
33	0.56
34	0.55
35	0.55
36	0.47
37	0.46
38	0.51
39	0.54
40	0.49
41	0.59
42	0.59
43	0.58
44	0.52
45	0.56
46	0.53
48	0.29
49	0.31
50	0.34
56	0.58
57	0.58
59	0.42
64	0.56

Drainage Area	C-Value
51	0.20
52	0.20
67	1.70
69	0.20

NOT INCLUDED IN POND CALCS

Area	Pond 1	Pond 2
Weighted C	13.04	0.57

12-15-22	3	TMK	JBT	REVISIONS PER NOVEMBER 13, 2020 JWP REVIEW
10-05-22	2	TMK	JBT	REVISIONS FOR ADDED EVA
08-13-22	1	TMK	JBT	REVISIONS PER MAY 6, 2020 PC MEETING
	NO.	JBT	DATE	DESCRIPTION

CAUTION!!

THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

THIS DRAWING AND DESIGN ARE THE PROPERTY OF PEA, INC. THEY ARE SUBMITTED ON THE CONDITION THAT THEY ARE NOT TO BE USED, REPRODUCED, OR COPIED IN WHOLE OR IN PART, OR USED FOR FURNISHING INFORMATION TO OTHERS, WITHOUT THE PRIOR WRITTEN CONSENT OF PEA, INC. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED. © 2020 PEA, INC.

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THAT THIS REQUIREMENT SHALL BE MADE TO APPLY TO CONTRACTORS AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFINE, INDEMNIFY AND HOLD DESIGN PROFESSIONAL, PEA, INC. HARMLESS FROM ANY AND ALL LIABILITY, LOSS OR ALLEGED IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

3 FULL WORKING DAYS BEFORE YOU DIG CALL

811

Know what's below
Call before you dig

MISS Dig System, Inc.
1-800-482-7171 www.missdig.net

PEA

PEA, Inc.
2430 Rochester Ct, Ste 100
Troy, MI 48063-1872
t: 248.689.9090
f: 248.689.1044
www.peainc.com

FRANKLIN RIDGE HOMES, LLC
30180 ORCHARD LAKE ROAD, SUITE 150
FARMINGTON HILLS, MICHIGAN 48334

DRAINAGE AREA PLAN
SILVERBELL POINTE

PART OF THE SE 1/4 OF SECTION 28 & NE 1/4 SECTION 33, T40N, R10E
ORION TOWNSHIP, OAKLAND COUNTY, MICHIGAN

DES.	TMK	DN.	TMK	SUR.	KTR	P.M.	JBT
V:\pea\hwy\hwy\PROJECTS\2018\18150\DWG\FINAL_PUD\X-BASE-18150.DWG							

ORIGINAL ISSUE DATE:
MARCH 17, 2020

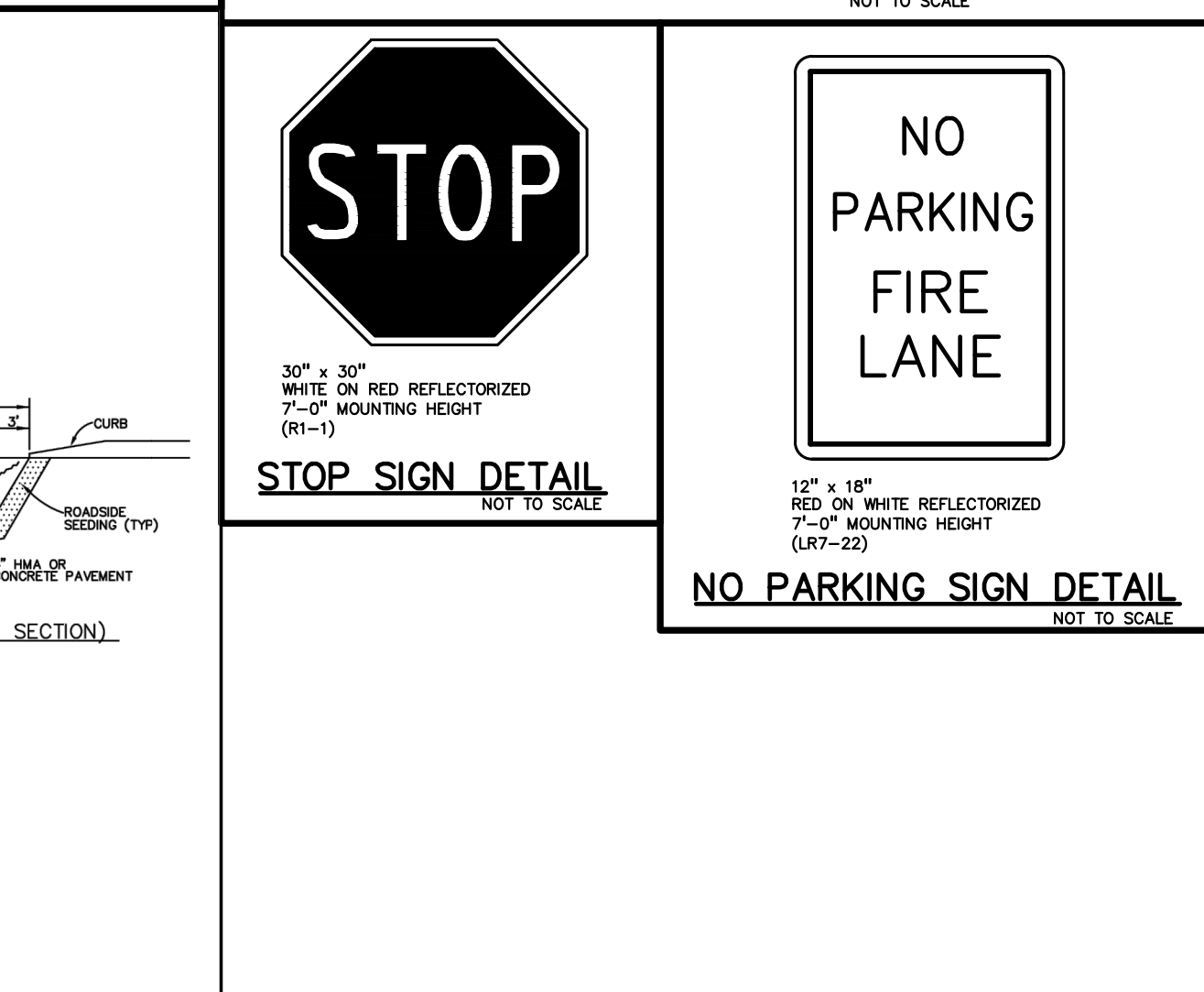
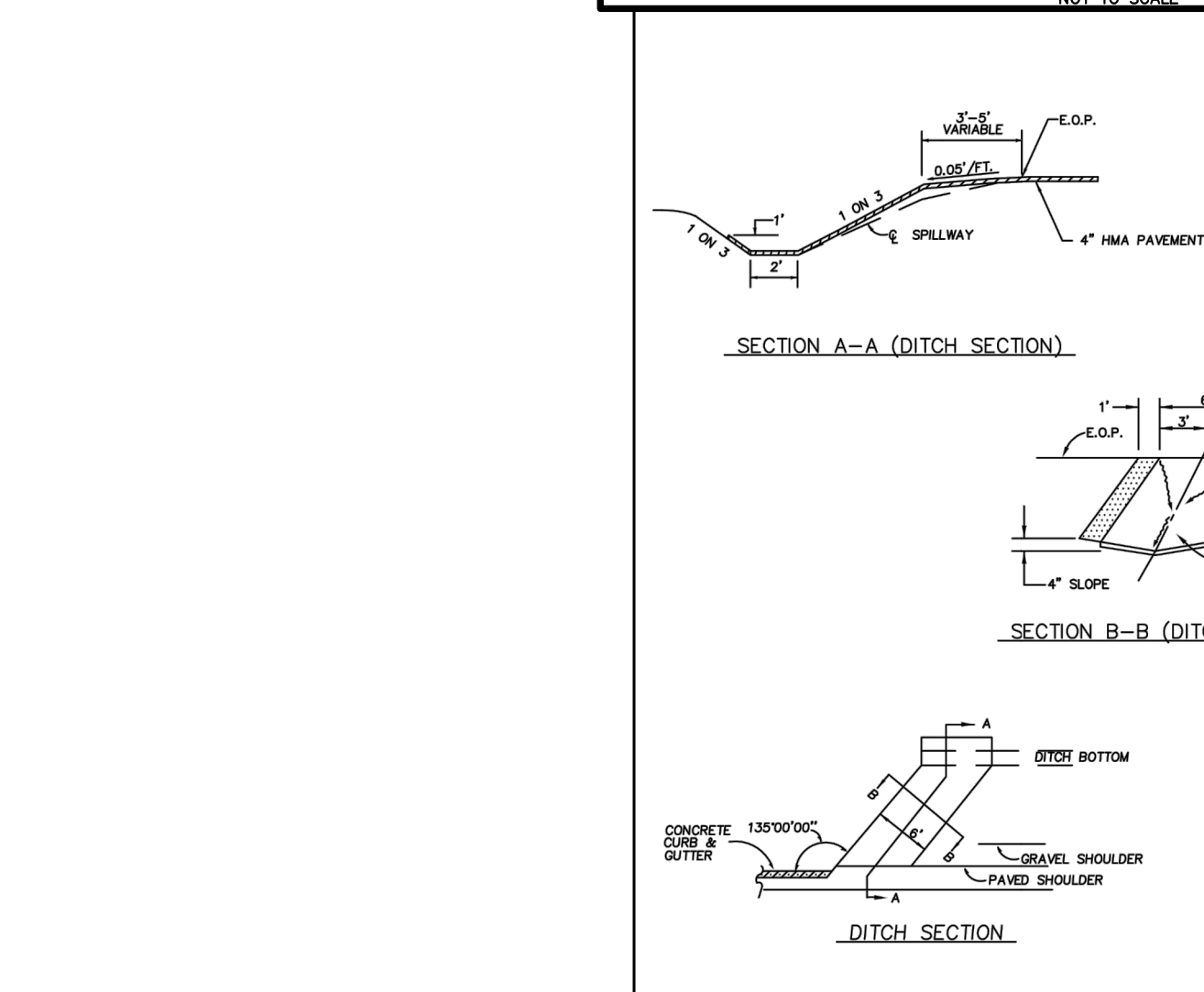
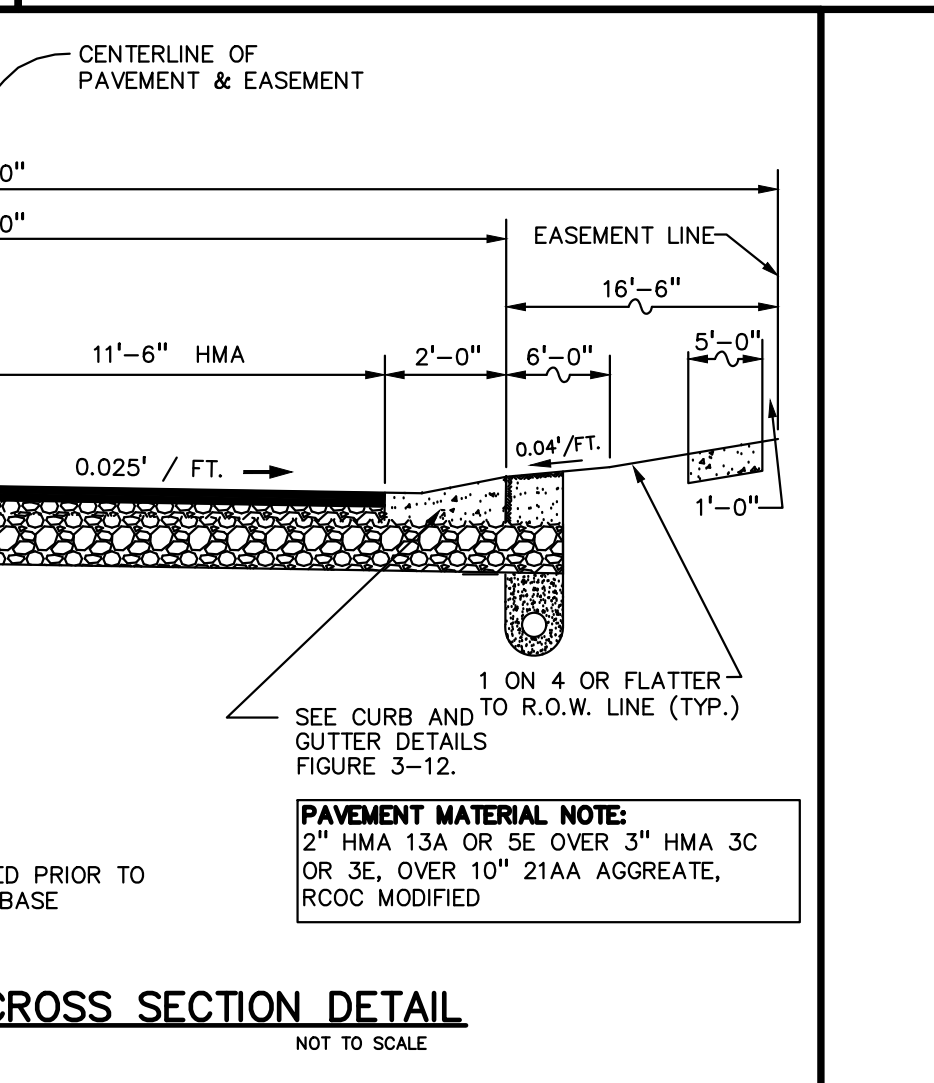
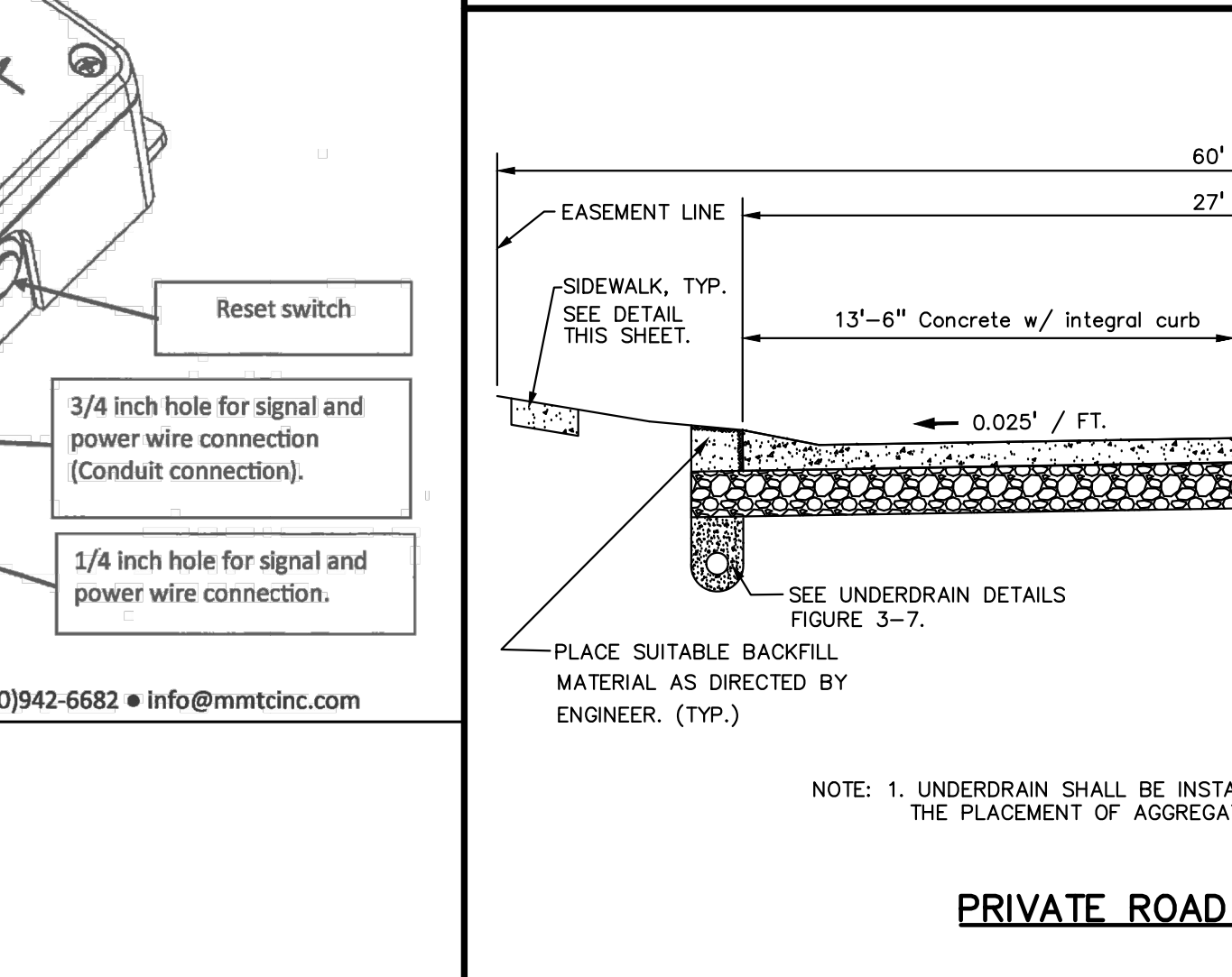
PEA JOB NO. 2018-150

SCALE: 1" = 60'

DRAWING NUMBER:
C-9.0

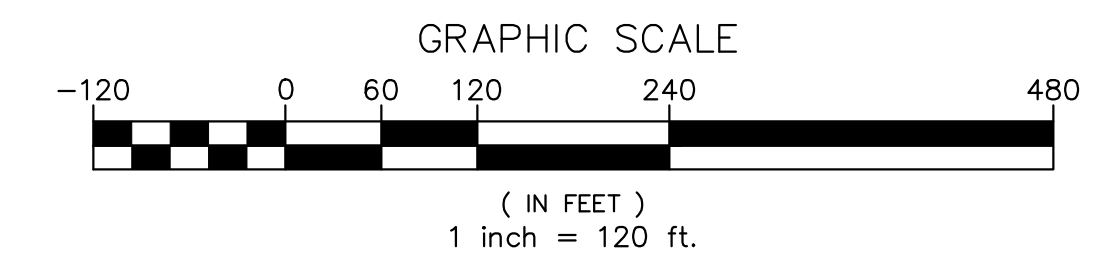
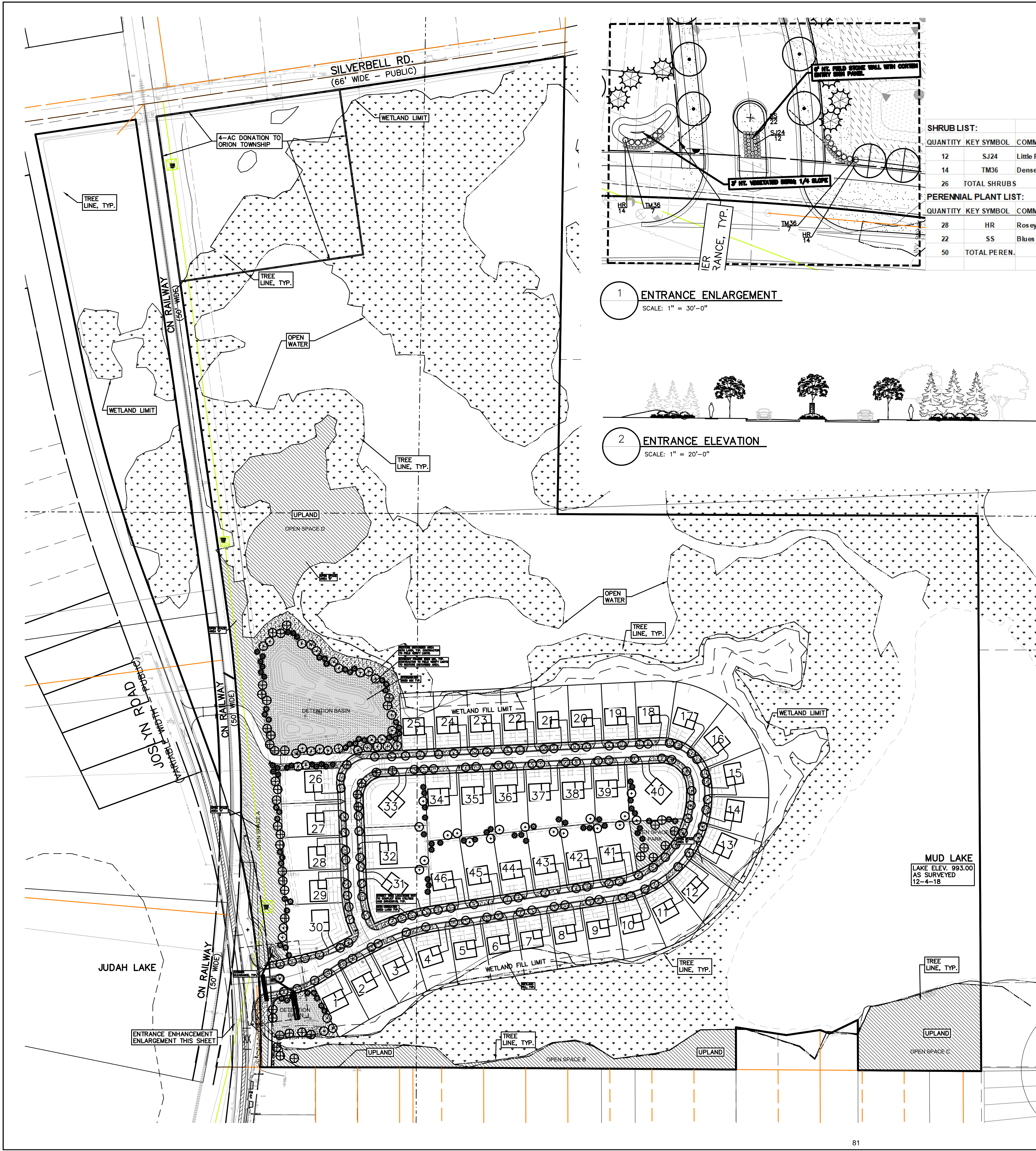
XREF: S:\PROJECTS\2018\18150\DWG\18150-TOPBASE.DWG
XREF: S:\PROJECTS\2018\18150\DWG\FINAL_PUD\X-BASE-18150.DWG
XREF: S:\PROJECTS\2018\18150\DWG\FINAL_PUD\X-TBLK-18150.DWG

79



FRANKLIN RIDGE HOMES, LLC
 30180 ORCHARD LAKE ROAD, SUITE 150
 FARMINGTON HILLS, MICHIGAN 48334
 NOTES AND DETAILS
 SILVERBELL POINTE
 PART OF THE SE 1/4 OF SECTION 28 & NE 1/4 SECTION 33, T04N, R10E
 ORION TOWNSHIP - OAKLAND COUNTY, MICHIGAN
 DES. DWG. DN. SUR. KTR. P.M. JB
 S. PROJECT/VAR# 1016-150 SILVERBELL POINTE CONDO - 3P UNITS/LOT 10-12 15-REHS030

230 Route 206, Suite 206, Flanders, New Jersey, 07836 • Phone: (800)942-6682 • info@mmtcinc.com



- KEY:
- = STREET TREES
 - ⊕ = OPEN SPACE TREES
 - ⊕ = REPLACEMENT TREES
 - ▨ = OPEN SPACE AREA
 - ▨ = NON-IRRIGATED SEED LAWN
 - ▨ = STORM WATER SEED MIX BY: CARDNO 574-586-2412 PROVIDE EROSION MAT ON SLOPES
 - ▨ = ECONOMY PRAIRIE SEED MIX BY: CARDNO 574-586-2412 PROVIDE EROSION MAT ON SLOPES

SHRUB LIST:

QUANTITY	KEY SYMBOL	COMMON NAME	SCIENTIFIC NAME	SIZE	SPEC
12	SJ24	Little Princess Japanese Spirea	<i>Spiraea japonica</i> 'Little Princess'	24" Ht.	B&B
14	TM36	Dense Yew	<i>Taxus x media</i> 'Densiformis'	36" Ht.	B&B
26		TOTAL SHRUBS			

PERENNIAL PLANT LIST:

QUANTITY	KEY SYMBOL	COMMON NAME	SCIENTIFIC NAME	SIZE	SPEC
28	HR	Rosey Returns Daylily	<i>Hemerocallis</i> 'Rosey Returns'	Cont.	B&B
22	SS	Blues Little Bluestem	<i>Schizachyrium scoparium</i> 'The Blues'	Cont.	B&B
50		TOTAL PEREN.			

1 ENTRANCE ENLARGEMENT
SCALE: 1" = 30'-0"

2 ENTRANCE ELEVATION
SCALE: 1" = 20'-0"

Stormwater Seed Mix
CARDNO 574-586-2412
cardnonativeplantnursery.com

Botanical Name	Common Name
Permanent Grasses/Sedges/Rushes:	
<i>Carex crinitata</i>	River Bulrush
<i>Carex lasiocarpa</i>	Crested Oat Sedge
<i>Carex vulpinoidea</i>	Bottlebrush Sedge
<i>Elymus virginicus</i>	Brown Fox Sedge
<i>Glyceria striata</i>	Virginia Wild Rye
<i>Juncus effusus</i>	Fowl Manna Grass
<i>Leersia oryzoides</i>	Common Rush
<i>Panicum virgatum</i>	Rice Cut Grass
<i>Schoenoplectus tabernaemontani</i>	Switch Grass
<i>Scirpus atrovirens</i>	Softstem Bulrush
<i>Scirpus cyperinus</i>	Dark Green Rush
Temporary Cover:	
<i>Avena sativa</i>	Common Oat
<i>Lolium multiflorum</i>	Annual Rye

Forbs & Shrubs:	
<i>Alisma spp.</i>	Water Plantain (Various Mix)
<i>Asclepias incarnata</i>	Swamp Milkweed
<i>Bidens spp.</i>	Wild Amaranth (Various Mix)
<i>Helianthus autumnale</i>	Sneezeweed
<i>Iris virginica</i>	Blue Flag
<i>Lycopersicon esculentum</i>	Common Water Horehound
<i>Mimulus ringens</i>	Monkey Flower
<i>Oligoneuron nudiflorum</i>	Riddell's Goldenrod
<i>Penthorum sedoides</i>	Ditch Stonecrop
<i>Polygonum spp.</i>	Pinkweed (Various Mix)
<i>Rudbeckia subtomentosa</i>	Sweet Black-Eyed Susan
<i>Rudbeckia triloba</i>	Brown-Eyed Susan
<i>Sagittaria latifolia</i>	Common Arrowhead
<i>Senna hebecarpa</i>	Wild Senna
<i>Symphoricarpos racemosa</i>	New England Aster
<i>Thalictrum dasycarpum</i>	Purple Meadow Rue

Economy Prairie Seed Mix
CARDNO 574-586-2412
cardnonativeplantnursery.com

Botanical Name	Common Name
Permanent Grasses/Sedges/Rushes:	
<i>Andropogon gerardii</i>	Big Bluestem
<i>Bouteloua curtipendula</i>	Side Oats Grama
<i>Carex spp.</i>	Prairie Sedge Mix
<i>Elymus canadensis</i>	Canada Wild Rye
<i>Panicum virgatum</i>	Switch Grass
<i>Schizachyrium scoparium</i>	Little Bluestem
<i>Sorghastrum nutans</i>	Indian Grass
Temporary Cover:	
<i>Avena sativa</i>	Common Oat
<i>Lolium multiflorum</i>	Annual Rye

Forbs & Shrubs:	
<i>Asclepias syriaca</i>	Common Milkweed
<i>Asclepias tuberosa</i>	Butterfly Weed
<i>Chamaecrista fasciculata</i>	Partridge Pea
<i>Coreopsis lanceolata</i>	Sand Coreopsis
<i>Echinacea purpurea</i>	Broad-leaved Purple Coneflower
<i>Helicopsis helianthoides</i>	False Sunflower
<i>Lupinus perennis</i>	Wild Lupine
<i>Monarda fistulosa</i>	Wild Bergamot
<i>Penstemon digitalis</i>	Foxglove Beard Tongue
<i>Pycnanthemum virginianum</i>	Common Mountain Mint
<i>Ratibida pinnata</i>	Yellow Coneflower
<i>Rudbeckia hirta</i>	Black-Eyed Susan
<i>Solidago speciosa</i>	Showy Goldenrod
<i>Symphoricarpos laevis</i>	Smooth Blue Aster
<i>Symphoricarpos novae-angliae</i>	New England Aster

LANDSCAPE CALCULATIONS:
PER ORION TOWNSHIP ZONING ORDINANCE

SINGLE FAMILY - STREET TREES

2 TREES PER LOT; 46 LOTS = 92 TREES

1 TREE/ 50 LF OF ROADWAY WITHOUT LOT FRONTAGE; 543 LF OR ROAD FRONTAGE/ 50 = 11 TREES. 92 + 11 = 103 TREES REQUIRED: 103 TREES PROVIDED: 103

OPEN SPACE (NIC DETENTION, WETLANDS TO REMAIN)

20% OF TOTAL USEABLE SPACE ON SITE REQUIRED AS OPEN SPACE. 28 ACRES * .2 = 5.6 ACRES

AREA 'A' ± 1.33 AC

AREA 'B' ± 1.23 AC

AREA 'C' ± 1.19 AC

AREA 'D' ± 1.76 AC

AREA 'E' ± .28 AC

TOTAL 5.79 ACRES (252,212 SF) - 20.6% OF TOTAL AREA.

1 TREE REQUIRED PER 3,000 SF = 87 TREES REQUIRED

87 TREES PROVIDED

TREE REPLACEMENT

REQUIRED: 1 TO 1 REPLACEMENT FOR WOODLAND TREES (ABOVE 4" AND 10" TREES WITHIN BUILDING ENVELOPE, ROADS, R.O.W., WALKS, UTILITIES, RETENTION/DETENTION BASINS AND DRIVEWAYS)

REPLACE TOTAL DBH OF REMOVED LANDMARK TREES.

865 WOODLAND TREES REMOVED, AND 34 LANDMARK TREES AT 995' / 4" CAL. REPLACEMENT = 249 TREES.

1,114 TOTAL TREES REQUIRED FOR REPLACEMENT.

PROVIDED: 120 TREES AT 4" OR 8" HT. AND 190 TREES (87 OPEN SPACE TREES AND 103 STREET TREES).

REMAINDER OF TREES NOT TO BE PAID INTO TREE FUND PER AGREEMENT OF AUG. 17 ORION BOARD MEETING. 5 TREES ADDED IN LIEU OF PAYING INTO THE TREE FUND.

GENERAL PLANTING NOTES:

- LANDSCAPE CONTRACTOR SHALL VISIT SITE, INSPECT EXISTING SITE CONDITIONS AND REVIEW PROPOSED PLANTING AND RELATED WORK. IN CASE OF DISCREPANCY BETWEEN PLAN AND PLANT LIST, PLAN SHALL GOVERN QUANTITIES, CONTACT LANDSCAPE ARCHITECT WITH ANY CONCERNS.
- CONTRACTOR SHALL VERIFY LOCATIONS OF ALL ON SITE UTILITIES PRIOR TO BEGINNING CONSTRUCTION ON HIS/HER PHASE OF WORK. ELECTRIC, GAS, TELEPHONE, CABLE, TELEVISION MAY BE LOCATED BY CALLING MISS DIG 1-800-482-7171. ANY DAMAGE OR INTERRUPTION OF SERVICES SHALL BE THE RESPONSIBILITY OF CONTRACTOR. CONTRACTOR SHALL COORDINATE ALL RELATED ACTIVITIES WITH OTHER TRADES ON THE JOB AND SHALL REPORT ANY UNACCEPTABLE JOB CONDITIONS TO OWNER'S REPRESENTATIVE PRIOR TO COMMENCING.
- ALL PLANT MATERIAL TO BE PREMIUM GRADE NURSERY STOCK AND SHALL SATISFY AMERICAN ASSOCIATION OF NURSERYMEN STANDARD FOR NURSERY STOCK. ALL LANDSCAPE MATERIAL SHALL BE NORTHERN GROWN, NO. 1, GRADE.
- CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL QUANTITIES SHOWN ON LANDSCAPE PLAN PRIOR TO PRICING THE WORK.
- THE OWNER'S REPRESENTATIVE RESERVES THE RIGHT TO REJECT ANY PLANT MATERIAL NOT MEETING SPECIFICATIONS.
- ALL SINGLE STEM SHADE TREES TO HAVE STRAIGHT TRUNKS AND SYMMETRICAL CROWNS.
- ALL SINGLE TRUNK SHADE TREES TO HAVE A CENTRAL LEADER; TREES WITH FORKED OR IRREGULAR TRUNKS WILL NOT BE ACCEPTED.
- ALL MULTI STEM TREES SHALL BE HEAVILY BRANCHED AND HAVE SYMMETRICAL CROWNS. ONE SIDED TREES OR THOSE WITH THIN OR OPEN CROWNS SHALL NOT BE ACCEPTED.
- ALL EVERGREEN TREES SHALL BE HEAVILY BRANCHED AND FULL TO THE GROUND, SYMMETRICAL IN SHAPE AND NOT SHEARED FOR THE LAST FIVE GROWING SEASONS.
- ALL TREES TO HAVE CLAY OR CLAY LOAM BALLS, TREES WITH SAND BALLS WILL BE REJECTED.
- NO MACHINERY IS TO BE USED WITHIN THE DRIP LINE OF EXISTING TREES. HAND GRADE ALL LAWN AREAS WITHIN THE DRIP LINE OF EXISTING TREES.
- ALL TREE LOCATIONS SHALL BE STAKED BY LANDSCAPE CONTRACTOR AND ARE SUBJECT TO THE APPROVAL OF THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION OF THE PLANT MATERIAL.
- IT IS MANDATORY THAT POSITIVE DRAINAGE IS PROVIDED AWAY FROM ALL BUILDINGS.
- ALL PLANTING BEDS SHALL RECEIVE 3" SHREDDED HARDWOOD BARK MULCH WITH PRE EMERGENT, SEE SPECIFICATIONS. SHREDDED PALETTE AND DYED MULCH WILL NOT BE ACCEPTED.
- ALL LANDSCAPED AREAS SHALL RECEIVE 3" COMPACTED TOPSOIL.
- SEE SPECIFICATIONS FOR ADDITIONAL COMMENTS, REQUIREMENTS, PLANTING PROCEDURES AND WARRANTY STANDARDS.
- FOR NON-LAWN SEED MIX AREAS, AS NOTED ON PLAN, BRUSH MOW ONCE SEASONALLY FOR INVASIVE SPECIES CONTROL.

STATE OF MICHIGAN
JANET L. EVANS
LANDSCAPE ARCHITECT
NO. 1380
JANET L. EVANS
LANDSCAPE ARCHITECT

CAUTION!!
THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT LOCATION AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.
THIS DRAWING AND DESIGN ARE THE PROPERTY OF PEA, INC. THEY ARE SUBMITTED ON THE CONDITION THAT THEY ARE NOT TO BE USED, REPRODUCED, OR COPIED, IN WHOLE OR IN PART, OR USED FOR FURNISHING INFORMATION TO OTHERS, WITHOUT THE PRIOR WRITTEN CONSENT OF PEA, INC. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHER RIGHTS ARE HEREBY SPECIFICALLY RESERVED. © 2018 PEA, INC.

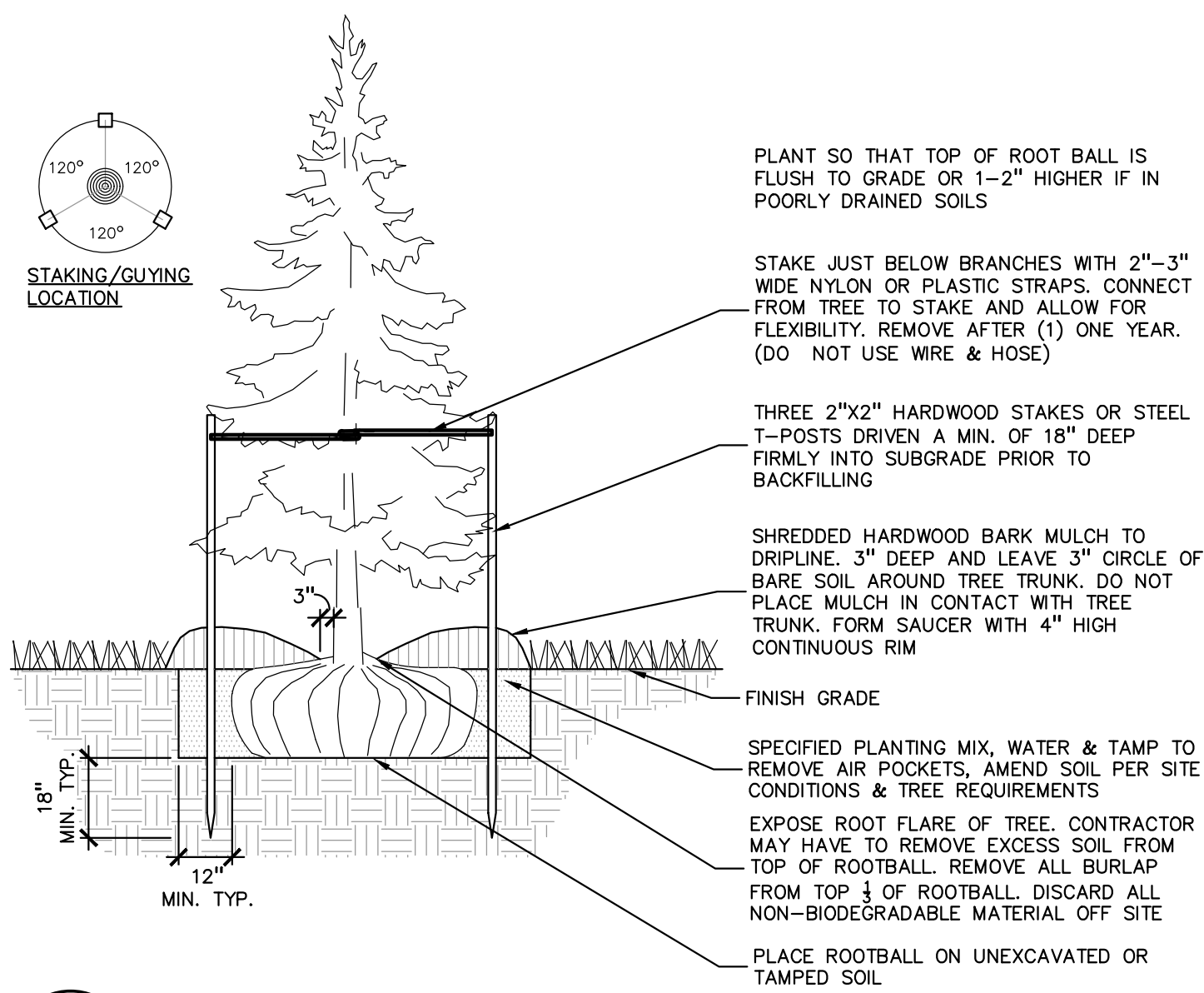
CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERAL PRACTICES, CONSTRUCTION CONTRACTOR SHALL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THAT THIS REQUIREMENT SHALL BE MADE TO ANY CONTRACTOR, AND CONSTRUCTION CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF ALL PERSONS AND PROPERTY. CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF ALL PERSONS AND PROPERTY. CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF ALL PERSONS AND PROPERTY.

3 FULL WORKING DAYS
BEFORE YOU DIG CALL
811
Know what's Below
Call before you dig
MISS DIG System, Inc.
1-800-482-7171 www.missdig.net
(TOLL FREE)

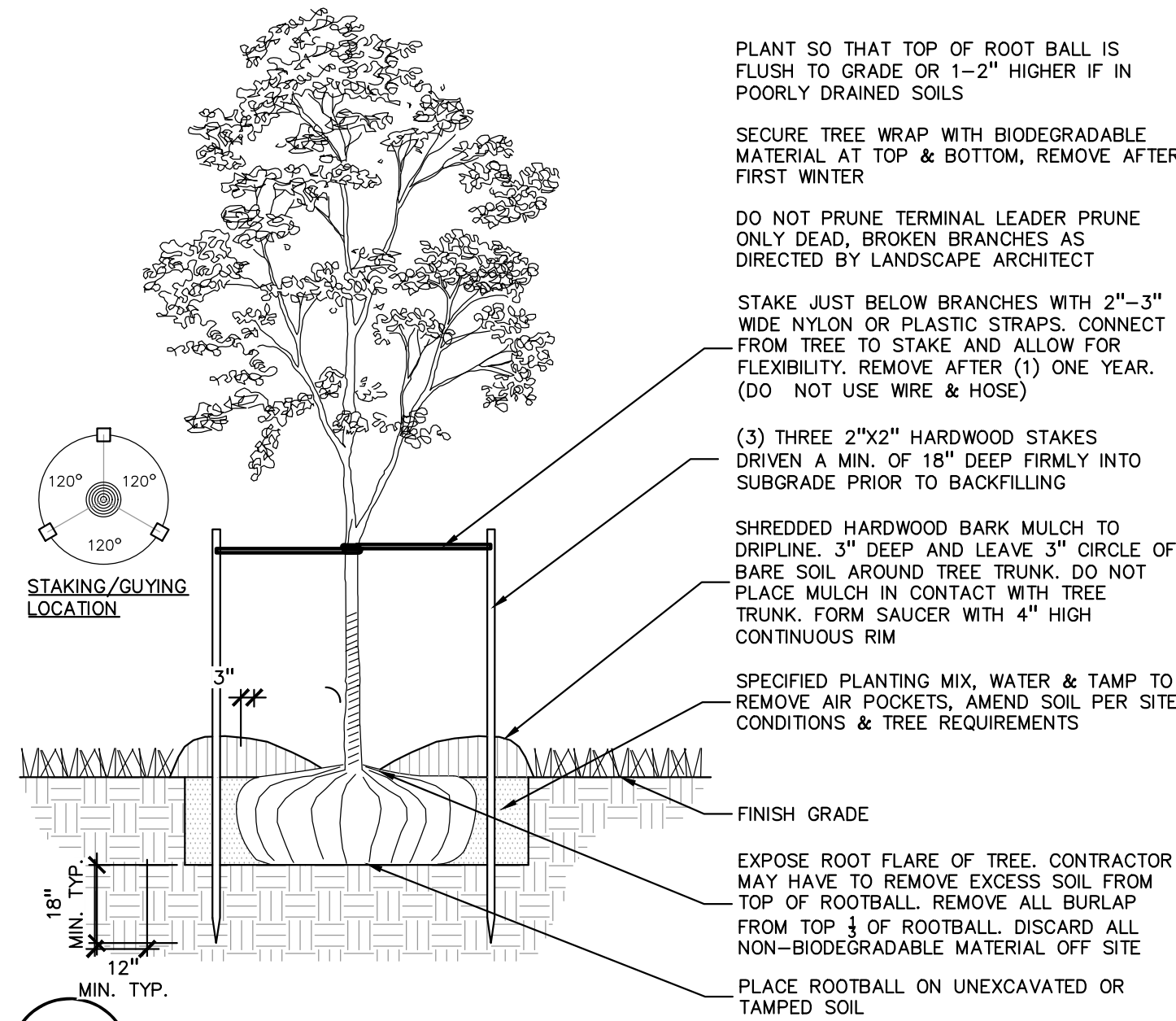
PEA, Inc.
2430 Rochester Ct, Ste 100
Troy, MI 48063-1872
t: 248.689.9090
f: 248.689.1044
www.peainc.com

FRANKLIN RIDGE HOMES, LLC
30180 ORCHARD LAKE ROAD, SUITE 150
FARMINGTON HILLS, MICHIGAN 48334
LANDSCAPE PLAN
SILVERBELL POINT
PART OF THE SE 1/4 OF SECTION 28 & NE 1/4 SECTION 33, T04N R10E
ORION TOWNSHIP, OAKLAND COUNTY, MICHIGAN
DES. JLE DN. KAD SUR. KTR P.M. JBT
S:\PROJECTS\2018-2019\2018150\DWG\CONSTRUCTION\150 LANDSCAPE-18150.DWG

ORIGINAL ISSUE DATE:
MARCH 17, 2020
PEA JOB NO. 2018-150
SCALE: 1" = 120'
DRAWING NUMBER:
L-1.0



2 EVERGREEN TREE PLANTING DETAIL
SCALE: 1/8" = 1'-0"



1 DECIDUOUS TREE PLANTING DETAIL
SCALE: 1/8" = 1'-0"

XREF: S:\PROJECTS\2018\2018150\DWG\18150-TOPOBASE.DWG
XREF: S:\PROJECTS\2018\2018150\DWG\FINAL_PUD\X-BASE-18150.DWG
XREF: S:\PROJECTS\2018\2018150\DWG\FINAL_PUD\X-TBLK-18150.DWG



CAUTION!!
THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

THIS DRAWING AND DESIGN ARE THE PROPERTY OF PEA, INC. THEY ARE SUBMITTED ON THE CONDITION THAT THEY ARE NOT TO BE USED, REPRODUCED, OR COPIED, IN WHOLE OR IN PART, OR USED FOR FURNISHING INFORMATION TO OTHERS, WITHOUT THE PRIOR WRITTEN CONSENT OF PEA, INC. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED. © 2001 PEA, INC.

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

3 FULL WORKING DAYS BEFORE YOU DIG CALL

811
Know what's below
Call before you dig
Miss Dig System, Inc.
1-800-482-7171 www.missdig.net
(TOLL FREE)



PEA, Inc.
2430 Rochester Ct, Ste 100
Troy, MI 48063-1872
t: 248.689.9090
f: 248.689.1044
www.peainc.com

FRANKLIN RIDGE HOMES, LLC

30180 ORCHARD LAKE ROAD, SUITE 150
FARMINGTON HILLS, MICHIGAN 48334
LANDSCAPE DETAILS
SILVERBELL POINTE
PART OF THE SE 1/4 OF SECTION 28 & NE 1/4 SECTION 33, T04N, R10E
ORION TOWNSHIP, OAKLAND COUNTY, MICHIGAN
DES. JLE DN KAD SUR KTR P.M. JBT
S:\PROJECTS\2018\2018150\DWG\CONSTRUCTION\LANDSCAPE-DETAILS 18150.DWG

ORIGINAL ISSUE DATE:
MARCH 17, 2020

PEA JOB NO. 2018-150

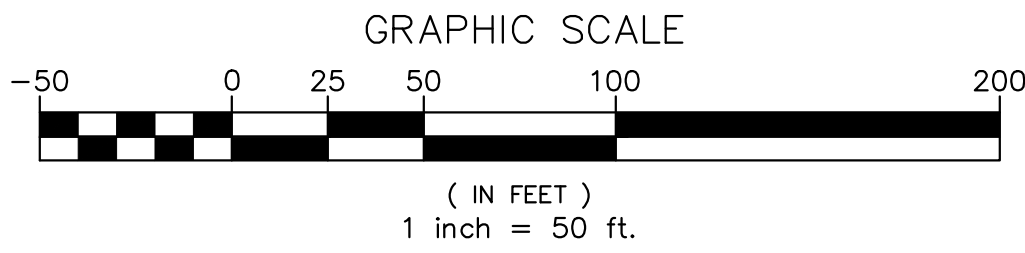
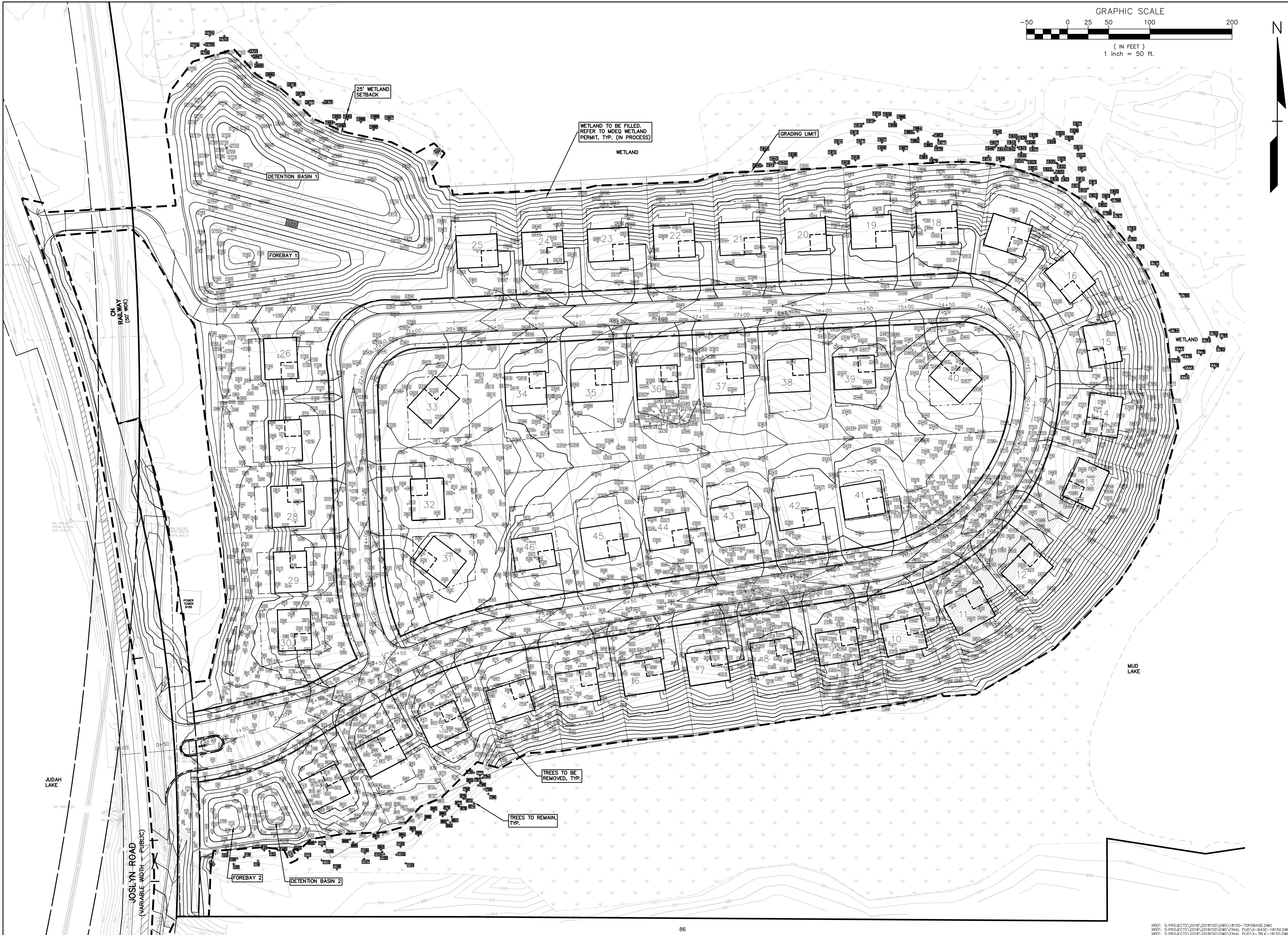
SCALE: 1" = 60'

DRAWING NUMBER:

L-1.2

REVISIONS

NO.	BY	DATE	DESCRIPTION
3	TWK	JBT	REVISIONS PER NOVEMBER 13, 2020 TWP REVIEW
2	TWK	JBT	REVISIONS FOR ADDED EVA
1	TWK	JBT	REVISIONS PER MAY 6, 2020 P2 MEETING
0	JBT	JBT	ORIGINAL



NO.	DATE	DESCRIPTION
1	10-05-20	REVISIONS FOR ADDED E.V.A.
2	10-05-20	REVISIONS FOR ADDED E.V.A.
3	10-05-20	REVISIONS FOR ADDED E.V.A.
4	10-05-20	REVISIONS FOR ADDED E.V.A.
5	10-05-20	REVISIONS FOR ADDED E.V.A.
6	10-05-20	REVISIONS FOR ADDED E.V.A.
7	10-05-20	REVISIONS FOR ADDED E.V.A.
8	10-05-20	REVISIONS FOR ADDED E.V.A.
9	10-05-20	REVISIONS FOR ADDED E.V.A.
10	10-05-20	REVISIONS FOR ADDED E.V.A.
11	10-05-20	REVISIONS FOR ADDED E.V.A.
12	10-05-20	REVISIONS FOR ADDED E.V.A.
13	10-05-20	REVISIONS FOR ADDED E.V.A.
14	10-05-20	REVISIONS FOR ADDED E.V.A.
15	10-05-20	REVISIONS FOR ADDED E.V.A.
16	10-05-20	REVISIONS FOR ADDED E.V.A.
17	10-05-20	REVISIONS FOR ADDED E.V.A.
18	10-05-20	REVISIONS FOR ADDED E.V.A.
19	10-05-20	REVISIONS FOR ADDED E.V.A.
20	10-05-20	REVISIONS FOR ADDED E.V.A.
21	10-05-20	REVISIONS FOR ADDED E.V.A.
22	10-05-20	REVISIONS FOR ADDED E.V.A.
23	10-05-20	REVISIONS FOR ADDED E.V.A.
24	10-05-20	REVISIONS FOR ADDED E.V.A.
25	10-05-20	REVISIONS FOR ADDED E.V.A.
26	10-05-20	REVISIONS FOR ADDED E.V.A.
27	10-05-20	REVISIONS FOR ADDED E.V.A.
28	10-05-20	REVISIONS FOR ADDED E.V.A.
29	10-05-20	REVISIONS FOR ADDED E.V.A.
30	10-05-20	REVISIONS FOR ADDED E.V.A.
31	10-05-20	REVISIONS FOR ADDED E.V.A.
32	10-05-20	REVISIONS FOR ADDED E.V.A.
33	10-05-20	REVISIONS FOR ADDED E.V.A.
34	10-05-20	REVISIONS FOR ADDED E.V.A.
35	10-05-20	REVISIONS FOR ADDED E.V.A.
36	10-05-20	REVISIONS FOR ADDED E.V.A.
37	10-05-20	REVISIONS FOR ADDED E.V.A.
38	10-05-20	REVISIONS FOR ADDED E.V.A.
39	10-05-20	REVISIONS FOR ADDED E.V.A.
40	10-05-20	REVISIONS FOR ADDED E.V.A.
41	10-05-20	REVISIONS FOR ADDED E.V.A.
42	10-05-20	REVISIONS FOR ADDED E.V.A.
43	10-05-20	REVISIONS FOR ADDED E.V.A.
44	10-05-20	REVISIONS FOR ADDED E.V.A.
45	10-05-20	REVISIONS FOR ADDED E.V.A.
46	10-05-20	REVISIONS FOR ADDED E.V.A.
47	10-05-20	REVISIONS FOR ADDED E.V.A.
48	10-05-20	REVISIONS FOR ADDED E.V.A.
49	10-05-20	REVISIONS FOR ADDED E.V.A.
50	10-05-20	REVISIONS FOR ADDED E.V.A.

CAUTION!!
THE LOCATION AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS GIVEN AS TO THE ACCURACY OF THE INFORMATION. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

THIS DRAWING AND DESIGN ARE THE PROPERTY OF PEA, INC. AND ARE NOT TO BE REPRODUCED, COPIED, REPRODUCED, OR USED FOR ANY OTHER PURPOSE WITHOUT THE WRITTEN CONSENT OF PEA, INC. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED. © 2020 PEA, INC.

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERAL ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND COMPLETING ALL NECESSARY SOIL AND COMPLETION RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THAT THE REQUIREMENT SHALL BE MADE TO APPLY CONTRACTORS, AND NOT BE LIMITED TO NORMAL WORKING HOURS AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFINE, INDICATE AND MAINTAIN DESIGN PROFESSIONAL LIABILITY FROM ANY AND ALL LIABILITY HOLD OR ALLEGED IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

3 FULL WORKING DAYS BEFORE YOU DIG CALL

811
Know what's below
Call before you dig
MISS DIG System, Inc.
1-800-482-7171 www.missdig.net
1001-4864



PEA, Inc.
2430 Rochester Ct. Ste 100
Troy, MI 48063-1872
t: 248.689.9090
f: 248.689.1044
www.peainc.com

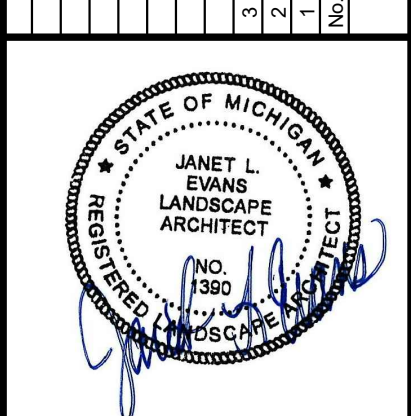
FRANKLIN RIDGE HOMES, LLC 30180 ORCHARD LAKE ROAD, SUITE 150 FARMINGTON HILLS, MICHIGAN 48334	
TREE REMOVAL OVERLAY SILVERBELL POINTE PART OF THE SE 1/4 OF SECTION 28 & NE 1/4 SECTION 33, T40N, R10E ORION TOWNSHIP, OAKLAND COUNTY, MICHIGAN	
DES.	TMK
DN.	TMK
SUR.	KTR
P.M.	JBT

ORIGINAL ISSUE DATE: MARCH 17, 2020
PEA JOB NO. 2018-150
SCALE: 1" = 50'
DRAWING NUMBER: T-0

XREF: S:\PROJECTS\2018\2018150\DWG\18150-TOPBASE.DWG
XREF: S:\PROJECTS\2018\2018150\DWG\FINAL_PUD_V-BASE-18150.DWG
XREF: S:\PROJECTS\2018\2018150\DWG\FINAL_PUD_V-TLK-18150.DWG



NO.	DATE	DESCRIPTION
1	12-04-20	REVISIONS PER NOVEMBER 13, 2020 TYP REVIEW
2	10-05-20	REVISIONS FOR ADDED EVA
3	08-13-20	REVISIONS FOR MAY 6, 2020 PC MEETING
4	07-13-20	DATE DISAPPROPRIATE



CAUTION!!
THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS GIVEN FOR THE ACCURACY OF THE INFORMATION. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

THIS DRAWING AND DESIGN ARE THE PROPERTY OF PEA, INC. THEY ARE LOANED TO THE CONTRACTOR THAT THEY ARE NOT TO BE USED, REPRODUCED, OR COPIED IN WHOLE OR IN PART, OR USED FOR FURNISHING INFORMATION TO OTHERS, WITHOUT THE PRIOR WRITTEN CONSENT OF PEA, INC. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED. © 2020 PEA, INC.

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION SHALL BE COMPLETED WITHIN THE SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS AND CONSTRUCTION. CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL, OR ALLIED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPT LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

3 FULL WORKING DAYS BEFORE YOU DIG CALL



MISS System, Inc.

1-800-482-7171 www.missdig.net (TOLL FREE)



PEA, Inc.

2430 Rochester Ct. Ste 100
Troy, MI 48063-1872
t: 248.689.9090
f: 248.689.1044
www.peainc.com

FRANKLIN RIDGE HOMES, LLC 30780 ORCHARD LAKE ROAD, SUITE 150 FARMINGTON HILLS, MICHIGAN 48334	
TREE PRESERVATION PLAN	
SILVERBELL POINTE	
PART OF THE SE 1/4 OF SECTION 28 & NE 1/4 SECTION 33, T40N, R10E ORION TOWNSHIP, OAKLAND COUNTY, MICHIGAN	
DES.	JLE
DN.	KAD
SUR.	KTR
P.M.	JBT

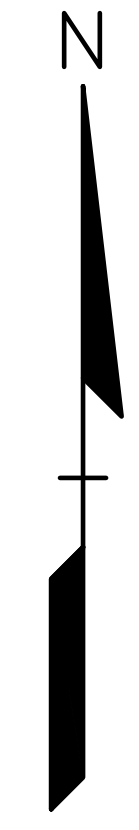
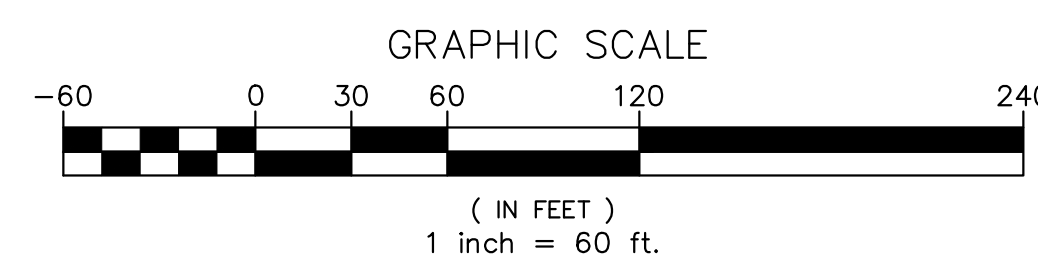
ORIGINAL ISSUE DATE:
MARCH 17, 2020

PEA JOB NO. 2018-150

SCALE: 1" = 60'

DRAWING NUMBER:
T-1.0

XREF: S:\PROJECTS\2018\2018150\DWG\18150-TPOBASE.DWG
XREF: S:\PROJECTS\2018\2018150\DWG\FINAL_PUD\X-BASE-18150.DWG
XREF: S:\PROJECTS\2018\2018150\DWG\FINAL_PUD\X-TLX-18150.DWG



TREE PROTECTION WILL BE ERECTED PRIOR TO START OF CONSTRUCTION ACTIVITIES AND SHALL REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETE

NO PERSON MAY CONDUCT ANY ACTIVITY WITHIN THE DRIP LINE OF ANY TREE DESIGNATED TO REMAIN, INCLUDING, BUT NOT LIMITED TO PLACING SOLVENTS, BUILDING MATERIAL, CONSTRUCTION EQUIPMENT OR SOIL DEPOSITS WITHIN DRIP LINES

GRADE CHANGES MAY NOT OCCUR WITHIN THE DRIP LINE OF PROTECTED TREES

DURING CONSTRUCTION, NO PERSON SHALL ATTACH ANY DEVICE OR WIRE TO ANY REMAINING TREE

ALL UTILITY SERVICE REQUESTS MUST INCLUDE NOTIFICATION TO THE INSTALLER THAT PROTECTED TREES MUST BE AVOIDED. ALL TRENCHING SHALL OCCUR OUTSIDE OF THE PROTECTIVE FENCING

TREES LOCATED ON ADJACENT PROPERTY THAT MAY BE AFFECTED BY CONSTRUCTION ACTIVITIES MUST BE PROTECTED

TREES TO BE PRESERVED SHALL BE IDENTIFIED WITH FLAGGING PRIOR TO THE TREE CLEARING OPERATIONS

PROVIDE FENCE AROUND CRITICAL ROOT ZONE OF TREE

FENCE SHALL BE PLACED IN A CIRCLE WITH A MINIMUM RADIUS OF 1" PER 1" DIAMETER OF THE TREE MEASURED AT 4.5' ABOVE GROUND

KEY:

= EXISTING TREES TO REMAIN WITH TREE PROTECTION FENCE

= EXISTING TREES TO BE REMOVED

1 TREE PROTECTION DETAIL
SCALE: 1" = 3'-0"

PROVIDE TREE PROTECTION FENCE AROUND EXISTING TREES TO REMAIN, TYP.

EXISTING TREE TO REMAIN, TYP.

EXISTING TREE TO BE REMOVED, TYP.

REVISIONS	
NO.	DATE
3	12-04-22
2	10-05-22
1	08-13-22
0	07-11-22

CAUTION!!
THE LOCATION AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS GIVEN FOR THE ACCURACY OF THE INFORMATION. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

THIS DRAWING AND DESIGN ARE THE PROPERTY OF PEA, INC. THEY ARE NOT TO BE REPRODUCED, COPIED, REPRODUCED, OR USED FOR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF PEA, INC. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED. © 2022 PEA, INC.

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION SHALL BE COMPLETED WITHIN THE SPECIFIED TIME FRAME AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL CLAIMS, DAMAGES, LOSSES AND ALLEGED IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPT LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

3 FULL WORKING DAYS BEFORE YOU DIG CALL 811

Know what's below
Call before you dig

MISS Dig System, Inc.
1-800-482-7171 www.missdig.net
1021-0001

PEA, Inc.
2430 Rochester Ct, Ste 100
Troy, MI 48063-1872
t: 248.689.9090
f: 248.689.1044
www.peainc.com

FRANKLIN RIDGE HOMES, LLC	
30180 ORCHARD LAKE ROAD, SUITE 150 FARMINGTON HILLS, MICHIGAN 48334	
TREE PRESERVATION PLAN	
PART OF THE SE 1/4 OF SECTION 28 & NE 1/4 SECTION 33, T40N, R10E ORION TOWNSHIP, OAKLAND COUNTY, MICHIGAN	
DES.	JLE
DN.	KAD
SUR.	KTR
P.M.	JBT

ORIGINAL ISSUE DATE:
MARCH 17, 2020

PEA JOB NO. 2018-150

SCALE: 1" = 60'

DRAWING NUMBER:
T-1.1

*XREF: S:\PROJECTS\2018\2018150\DWG\18150-1-TOPOBASE.DWG
XREF: S:\PROJECTS\2018\2018150\DWG\FINAL_PUD\X-BASE-18150.DWG
XREF: S:\PROJECTS\2018\2018150\DWG\FINAL_PUD\X-TBLK-18150.DWG

TAG NO.	CODE	DBH	COMMON NAME	LATIN NAME	COND	NOTES	CLASS	SAVE / REMOVE	REPLACEMENT
1	SU	9	Sugar Maple	Acer saccharum	Good		WOODLAND	S	-
2	RM	6	Red Maple	Acer rubrum	Fair		WOODLAND	S	-
3	WO	9	White Oak	Quercus alba	Fair		WOODLAND	S	-
4	WO	7	White Oak	Quercus alba	Fair		WOODLAND	S	-
5	BC	9	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
6	E	6	American Elm	Ulmus americana	Poor		INVASIVE	S	-
7	E	9	American Elm	Ulmus americana	Fair		INVASIVE	S	-
8	WO	8	White Oak	Quercus alba	Fair		WOODLAND	S	-
9	E	11	American Elm	Ulmus americana	Fair		INVASIVE	S	-
10	WO	5	White Oak	Quercus alba	Poor		WOODLAND	S	-
11	WO	25	White Oak	Quercus alba	Fair		LANDMARK	R	REPLACE
12	WO	37	White Oak	Quercus alba	Good		LANDMARK	R	REPLACE
13	SU	5	Sugar Maple	Acer saccharum	Good		WOODLAND	R	-
14	BC	11	Wild Black Cherry	Prunus serotina	Poor		WOODLAND	R	-
15	WO	5	White Oak	Quercus alba	Poor		WOODLAND	S	-
16	BW	7	Black Walnut	Juglans nigra	Fair		WOODLAND	S	-
17	BW	7	Juglans nigra	Juglans nigra	Poor		WOODLAND	S	-
18	PO	17	Pin Oak	Quercus palustris	Poor		WOODLAND	S	-
19	BW	4	Black Walnut	Juglans nigra	Fair		WOODLAND	R	-
20	BC	4	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	-
21	BW	7	Black Walnut	Juglans nigra	Poor		WOODLAND	R	-
22	SM	7	Silver Maple	Acer saccharinum	Fair		INVASIVE	R	-
23	SU	9	Sugar Maple	Acer saccharum	Good		WOODLAND	R	REPLACE
24	RO	37	Red Oak	Quercus rubra	Very Poor		LANDMARK	R	-
25	WO	4	White Oak	Quercus alba	Very Poor		WOODLAND	R	-
26	WO	5	White Oak	Quercus alba	Fair		WOODLAND	R	REPLACE
27	WO	9	White Oak	Quercus alba	Fair		WOODLAND	R	REPLACE
28	BL	4	Black Locust	Robinia pseudoacacia	Poor		WOODLAND	R	-
29	BL	7	Black Locust	Robinia pseudoacacia	Fair		WOODLAND	R	REPLACE
30	BL	5	Black Locust	Robinia pseudoacacia	Poor		WOODLAND	R	-
31	WO	8	White Oak	Quercus alba	Fair		WOODLAND	R	REPLACE
32	BO	17	Black Oak	Quercus velutina	Fair		WOODLAND	R	REPLACE
33	WO	9	White Oak	Quercus alba	Fair		WOODLAND	R	REPLACE
34	RO	15	Red Oak	Quercus rubra	Fair		WOODLAND	R	REPLACE
35	BC	5	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
36	RO	17	Red Oak	Quercus rubra	Fair		WOODLAND	R	REPLACE
37	WO	6	White Oak	Quercus alba	Fair		WOODLAND	R	REPLACE
38	BL	14	Black Locust	Quercus velutina	Fair		WOODLAND	R	REPLACE
39	RO	17	Red Oak	Quercus rubra	Fair		WOODLAND	R	REPLACE
40	RO	20	Red Oak	Quercus rubra	Fair		WOODLAND	R	REPLACE
41	WO	17	White Oak	Quercus alba	Fair		WOODLAND	R	REPLACE
42	BL	3	Black Locust	Robinia pseudoacacia	Fair		WOODLAND	R	REPLACE
43	BL	14	Black Locust	Robinia pseudoacacia	Fair		WOODLAND	R	REPLACE
44	BL	7	Black Locust	Robinia pseudoacacia	Fair		WOODLAND	R	REPLACE
45	WP	7	(Eastern) White Pine	Pinus strobus	Fair		WOODLAND	R	REPLACE
46	BL	14	Black Locust	Robinia pseudoacacia	Fair		WOODLAND	R	REPLACE
47	RM	17	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
48	BC	4	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	-
49	BL	13	Black Locust	Robinia pseudoacacia	Poor		WOODLAND	R	-
50	BO	18	Black Oak	Quercus velutina	Fair		WOODLAND	R	REPLACE
51	BL	13	Black Locust	Robinia pseudoacacia	Fair		WOODLAND	R	REPLACE
52	RM	17	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
53	BL	19	Black Locust	Robinia pseudoacacia	Fair		WOODLAND	R	REPLACE
54	BL	5	Black Locust	Robinia pseudoacacia	Fair		WOODLAND	R	-
55	BL	17	Black Locust	Robinia pseudoacacia	Fair		WOODLAND	R	REPLACE
56	GA	4	Green Ash	Fraxinus pennsylvanica	Good	spiky	INVASIVE	R	-
57	GA	6	Green Ash	Fraxinus pennsylvanica	Fair	spiky	INVASIVE	R	-
58	BL	5	Black Locust	Robinia pseudoacacia	Fair		WOODLAND	R	REPLACE
59	BL	10	Black Locust	Robinia pseudoacacia	Fair	x2	WOODLAND	R	REPLACE
60	BC	9	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	REPLACE
61	BL	12	Black Locust	Robinia pseudoacacia	Fair	x2	WOODLAND	R	REPLACE
62	BL	10	Black Locust	Robinia pseudoacacia	Fair		WOODLAND	R	REPLACE
63	GA	8	Green Ash	Fraxinus pennsylvanica	Fair		INVASIVE	R	-
64	BL	14	Black Locust	Robinia pseudoacacia	Fair	x3	WOODLAND	R	REPLACE
65	BL	13	Black Locust	Robinia pseudoacacia	Fair		WOODLAND	R	REPLACE
66	BL	8	Black Locust	Robinia pseudoacacia	Fair		WOODLAND	R	REPLACE
67	BL	7	Black Locust	Robinia pseudoacacia	Fair		WOODLAND	R	REPLACE
68	BL	13	Black Locust	Robinia pseudoacacia	Fair		WOODLAND	R	REPLACE
69	BL	9	Black Locust	Robinia pseudoacacia	Fair		WOODLAND	R	REPLACE
70	BL	8	Black Locust	Robinia pseudoacacia	Fair		WOODLAND	R	REPLACE
71	BL	6	Black Locust	Robinia pseudoacacia	Fair		WOODLAND	R	REPLACE
72	BX	12	Box elder	Acer negundo	Fair		INVASIVE	R	-
73	BL	12	Black Locust	Robinia pseudoacacia	Fair		WOODLAND	R	REPLACE
74	BL	12	Black Locust	Robinia pseudoacacia	Fair		WOODLAND	R	REPLACE
75	BL	9	Black Locust	Robinia pseudoacacia	Fair		WOODLAND	R	REPLACE
76	BL	9	Black Locust	Robinia pseudoacacia	Fair		WOODLAND	R	REPLACE
77	BL	9	Black Locust	Robinia pseudoacacia	Fair		WOODLAND	R	REPLACE
78	BL	9	Black Locust	Robinia pseudoacacia	Fair		WOODLAND	R	REPLACE
79	SU	4	Sugar Maple	Acer saccharum	Fair		WOODLAND	R	-
80	BC	15	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	REPLACE
81	RO	8	Red Oak	Quercus rubra	Fair		WOODLAND	R	REPLACE
82	RO	19	Red Oak	Quercus rubra	Fair	x2	WOODLAND	S	-
83	BX	5	Box elder	Acer negundo	Fair	x2	INVASIVE	S	-
84	WO	13	White Oak	Quercus alba	Fair		WOODLAND	S	-
85	BL	6	Black Locust	Robinia pseudoacacia	Fair		WOODLAND	S	-
86	BX	13	Box elder	Acer negundo	Poor	x2	INVASIVE	S	-
87	BL	9	Black Locust	Robinia pseudoacacia	Fair		WOODLAND	S	-
88	BL	11	Black Locust	Robinia pseudoacacia	Fair		WOODLAND	S	-
89	BL	12	Black Locust	Robinia pseudoacacia	Fair		WOODLAND	S	-
90	BC	9	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
91	RO	15	Red Oak	Quercus rubra	Fair	x2	WOODLAND	S	-
92	BL	7	Black Locust	Robinia pseudoacacia	Fair		WOODLAND	S	-
93	BC	10	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
94	BL	9	Black Locust	Robinia pseudoacacia	Fair		WOODLAND	S	-
95	BL	11	Black Locust	Robinia pseudoacacia	Fair		WOODLAND	S	-
96	BL	12	Black Locust	Robinia pseudoacacia	Fair		WOODLAND	S	-
97	BL	9	Black Locust	Robinia pseudoacacia	Fair		WOODLAND	S	-
98	BL	8	Black Locust	Robinia pseudoacacia	Fair		WOODLAND	S	-
99	BL	8	Black Locust	Robinia pseudoacacia	Fair		WOODLAND	S	-
100	BL	8	Black Locust	Robinia pseudoacacia	Fair		WOODLAND	S	-
101	RO	10	Red Oak	Quercus rubra	Poor		WOODLAND	S	-
102	RO	12	Red Oak	Quercus rubra	Very Poor		WOODLAND	S	-
103	RO	6	Red Oak	Quercus rubra	Very Poor		WOODLAND	S	-
104	RO	14	Red Oak	Quercus rubra	Poor		WOODLAND	S	-
105	E	5	American Elm	Ulmus americana	Poor		INVASIVE	S	-
106	E	10	American Elm	Ulmus americana	Poor		INVASIVE	S	-
107	RO	7	Red Oak	Quercus rubra	Fair		WOODLAND	S	-
108	RM	8	Red Maple	Acer rubrum	Good		WOODLAND	S	-
109	BC	5	Wild Black Cherry	Prunus serotina	Poor		WOODLAND	S	-
110	SM	4	Silver Maple	Acer saccharinum	Fair		INVASIVE	S	-
111	BC	5	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
112	BC	5	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
113	RO	6	Red Oak	Quercus rubra	Fair		WOODLAND	S	-
114	BC	4	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	-
115	GA	9	Green Ash	Fraxinus nigra	Good		INVASIVE	S	-
116	BC	5	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
117	BC	5	Wild Black Cherry	Prunus serotina	Poor		WOODLAND	S	-
118	RO	6	Red Oak	Quercus rubra	Poor		WOODLAND	S	-
119	RO	16	Red Oak	Quercus rubra	Very Poor		WOODLAND	S	-
120	SU	5	American Elm	Ulmus americana	Good		INVASIVE	S	-
121	E	6	American Elm	Ulmus americana	Good		INVASIVE	S	-
122	BL	12	Black Locust	Robinia pseudoacacia	Good		WOODLAND	S	-
123	WO	30	White Oak	Quercus alba	Poor		LANDMARK	S	-
124	RO	30	Red Oak	Quercus rubra	Poor		LANDMARK	R	-
125	BO	30	Black Oak	Quercus velutina	Poor		LANDMARK	R	-
126	BO	34	Black Oak	Quercus velutina	Fair		LANDMARK	R	REPLACE
127	BC	6	Wild Black Cherry	Prunus serotina	Good		WOODLAND	S	-
128	BC	5	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
129	BC	5	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	-
130	SU	12	Sugar Maple	Acer saccharum	Good		WOODLAND	R	REPLACE
131	BC	8	Wild Black Cherry	Prunus serotina	Good		WOODLAND	R	REPLACE
132	RO	10	Red Oak	Quercus rubra	Fair		WOODLAND	R	REPLACE
133	RO	10	Red Oak	Quercus rubra	Fair		WOODLAND	R	REPLACE
134	BC	5	Wild Black Cherry	Prunus serotina	Very Poor		WOODLAND	R	-
135	RO	10	Red Oak	Quercus rubra	Very Poor		WOODLAND	R	-

TAG NO.	CODE	DBH	COMMON NAME	LATIN NAME	COND	NOTES	CLASS	SAVE / REMOVE
136	BL	12	Black Locust	Robinia pseudoacacia	Fair		WOODLAND	R
137	BO	12	Black Oak	Quercus velutina	Very Poor		WOODLAND	S
138	BC	8	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R
139	BC	6	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R
140	SU	5	Sugar Maple	Acer saccharum	Fair		WOODLAND	R
141	BC	5	Wild Black Cherry	Prunus serotina	Poor		WOODLAND	R
142	BC	4	Wild Black Cherry	Prunus serotina	Good		WOODLAND	R
143	SU	5	Sugar Maple	Acer saccharum	Good		WOODLAND	R
144	RO	9	Red Oak	Quercus rubra	Fair		WOODLAND	S
145	RO	18	Red Oak	Quercus rubra	Fair		WOODLAND	S
146	RO	8	Red Oak	Quercus rubra	Fair		WOODLAND	R
147	BO	12	Black Oak	Quercus velutina	Fair		WOODLAND	R
148	SU	5	Sugar Maple	Acer saccharum	Good		WOODLAND	R
149	BL	15	Black Locust	Robinia pseudoacacia	Fair		WOODLAND	R
150	RO	5	Red Oak	Quercus rubra	Fair		WOODLAND	R
151	BL	16	Black Locust	Robinia pseudoacacia	Fair	1	WOODLAND	R
152	BL	12	Black Locust	Robinia pseudoacacia	Good		WOODLAND	R
153	BL	18	Black Locust	Robinia pseudoacacia	Good		WOODLAND	R
154	BL	12	Black Locust	Robinia pseudoacacia	Fair		WOODLAND	R
155	BL	15	Black Locust	Robinia pseudoacacia	Good		WOODLAND	R
156	BL	13	Black Locust	Robinia pseudoacacia	Good		WOODLAND	R
157	BC	18	Wild Black Cherry	Prunus serotina	Poor		WOODLAND	R
158	BL	12	Black Locust	Robinia pseudoacacia	Good		WOODLAND	R
159	BX	5	Box elder	Acer negundo	Poor		INVASIVE	R
160	BX	5	Box elder	Acer negundo	Fair		INVASIVE	R
161	BX	5	Box elder	Acer negundo	Fair		INVASIVE	R
162	BL	10	Black Locust	Robinia pseudoacacia	Poor		WOODLAND	R
163	BL	12	Black Locust	Robinia pseudoacacia	Good	1	WOODLAND	R
164	BL	15	Black Locust	Robinia pseudoacacia	Good		WOODLAND	R
165	BL	10	Black Locust	Robinia pseudoacacia	Good		WOODLAND	R
166	BC	5	Wild Black Cherry	Prunus serotina	Poor		WOODLAND	R
167	BL	15	Black Locust	Robinia pseudoacacia	Fair		WOODLAND	R
168	BX	7	Box elder	Acer negundo	Poor		INVASIVE	R
169	BC	5	Wild Black Cherry	Prunus serotina	Good		WOODLAND	R
170	BL	6	Black Locust	Robinia pseudoacacia	Poor		WOODLAND	R
171	BX	6	Box elder	Acer negundo	Poor		INVASIVE	R
173	BX	4	Box elder	Acer negundo	Fair		INVASIVE	S
174	BL	5	Black Locust	Robinia pseudoacacia	Poor		WOODLAND	R
175	BL	8	Black Locust	Robinia pseudoacacia	Fair		WOODLAND	R
176	BL	12	Black Locust	Robinia pseudoacacia	Poor		WOODLAND	R
177	BL	14	Black Locust	Robinia pseudoacacia	Fair	1	WOODLAND	R
178	BX	4	Box elder	Acer negundo	Poor		INVASIVE	R
179	RM	6	Red Maple	Acer rubrum	Fair		WOODLAND	S
180	BL	16	Black Locust	Robinia pseudoacacia	Good		WOODLAND	S
181	BL	12	Black Locust	Robinia pseudoacacia	Fair		WOODLAND	S
182	BC	5	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R
183	BL	12	Black Locust	Robinia pseudoacacia	Fair		WOODLAND	R
184	BL	13	Black Locust	Robinia pseudoacacia	Fair		WOODLAND	R
185	BL	14	Black Locust	Robinia pseudoacacia	Good		WOODLAND	R
186	BL	8	Black Locust	Robinia pseudoacacia	Good		WOODLAND	R
187	BL	10	Black Locust	Robinia pseudoacacia	Fair	1	WOODLAND	R
188	BL	12	Black Locust	Robinia pseudoacacia	Good	1	WOODLAND	R
189	BL	16	Black Locust	Robinia pseudoacacia	Fair		WOODLAND	S
190	BX	4	Box elder	Acer negundo	Poor		INVASIVE	S
191	BL	16	Black Locust	Robinia pseudoacacia	Good		WOODLAND	S
192	BL	7	Black Locust	Robinia pseudoacacia	Good		WOODLAND	S
193	BX	4	Box elder	Acer negundo	Very Poor		INVASIVE	S
194	WP	9	(Eastern) White Pine	Pinus strobus	Very Poor		WOODLAND	S
195	BX	5	Box elder	Acer negundo	Poor		INVASIVE	S
196	BL	15	Black Locust	Robinia pseudoacacia	Poor		WOODLAND	R
197	BL	14	Black Locust	Robinia pseudoacacia	Good		WOODLAND	R
198	BX	4	Box elder	Acer negundo	Poor		INVASIVE	R
199	BL	27	Black Locust	Robinia pseudoacacia	Good	1	WOODLAND	R
200	WP	11	(Eastern) White Pine	Pinus strobus	Fair		WOODLAND	S
201	BC	7	Wild Black Cherry	Prunus serotina	Very Poor	2	WOODLAND	S
202	BL	9	Black Locust	Robinia pseudoacacia	Poor		WOODLAND	S
202	BL	11	Black Locust	Robinia pseudoacacia	Fair		WOODLAND	S
203	BL	9	Black Locust	Robinia pseudoacacia	Fair	x2	WOODLAND	S
204	WP	19	(Eastern) White Pine	Pinus strobus	Poor		WOODLAND	R
205	WP	16	(Eastern) White Pine	Pinus strobus	Fair		WOODLAND	S
206	BL	6	Black Locust	Robinia pseudoacacia	Fair		WOODLAND	R
207	BL	9	Black Locust	Robinia pseudoacacia	Fair		WOODLAND	R
208	BC	6	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R
209	BL	8	Black Locust	Robinia pseudoacacia	Fair	x2	WOODLAND	R
210	BL	11	Black Locust	Robinia pseudoacacia	Fair		WOODLAND	R
211	RO	9	Red Oak	Quercus rubra	Fair		WOODLAND	R
212	BL	10	Black Locust	Robinia pseudoacacia	Poor	x2	WOODLAND	S
213	BL	10	Black Locust	Robinia pseudoacacia	Poor		WOODLAND	S
214	WP	11	(Eastern) White Pine	Pinus strobus	Fair		WOODLAND	R
215	WP	19	(Eastern) White Pine	Pinus strobus	Poor		WOODLAND	R
216	BL	7	Black Locust	Robinia pseudoacacia	Poor	x2	WOODLAND	R
217	BL	8	Black Locust	Robinia pseudoacacia	Fair		WOODLAND	R
218	BL	9	Black Locust	Robinia pseudoacacia	Fair		WOODLAND	R
219	BL	4	Black Locust	Robinia pseudoacacia	Poor		WOODLAND	R
220	RO	9	Red Oak	Quercus rubra	Poor		WOODLAND	S
221	RO	22	Red Oak	Quercus rubra	Fair		WOODLAND	S
222	WP	10	(Eastern) White Pine	Pinus strobus	Fair		WOODLAND	R
223	RO	12	Red Oak	Quercus rubra	Fair		WOODLAND	S
224	RO	6	Red Oak	Quercus rubra	Poor		WOODLAND	S
225	BL	5	Black Locust	Robinia pseudoacacia	Very Poor		WOODLAND	S
226	WP	8	(Eastern) White Pine	Pinus strobus	Poor		WOODLAND	S
227	BL	8	Black Locust	Robinia pseudoacacia	Poor		WOODLAND	S
228	BL	9	Black Locust	Robinia pseudoacacia	Fair		WOODLAND	S
229	RO	10	Red Oak	Quercus rubra	Fair		WOODLAND	R
230	BL	9	Black Locust	Robinia pseudoacacia	Fair	x1	WOODLAND	R
231	WP	10	(Eastern) White Pine	Pinus strobus	Fair		WOODLAND	R
232	WP	16	(Eastern) White Pine	Pinus strobus	Fair	x2	WOODLAND	S
233	BC	11	Wild Black Cherry	Prunus serotina	Poor		WOODLAND	R
234	RO	12	Red Oak	Quercus rubra	Fair		WOODLAND	S
235	BC	6	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S
236	BC	18	Wild Black Cherry	Prunus serotina	Poor		WOODLAND	R
237	WP	22	(Eastern) White Pine	Pinus strobus	Poor		WOODLAND	S
238	CA	6	Crab Apple	Malus coronaria	Poor		WOODLAND	S
239	RO	15	Red Oak	Quercus rubra	Fair		WOODLAND	S
240	RO	12	Red Oak	Quercus rubra	Poor		WOODLAND	S
241	WP	5	(Eastern) White Pine	Pinus strobus	Fair		WOODLAND	R
242	RO	6	Red Oak	Quercus rubra	Poor		WOODLAND	S
243	RO	10	Red Oak	Quercus rubra	Fair	x1	WOODLAND	S
244	WP	11	(Eastern) White Pine	Pinus strobus	Poor		WOODLAND	S
245	RO	13	Red Oak	Quercus rubra	Fair		WOODLAND	S
246	E	5	American Elm	Ulmus americana	Fair		INVASIVE	S
247	RO	28	Red Oak	Quercus rubra	Poor		UNDEVELOPED	R
248	WP	16	(Eastern) White Pine	Pinus strobus	Poor		WOODLAND	R
249	WP	12	(Eastern) White Pine	Pinus strobus	Fair		WOODLAND	S
250	WP	24	(Eastern) White Pine	Pinus strobus	Fair		WOODLAND	R
251	WP	19	(Eastern) White Pine	Pinus strobus	Fair		WOODLAND	R
252	WP	12	(Eastern) White Pine	Pinus strobus	Poor		WOODLAND	S
253	RO	11	Red Oak	Quercus rubra	Fair		WOODLAND	S
254	WP	24	(Eastern) White Pine	Pinus strobus	Fair		WOODLAND	S
256	WP	8	(Eastern) White Pine	Pinus strobus	Poor		WOODLAND	S
255	WP	11	(Eastern) White Pine	Pinus strobus	Fair		WOODLAND	S
257	WP	6	(Eastern) White Pine	Pinus strobus	Poor		WOODLAND	R
258	SU	8	Sugar Maple	Acer saccharum	Fair		WOODLAND	S
259	WP	8	(Eastern) White Pine	Pinus strobus	Poor		WOODLAND	S
260	WP	16	(Eastern) White Pine	Pinus strobus	Fair		WOODLAND	S
261	WP	10	(Eastern) White Pine	Pinus strobus	Fair		WOODLAND	S
262	E	7	American Elm	Ulmus americana	Fair		INVASIVE	S
263	WP	19	(Eastern) White Pine	Pinus strobus	Fair		WOODLAND	S
264	WP	21	(Eastern) White Pine	Pinus strobus	Fair		WOODLAND	R
265	WP	22	(Eastern) White Pine	Pinus strobus	Fair		WOODLAND	S
266	WP	9	(Eastern) White Pine	Pinus strobus	Poor		WOODLAND	S
267	WP	12	(Eastern) White Pine	Pinus strobus	Fair		WOODLAND	S
268	BX	12	Box elder	Acer negundo	Poor	x1	INVASIVE	R
269	E	5	American Elm	Ulmus americana	Fair		INVASIVE	R
270	RO	5	Red Oak	Quercus rubra	Fair		WOODLAND	R

TAG NO.	CODE	DBH	COMMON NAME	LATIN NAME	COND	NOTES	CLASS	SAVE / REMOVE	REPLACEMENT
406	E	14	American Elm	Ulmus americana	Poor		INVASIVE	S	-
407	BC	26	Wild Black Cherry	Prunus serotina	Good		LANDMARK	R	REPLACE
408	BW	4	Black Walnut	Juglans nigra	Fair		WOODLAND	S	-
409	BX	9	Box elder	Acer negundo	Fair		WOODLAND	R	-
410	BL	4	Black Locust	Robinia pseudoacacia	Very Poor		WOODLAND	S	-
411	BC	4	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
412	BX	9	Box elder	Acer negundo	Very Poor		INVASIVE	S	-
413	BC	8	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	REPLACE
414	BC	13	Wild Black Cherry	Prunus serotina	Good	1	WOODLAND	R	REPLACE
415	BC	16	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	REPLACE
416	WP	25	(Eastern) White Pine	Pinus strobus	Poor		WOODLAND	R	-
417	BL	8	Black Locust	Robinia pseudoacacia	Good		WOODLAND	S	-
418	SU	11	Sugar Maple	Acer saccharum	Good		WOODLAND	S	-
419	BC	6	Wild Black Cherry	Prunus serotina	Good		WOODLAND	R	REPLACE
420	BC	9	Wild Black Cherry	Prunus serotina	Poor		WOODLAND	R	-
421	BC	26	Wild Black Cherry	Prunus serotina	Good	1	WOODLAND	R	REPLACE
422	WP	12	(Eastern) White Pine	Pinus strobus	Poor		WOODLAND	S	-
423	BL	13	Black Locust	Robinia pseudoacacia	Very Poor		WOODLAND	R	-
424	BL	7	Black Locust	Robinia pseudoacacia	Poor		WOODLAND	R	-
425	BL	10	Black Locust	Robinia pseudoacacia	Poor		WOODLAND	R	-
426	WP	28	(Eastern) White Pine	Pinus strobus	Fair		WOODLAND	S	-
427	BL	5	Black Locust	Robinia pseudoacacia	Good		WOODLAND	S	-
428	BL	11	Black Locust	Robinia pseudoacacia	Poor		WOODLAND	S	-
429	BL	26	Black Locust	Robinia pseudoacacia	Very Poor		WOODLAND	S	-
430	BL	10	Black Locust	Robinia pseudoacacia	Fair		WOODLAND	S	-
431	BC	24	Wild Black Cherry	Prunus serotina	Good		LANDMARK	S	-
432	WP	12	(Eastern) White Pine	Pinus strobus	Poor		WOODLAND	S	-
433	BC	13	Wild Black Cherry	Prunus serotina	Good		WOODLAND	R	REPLACE
434	BL	8	Black Locust	Robinia pseudoacacia	Fair		WOODLAND	R	REPLACE
435	BL	8	Black Locust	Robinia pseudoacacia	Good		WOODLAND	R	REPLACE
436	E	10	American Elm	Ulmus americana	Very Poor		INVASIVE	R	-
437	BL	13	Black Locust	Robinia pseudoacacia	Good		WOODLAND	R	REPLACE
438	BL	9	Black Locust	Robinia pseudoacacia	Very Poor		WOODLAND	R	-
439	BL	11	Black Locust	Robinia pseudoacacia	Good		WOODLAND	R	REPLACE
440	BL	4	Black Locust	Robinia pseudoacacia	Very Poor		WOODLAND	R	-
441	BC	10	Wild Black Cherry	Prunus serotina	Very Poor		WOODLAND	R	-
442	BA	5	Black Ash	Fraxinus nigra	Fair		INVASIVE	R	-
443	BL	15	Black Locust	Robinia pseudoacacia	Fair		WOODLAND	R	REPLACE
444	BL	14	Black Locust	Robinia pseudoacacia	Fair		WOODLAND	R	REPLACE
445	BC	12	Wild Black Cherry	Prunus serotina	Poor		WOODLAND	R	-
446	BC	12	Wild Black Cherry	Prunus serotina	Poor		WOODLAND	R	-
447	BL	14	Black Locust	Robinia pseudoacacia	Fair		WOODLAND	R	REPLACE
448	BX	8	Box elder	Acer negundo	Poor	2	INVASIVE	R	-
449	BL	24	Black Locust	Robinia pseudoacacia	Good		WOODLAND	S	-
450	WP	16	(Eastern) White Pine	Pinus strobus	Fair		WOODLAND	R	REPLACE
451	BL	12	Black Locust	Robinia pseudoacacia	Poor		WOODLAND	S	-
452	E	14	American Elm	Ulmus americana	Fair		INVASIVE	R	-
453	BL	12	Black Locust	Robinia pseudoacacia	Fair	1	WOODLAND	S	-
454	BL	10	Black Locust	Robinia pseudoacacia	Fair	1	WOODLAND	S	-
455	E	7	American Elm	Ulmus americana	Fair		INVASIVE	S	-
456	RO	9	Red Oak	Quercus rubra	Good		WOODLAND	S	-
457	BL	10	Black Locust	Robinia pseudoacacia	Fair	1	WOODLAND	R	REPLACE
458	SU	6	Sugar Maple	Acer saccharum	Good		WOODLAND	R	REPLACE
459	BC	5	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	-
460	SU	9	Sugar Maple	Acer saccharum	Fair		WOODLAND	R	-
461	WP	18	(Eastern) White Pine	Pinus strobus	Poor		WOODLAND	R	-
462	BL	18	Black Locust	Robinia pseudoacacia	Fair		WOODLAND	R	REPLACE
463	BL	12	Black Locust	Robinia pseudoacacia	Good		WOODLAND	R	REPLACE
464	BL	13	Black Locust	Robinia pseudoacacia	Poor		WOODLAND	R	-
465	BX	8	Box elder	Acer negundo	Very Poor	3	INVASIVE	R	-
466	BX	8	Box elder	Acer negundo	Very Poor		WOODLAND	R	-
467	BC	12	Wild Black Cherry	Prunus serotina	Good		WOODLAND	R	REPLACE
468	BC	18	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
469	BC	10	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	REPLACE
470	SU	7	Sugar Maple	Acer saccharum	Fair		WOODLAND	R	-
471	BC	8	Wild Black Cherry	Prunus serotina	Poor		WOODLAND	S	-
472	BC	8	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
473	BL	12	Black Locust	Robinia pseudoacacia	Fair		WOODLAND	R	REPLACE
474	SU	6	Sugar Maple	Acer saccharum	Fair		WOODLAND	R	-
475	BL	13	Black Locust	Robinia pseudoacacia	Poor		WOODLAND	S	-
476	BX	10	Box elder	Acer negundo	Poor		INVASIVE	R	-
477	BL	12	Black Locust	Robinia pseudoacacia	Good		WOODLAND	R	REPLACE
478	BL	12	Black Locust	Robinia pseudoacacia	Fair		WOODLAND	R	REPLACE
479	SU	6	Sugar Maple	Acer saccharum	Good		WOODLAND	S	-
480	SU	5	Sugar Maple	Acer saccharum	Fair		WOODLAND	S	-
481	BC	5	Wild Black Cherry	Prunus serotina	Good		WOODLAND	R	-
482	BL	26	Black Locust	Robinia pseudoacacia	Fair		WOODLAND	R	REPLACE
483	BL	12	Black Locust	Robinia pseudoacacia	Good		WOODLAND	R	REPLACE
484	BX	7	Box elder	Acer negundo	Very Poor		INVASIVE	R	-
485	BL	18	Black Locust	Robinia pseudoacacia	Poor		WOODLAND	R	-
486	BL	14	Black Locust	Robinia pseudoacacia	Poor		WOODLAND	R	-
487	BL	18	Black Locust	Robinia pseudoacacia	Fair		WOODLAND	R	REPLACE
488	BL	16	Black Locust	Robinia pseudoacacia	Poor		WOODLAND	R	-
489	BL	12	Black Locust	Robinia pseudoacacia	Fair		WOODLAND	R	REPLACE
490	BX	6	Box elder	Acer negundo	Very Poor		INVASIVE	R	-
491	BL	8	Black Locust	Robinia pseudoacacia	Poor		WOODLAND	R	-
492	BL	12	Black Locust	Robinia pseudoacacia	Fair	1	WOODLAND	R	REPLACE
493	BL	13	Black Locust	Robinia pseudoacacia	Good		WOODLAND	R	REPLACE
494	BL	12	Black Locust	Robinia pseudoacacia	Fair		WOODLAND	R	REPLACE
495	BX	5	Box elder	Acer negundo	Very Poor		INVASIVE	R	-
496	BX	7	Box elder	Acer negundo	Very Poor		INVASIVE	R	-
497	BX	5	Box elder	Acer negundo	Very Poor		INVASIVE	R	-
498	BL	8	Black Locust	Robinia pseudoacacia	Poor		WOODLAND	R	-
499	BL	13	Black Locust	Robinia pseudoacacia	Good		WOODLAND	R	REPLACE
500	BX	7	Box elder	Acer negundo	Very Poor		INVASIVE	R	-
501	CH	8	Domestic Cherry	Prunus avium	Poor	x2	WOODLAND	S	-
502	RO	5	Red Oak	Quercus rubra	Fair		WOODLAND	S	-
503	BC	7	Wild Black Cherry	Prunus serotina	Very Poor		WOODLAND	S	-
504	BC	8	Wild Black Cherry	Prunus serotina	Poor		WOODLAND	S	-
505	BC	6	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
506	CH	5	Domestic Cherry	Prunus avium	Poor		WOODLAND	S	-
507	BX	18	Box elder	Acer negundo	Poor		INVASIVE	S	-
508	BC	6	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	REPLACE
509	RO	7	Red Oak	Quercus rubra	Fair		WOODLAND	R	REPLACE
510	AP	9	Domestic Apple	Malus sylvestris	Poor	x3	WOODLAND	S	-
511	BC	16	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	REPLACE
512	E	7	American Elm	Ulmus americana	Fair		INVASIVE	S	-
513	AP	4	Domestic Apple	Malus sylvestris	Poor		WOODLAND	S	-
514	AP	17	Domestic Apple	Malus sylvestris	Poor		WOODLAND	S	-
515	RO	7	Red Oak	Quercus rubra	Fair		WOODLAND	S	-
516	BC	8	Wild Black Cherry	Prunus serotina	Poor		WOODLAND	S	-
517	RO	8	Red Oak	Quercus rubra	Fair		WOODLAND	S	-
518	RO	9	Red Oak	Quercus rubra	Fair		WOODLAND	S	-
519	RO	8	Red Oak	Quercus rubra	Fair		WOODLAND	R	REPLACE
520	AP	4	Domestic Apple	Malus sylvestris	Poor		WOODLAND	S	-
521	AP	27	Domestic Apple	Malus sylvestris	Poor		WOODLAND	S	-
522	E	7	American Elm	Ulmus americana	Fair		INVASIVE	S	-
523	BC	13	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
524	E	12	American Elm	Ulmus americana	Fair		INVASIVE	S	-
525	RO	8	Red Oak	Quercus rubra	Fair		WOODLAND	R	REPLACE
526	RO	7	Red Oak	Quercus rubra	Fair	x3	WOODLAND	R	REPLACE
527	RO	9	Red Oak	Quercus rubra	Fair		WOODLAND	R	REPLACE
528	WP	21	(Eastern) White Pine	Pinus strobus	Poor		WOODLAND	R	-
529	RO	9	Red Oak	Quercus rubra	Fair		WOODLAND	R	REPLACE
530	WO	9	White Oak	Quercus alba	Fair		WOODLAND	R	REPLACE
531	SU	9	Sugar Maple	Acer saccharum	Fair		WOODLAND	R	REPLACE
532	E	11	American Elm	Ulmus americana	Fair		INVASIVE	S	-
533	RO	13	Red Oak	Quercus rubra	Fair		WOODLAND	S	-
534	E	7	American Elm	Ulmus americana	Fair		INVASIVE	S	-
535	SU	4	Sugar Maple	Acer saccharum	Fair		WOODLAND	S	-
536	BC	8	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
537	BC	11	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
538	SU	5	Sugar Maple	Acer saccharum	Fair		WOODLAND	S	-
539	WP	18	(Eastern) White Pine	Pinus strobus	Poor		WOODLAND	S	-

A#	CODE	DBH	COMMON NAME	LATIN NAME	COND	NOTES	CLASS	SAVE / REMOVE	REPLACEMENT
540	BC	17	Wild Black Cherry	Prunus serotina	Fair	x2	WOODLAND	S	-
541	E	6	American Elm	Ulmus americana	Fair		INVASIVE	S	-
542	BC	11	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
543	BC	8	Wild Black Cherry	Prunus serotina	Poor		WOODLAND	R	-
544	SU	8	Sugar Maple	Acer saccharum	Fair		WOODLAND	R	REPLACE
545	SU	8	Sugar Maple	Acer saccharum	Fair		WOODLAND	S	-
546	RO	8	Red Oak	Quercus rubra	Fair		WOODLAND	R	REPLACE
547	SU	6	Sugar Maple	Acer saccharum	Fair		WOODLAND	S	-
548	BC	8	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
549	SU	5	Sugar Maple	Acer saccharum	Fair		WOODLAND	S	-
550	BC	7	Wild Black Cherry	Prunus serotina	Poor		WOODLAND	S	-
551	BC	12	Wild Black Cherry	Prunus serotina	Poor		WOODLAND	R	-
552	SU	7	Sugar Maple	Acer saccharum	Fair		WOODLAND	R	REPLACE
553	SU	9	Sugar Maple	Acer saccharum	Fair		WOODLAND	R	REPLACE
554	BC	9	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	REPLACE
555	SU	8	Sugar Maple	Acer saccharum	Fair		WOODLAND	R	REPLACE
556	BC	8	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	REPLACE
557	SU	8	Sugar Maple	Acer saccharum	Fair		WOODLAND	R	REPLACE
558	E	4	American Elm	Ulmus americana	Fair		INVASIVE	R	-
559	SU	9	Sugar Maple	Acer saccharum	Fair		WOODLAND	R	REPLACE
560	BC	29	Wild Black Cherry	Prunus serotina	Poor		LANDMARK	R	-
561	BC	9	Wild Black Cherry	Prunus serotina	Fair	x1	WOODLAND	R	REPLACE
562	E	11	American Elm	Ulmus americana	Fair	x1	INVASIVE	R	REPLACE
563	SU	6	Sugar Maple	Acer saccharum	Fair		WOODLAND	R	-
564	BC	9	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	REPLACE
565	RO	10	Red Oak	Quercus rubra	Fair		WOODLAND	R	REPLACE
566	BC	8	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	REPLACE
567	BC	5	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	-
568	BC	11	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	REPLACE
569	BC	25	Wild Black Cherry	Prunus serotina	Fair		LANDMARK	R	REPLACE
570	SU	5	Sugar Maple	Acer saccharum	Fair		WOODLAND	R	-
571	SU	4	Sugar Maple	Acer saccharum	Fair		WOODLAND	R	-
572	BL	4	Black Locust	Robinia pseudoacacia	Fair		WOODLAND	R	-
573	SU	5	Sugar Maple	Acer saccharum	Fair		WOODLAND	R	-
574	SU	9	Sugar Maple	Acer saccharum	Fair		WOODLAND	R	REPLACE
575	SU	8	Sugar Maple	Acer saccharum	Fair		WOODLAND	R	REPLACE
576	WP	27	(Eastern) White Pine	Pinus strobus	Poor		WOODLAND	R	-
577	BC	6	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	REPLACE
578	BC	5	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	-
579	SU	11	Sugar Maple	Acer saccharum	Fair	x2	WOODLAND	S	-
580	BC	13	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
581	E	8	American Elm	Ulmus americana	Fair		INVASIVE	S	-
582	BC	7	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
583	BC	24	Wild Black Cherry	Prunus serotina	Fair		LANDMARK	R	-
584	BC	14	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
585	SU	9	Sugar Maple	Acer saccharum	Fair		WOODLAND	R	REPLACE
586	BC	6	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
587	SU	5	Sugar Maple	Acer saccharum	Fair		WOODLAND	S	-
588	SU	19	Sugar Maple	Acer saccharum	Fair		WOODLAND	R	REPLACE
589	E	9	American Elm	Ulmus americana	Fair		INVASIVE	R	REPLACE
590	BL	16	Black Locust	Robinia pseudoacacia	Fair		WOODLAND	R	REPLACE
592	BL	9	Black Locust	Robinia pseudoacacia	Fair		WOODLAND	S	-
591	SU	5	Sugar Maple	Acer saccharum	Fair		WOODLAND	R	-
593	BL	9	Black Locust	Robinia pseudoacacia	Fair		WOODLAND	S	-
594	BL	17	Black Locust	Robinia pseudoacacia	Fair		WOODLAND	R	REPLACE
595	SU	4	Sugar Maple	Acer saccharum	Fair		WOODLAND	S	-
596	BL	14	Black Locust	Robinia pseudoacacia	Fair		WOODLAND	R	REPLACE
597	SM	4	Silver Maple	Acer saccharinum	Fair		INVASIVE	S	-
598	E	14	American Elm	Ulmus americana	Fair		INVASIVE	R	-
599	BC	8	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	REPLACE
600	SU	5	Sugar Maple	Acer saccharum	Fair		WOODLAND	R	-
601	DX	5	Box elder	Acer negundo	Very Poor		INVASIVE	R	-
602	BL	2	Black Locust	Robinia pseudoacacia	Fair		WOODLAND	R	REPLACE
603	BL	15	Black Locust	Robinia pseudoacacia	Good		WOODLAND	R	REPLACE
604	DX	5	Box elder	Acer negundo	Very Poor		INVASIVE	R	-
605	BL	12	Black Locust	Robinia pseudoacacia	Fair		WOODLAND	R	REPLACE
606	BL	6	Black Locust	Robinia pseudoacacia	Poor		WOODLAND	R	-
607	BA	7	Black Ash	Fraxinus nigra	Fair		INVASIVE	R	-
608	BL	8	Black Locust	Robinia pseudoacacia	Good		WOODLAND	R	REPLACE
609	DX	6	Box elder	Acer negundo	Very Poor		INVASIVE	R	-
610	BL	17	Black Locust	Robinia pseudoacacia	Good		WOODLAND	R	REPLACE
611	DX	5	Box elder	Acer negundo	Very Poor		INVASIVE	R	-
612	BL	12	Black Locust	Robinia pseudoacacia	Good		WOODLAND	R	REPLACE
613	BL	10	Black Locust	Robinia pseudoacacia	Poor		WOODLAND	R	-
614	BL	14	Black Locust	Robinia pseudoacacia	Good		WOODLAND	R	REPLACE
615	BC	6	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
616	DX	6	Box elder	Acer negundo	Very Poor		INVASIVE	R	-
617	BL	24	Black Locust	Robinia pseudoacacia	Fair		WOODLAND	R	REPLACE
618	BL	14	Black Locust	Robinia pseudoacacia	Fair		WOODLAND	R	REPLACE
619	BC	7	Wild Black Cherry	Prunus serotina	Good		WOODLAND	R	REPLACE
620	BL	14	Black Locust	Robinia pseudoacacia	Fair		WOODLAND	R	REPLACE
621	BL	13	Black Locust	Robinia pseudoacacia	Poor		WOODLAND	R	-
622	BL	15	Black Locust	Robinia pseudoacacia	Poor		WOODLAND	R	-
623	BL	15	Black Locust	Robinia pseudoacacia	Fair		WOODLAND	R	REPLACE
624	BL	15	Black Locust	Robinia pseudoacacia	Fair		WOODLAND	R	REPLACE
625	BL	18	Black Locust	Robinia pseudoacacia	Good		WOODLAND	R	REPLACE
626	DX	8	Box elder	Acer negundo	Very Poor		INVASIVE	R	-
627	BL	13	Black Locust	Robinia pseudoacacia	Fair		WOODLAND	R	REPLACE
629	BL	16	Black Locust	Robinia pseudoacacia	Good		WOODLAND	R	REPLACE
629	BL	16	Black Locust	Robinia pseudoacacia	Good		WOODLAND	R	REPLACE
630	DX	6	Box elder	Acer negundo	Very Poor		INVASIVE	R	-
631	BL	17	Black Locust	Robinia pseudoacacia	Fair		WOODLAND	R	REPLACE
632	BL	15	Black Locust	Robinia pseudoacacia	Fair		WOODLAND	S	-
633	BC	8	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	REPLACE
634	BL	13	Black Locust	Robinia pseudoacacia	Fair		WOODLAND	R	-
635	DX	6	Box elder	Acer negundo	Very Poor		INVASIVE	S	-
636	BL	15	Black Locust	Robinia pseudoacacia	Fair		WOODLAND	S	-
637	DX	6	Box elder	Acer negundo	Very Poor		INVASIVE	R	-
638	BC	13	Wild Black Cherry	Prunus serotina	Good		WOODLAND	R	REPLACE
639	BL	7	Black Locust	Robinia pseudoacacia	Poor		WOODLAND	R	-
640	BL	14	Black Locust	Robinia pseudoacacia	Fair		WOODLAND	R	REPLACE
641	BL	15	Black Locust	Robinia pseudoacacia	Poor		WOODLAND	R	-
642	DX	6	Box elder	Acer negundo	Very Poor		INVASIVE	R	-
643	SM	6	Silver Maple	Acer saccharinum	Poor		WOODLAND	R	-
644	DX	6	Box elder	Acer negundo	Very Poor		INVASIVE	S	-
645	BC	4	Wild Black Cherry	Prunus serotina	Poor		WOODLAND	R	-
646	BL	4	Black Locust	Robinia pseudoacacia	Very Poor		WOODLAND	S	-
647	DX	6	Box elder	Acer negundo	Very Poor		INVASIVE	R	-
648	SU	6	Sugar Maple	Acer saccharum	Good		WOODLAND	S	-
649	BC	16	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
650	BL	11	Black Locust	Robinia pseudoacacia	Good		WOODLAND	R	REPLACE
651	E	9	American Elm	Ulmus americana	Fair		INVASIVE	R	-
652	BC	5	Wild Black Cherry	Prunus serotina	Poor		WOODLAND	R	REPLACE
653	BC	10	Wild Black Cherry	Prunus serotina	Good		WOODLAND	R	REPLACE
654	BC	16	Wild Black Cherry	Prunus serotina	Good		WOODLAND	R	REPLACE
655	SU	4	Sugar Maple	Acer saccharum	Poor		WOODLAND	R	-
656	E	6	American Elm	Ulmus americana	Very Poor		INVASIVE	R	-
657	BC	18	Wild Black Cherry	Prunus serotina	Good		WOODLAND	R	REPLACE
658	BL	11	Black Locust	Robinia pseudoacacia	Fair		WOODLAND	R	REPLACE
659	SU	7	Sugar Maple	Acer saccharum	Good		WOODLAND	S	-
660	BL	15	Black Locust	Robinia pseudoacacia	Poor		WOODLAND	R	-
661	BC	6	Wild Black Cherry	Prunus serotina	Very Poor		WOODLAND	S	-
662	BL	14	Black Locust	Robinia pseudoacacia	Fair		WOODLAND	S	-
663	DX	5	Box elder	Acer negundo	Very Poor		INVASIVE	S	-
664	DX	6	Box elder	Acer negundo	Very Poor		INVASIVE	S	-
665	BL	20	Black Locust	Robinia pseudoacacia	Poor		WOODLAND	S	-
666	BL	13	Black Locust	Robinia pseudoacacia	Good		WOODLAND	R	-
667	E	13	American Elm	Ulmus americana	Poor		INVASIVE	R	-
668	BC	14	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	REPLACE
669	NM	11	Newway Maple	Acer platanoides	Good		WOODLAND	S	-
670	BC	11	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
671	SU	6	Sugar Maple	Acer saccharum	Fair		WOODLAND	S	-
672	BC	6	Wild Black Cherry	Prunus serotina	Poor		WOODLAND	S	-
673	BC	7	Wild Black Cherry	Prunus serotina	Poor		WOODLAND	R	-
674	NM	7	Newway Maple	Acer platanoides	Fair		WOODLAND	S	-
675	SU	8	Sugar Maple	Acer saccharum	Fair		WOODLAND	S	-

TAG NO.	CODE	DBH	COMMON NAME	LATIN NAME	COND	NOTES	CLASS	SAVE / REMOVE	REPLACEMENT
811	BX	4	Box elder	Acer negundo	Poor		INVASIVE	S	-
812	BL	7	Black Locust	Robinia pseudoacacia	Poor		WOODLAND	S	-
813	E	7	American Elm	Ulmus americana	Poor		INVASIVE	R	-
814	BC	10	Wild Black Cherry	Prunus serotina	Very Poor		WOODLAND	S	-
815	BC	8	Wild Black Cherry	Prunus serotina	Poor		WOODLAND	R	-
816	BC	5	Wild Black Cherry	Prunus serotina	Poor		WOODLAND	R	-
817	BL	10	Black Locust	Robinia pseudoacacia	Poor		WOODLAND	R	-
818	BL	10	Black Locust	Robinia pseudoacacia	Poor		WOODLAND	R	-
819	BL	18	Black Locust	Robinia pseudoacacia	Fair		WOODLAND	R	REPLACE
820	BL	13	Black Locust	Robinia pseudoacacia	Fair		WOODLAND	R	REPLACE
821	BL	16	Black Locust	Robinia pseudoacacia	Fair		WOODLAND	R	REPLACE
822	BW	-	Black Walnut	Juglans nigra	Good		LANDMARK	R	REPLACE
823	BL	14	Black Locust	Robinia pseudoacacia	Fair		WOODLAND	R	REPLACE
824	E	6	American Elm	Ulmus americana	Poor		INVASIVE	R	-
825	BL	11	Black Locust	Robinia pseudoacacia	Poor		WOODLAND	R	-
826	BL	14	Black Locust	Robinia pseudoacacia	Fair		WOODLAND	R	REPLACE
827	RM	5	Red Maple	Acer rubrum	Fair		WOODLAND	R	-
828	BO	8	Black Oak	Quercus velutina	Poor		WOODLAND	R	-
829	BWW	9	Black Willow	Salix nigra	Poor		INVASIVE	R	-
830	BC	11	Wild Black Cherry	Prunus serotina	Good		WOODLAND	S	REPLACE
831	BC	10	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
832	BC	10	Wild Black Cherry	Prunus serotina	Good		WOODLAND	S	-
833	BC	7	Wild Black Cherry	Prunus serotina	Very Poor		WOODLAND	S	-
835	BC	5	Wild Black Cherry	Prunus serotina	Very Poor		WOODLAND	S	-
836	BC	8	Wild Black Cherry	Prunus serotina	Poor		WOODLAND	S	-
837	BC	8	Wild Black Cherry	Prunus serotina	Poor		WOODLAND	S	-
838	BO	36	Black Oak	Quercus velutina	Very Poor		LANDMARK	S	-
839	BC	5	Wild Black Cherry	Prunus serotina	Poor		WOODLAND	S	-
840	SU	4	Sugar Maple	Acer saccharum	Fair		WOODLAND	S	-
841	BC	9	Wild Black Cherry	Prunus serotina	Good		WOODLAND	S	-
842	BC	4	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
843	BC	10	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
844	BC	10	Wild Black Cherry	Prunus serotina	Good		WOODLAND	S	-
845	BC	7	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
846	BO	28	Black Oak	Quercus velutina	Fair		LANDMARK	S	-
847	BC	6	Wild Black Cherry	Prunus serotina	Poor		WOODLAND	S	-
834	SU	9	Sugar Maple	Acer saccharum	Good		WOODLAND	S	-
848	BO	26	Black Oak	Quercus velutina	Fair		LANDMARK	S	-
849	NM	4	Norway Maple	Acer platanoides	Good		WOODLAND	S	-
850	BC	9	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
851	BC	8	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
852	RM	16	Red Maple	Acer rubrum	Good		WOODLAND	R	-
853	BC	6	Wild Black Cherry	Prunus serotina	Poor		WOODLAND	R	-
854	BC	6	Wild Black Cherry	Prunus serotina	Poor		WOODLAND	R	-
855	BC	9	Wild Black Cherry	Prunus serotina	Good		WOODLAND	R	REPLACE
856	BC	12	Wild Black Cherry	Prunus serotina	Good		WOODLAND	R	REPLACE
857	BC	9	Wild Black Cherry	Prunus serotina	Good		WOODLAND	S	-
858	BC	10	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	REPLACE
859	BC	4	Wild Black Cherry	Prunus serotina	Poor		WOODLAND	R	-
860	BC	10	Wild Black Cherry	Prunus serotina	Good		WOODLAND	R	REPLACE
861	BC	7	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
862	WO	19	White Oak	Quercus alba	Poor		WOODLAND	S	-
863	NM	8	Norway Maple	Acer platanoides	Fair		WOODLAND	S	-
864	NM	11	Norway Maple	Acer platanoides	Fair		WOODLAND	S	-
865	RM	8	Red Maple	Acer rubrum	Fair		WOODLAND	S	-
866	SS	8	Sassafras	Sassafras albidum	Fair		WOODLAND	S	-
867	RO	29	Red Oak	Quercus rubra	Poor		LANDMARK	S	-
868	BC	9	Wild Black Cherry	Prunus serotina	Poor		WOODLAND	S	REPLACE
869	NM	10	Norway Maple	Acer platanoides	Good		WOODLAND	R	REPLACE
870	NM	4	Norway Maple	Acer platanoides	Good		WOODLAND	R	-
871	BC	9	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
872	BC	4	Wild Black Cherry	Prunus serotina	Poor		WOODLAND	S	-
873	BO	26	Black Oak	Quercus velutina	Fair		LANDMARK	S	-
874	E	7	American Elm	Ulmus americana	Fair		INVASIVE	S	-
875	SM	7	Silver Maple	Acer saccharinum	Very Poor		INVASIVE	S	-
876	RM	4	Red Maple	Acer rubrum	Fair		WOODLAND	S	-
877	RM	4	Red Maple	Acer rubrum	Fair		WOODLAND	S	-
878	SM	10	Silver Maple	Acer saccharinum	Very Poor		INVASIVE	S	-
879	WO	30	White Oak	Quercus alba	Very Poor		LANDMARK	S	-
880	RM	10	Red Maple	Acer rubrum	Fair		WOODLAND	S	-
881	E	13	American Elm	Ulmus americana	Fair		INVASIVE	S	-
882	E	13	American Elm	Ulmus americana	Fair		INVASIVE	S	-
883	RM	18	Red Maple	Acer rubrum	Fair		WOODLAND	S	-
884	SU	8	Sugar Maple	Acer saccharum	Fair		WOODLAND	S	-
885	RM	11	Red Maple	Acer rubrum	Fair		WOODLAND	S	-
886	BC	8	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	REPLACE
887	BC	12	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	-
888	BC	5	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	-
889	NM	7	Norway Maple	Acer platanoides	Fair		WOODLAND	S	-
890	RM	11	Red Maple	Acer rubrum	Very Poor		WOODLAND	S	-
891	BC	10	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
892	BC	8	Wild Black Cherry	Prunus serotina	Poor		WOODLAND	S	-
893	BC	10	Wild Black Cherry	Prunus serotina	Very Poor		WOODLAND	S	-
894	NM	11	Norway Maple	Acer platanoides	Good		WOODLAND	S	-
895	WO	44	White Oak	Quercus alba	Fair		LANDMARK	S	-
896	RM	10	Red Maple	Acer rubrum	Good		WOODLAND	S	-
897	BC	7	Wild Black Cherry	Prunus serotina	Poor		WOODLAND	R	-
898	WO	26	White Oak	Quercus alba	Very Poor		LANDMARK	S	-
899	NM	7	Norway Maple	Acer platanoides	Good		WOODLAND	S	-
900	BO	34	Black Oak	Quercus velutina	Fair		LANDMARK	S	-
901	BC	4	Wild Black Cherry	Prunus serotina	Poor		WOODLAND	R	REPLACE
902	RM	7	Red Maple	Acer rubrum	Fair	x1	WOODLAND	R	REPLACE
903	BC	9	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
904	RM	8	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
905	RM	8	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
906	E	5	American Elm	Ulmus americana	Poor		INVASIVE	S	-
907	RM	9	Red Maple	Acer rubrum	Fair	x1	WOODLAND	S	-
908	E	9	American Elm	Ulmus americana	Fair		INVASIVE	S	-
909	BC	8	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	REPLACE
910	RM	5	Red Maple	Acer rubrum	Fair		WOODLAND	R	-
911	E	11	American Elm	Ulmus americana	Fair		INVASIVE	R	-
912	SM	9	Silver Maple	Acer saccharinum	Fair		INVASIVE	R	-
913	RM	5	Red Maple	Acer rubrum	Fair		WOODLAND	R	-
914	BC	5	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	REPLACE
915	RM	9	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
916	BC	12	Wild Black Cherry	Prunus serotina	Very Poor		WOODLAND	R	-
917	RM	13	Red Maple	Acer rubrum	Good		WOODLAND	R	REPLACE
918	RM	8	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
919	RM	8	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
920	RM	4	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
921	RM	9	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
922	E	7	American Elm	Ulmus americana	Fair		INVASIVE	S	-
923	RM	4	Red Maple	Acer rubrum	Fair		WOODLAND	S	-
924	RM	8	Red Maple	Acer rubrum	Fair		WOODLAND	S	-
925	SU	18	Sugar Maple	Acer saccharum	Poor		WOODLAND	R	-
926	RM	6	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
927	RM	6	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
928	BC	4	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	-
929	RM	5	Red Maple	Acer rubrum	Poor		WOODLAND	S	-
930	RM	6	Red Maple	Acer rubrum	Fair		WOODLAND	S	-
931	RM	6	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
932	RM	4	Red Maple	Acer rubrum	Fair		WOODLAND	S	-
933	BC	14	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	-
934	E	5	American Elm	Ulmus americana	Fair		INVASIVE	R	-
935	E	8	American Elm	Ulmus americana	Fair		INVASIVE	R	-
936	RM	11	Red Maple	Acer rubrum	Fair	x1	WOODLAND	R	REPLACE
937	RM	9	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
938	E	9	American Elm	Ulmus americana	Very Poor	x1	INVASIVE	R	-
939	BC	14	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	REPLACE
940	RM	4	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
941	RM	6	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
942	RM	6	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
943	RM	8	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
944	E	4	American Elm	Ulmus americana	Fair		INVASIVE	R	-
945	NM	10	Norway Maple	Acer platanoides	Fair		WOODLAND	R	REPLACE

AG	CODE	DBH	COMMON NAME	LATIN NAME	COND	NOTES	CLASS	SAVE / REMOVE	REPLACEMENT
946	RM	9	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
947	BC	12	Wild Black Cherry	Prunus serotina	Poor		WOODLAND	R	-
948	RM	6	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
949	RM	5	Red Maple	Acer rubrum	Fair		WOODLAND	R	-
950	RM	10	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
951	WP	23	(Eastern) White Pine	Pinus strobus	Fair		WOODLAND	R	REPLACE
952	BC	12	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
953	BC	5	Wild Black Cherry	Prunus serotina	Poor		WOODLAND	S	-
954	BC	12	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	-
955	BC	10	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	REPLACE
956	NM	14	Norway Maple	Acer platanoides	Fair		WOODLAND	S	-
957	RM	12	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
958	E	8	American Elm	Ulmus americana	Fair		INVASIVE	S	-
959	RM	6	Red Maple	Acer rubrum	Fair		WOODLAND	S	-
960	RM	4	Red Maple	Acer rubrum	Fair		WOODLAND	S	-
961	RO	12	Red Oak	Quercus rubra	Fair		WOODLAND	R	REPLACE
962	RM	9	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
963	RM	6	Red Maple	Acer rubrum	Fair		WOODLAND	S	-
964	RO	8	Red Oak	Quercus rubra	Fair		WOODLAND	S	-
965	BC	21	Wild Black Cherry	Prunus serotina	Poor		WOODLAND	S	-
966	BC	10	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
967	RM	7	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
968	RM	10	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
969	RM	9	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
970	BC	4	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	-
971	RM	9	Red Maple	Acer rubrum	Good		WOODLAND	S	-
972	BC	8	Wild Black Cherry	Prunus serotina	Poor		WOODLAND	R	-
973	BC	10	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
974	BC	5	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	-
975	BC	8	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	REPLACE
976	BC	9	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	REPLACE
977	BC	10	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	REPLACE
978	RM	10	Red Maple	Acer rubrum	Fair		WOODLAND	S	-
979	BC	5	Wild Black Cherry	Prunus serotina	Poor		WOODLAND	S	-
980	RM	8	Red Maple	Acer rubrum	Fair		WOODLAND	S	-
981	E	8	American Elm	Ulmus americana	Fair		INVASIVE	R	-
982	BC	6	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	REPLACE
983	RM	9	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
984	BC	12	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	REPLACE
985	RM	6	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
986	RM	9	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
987	E	6	American Elm	Ulmus americana	Fair		INVASIVE	R	-
988	E	6	American Elm	Ulmus americana	Fair		INVASIVE	R	-
989	RM	6	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
990	BC	9	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	REPLACE
991	WP	26	(Eastern) White Pine	Pinus strobus	Fair		WOODLAND	R	REPLACE
992	E	8	American Elm	Ulmus americana	Poor		INVASIVE	R	-
993	E	15	American Elm	Ulmus americana	Fair		INVASIVE	S	-
994	BC	7	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
995	E	6	American Elm	Ulmus americana	Fair		INVASIVE	S	-
996	AP	5	Domestic Apple	Malus sylvestris	Fair		WOODLAND	S	-
997	RM	7	Red Maple	Acer rubrum	Fair		WOODLAND	S	-
998	RM	7	Red Maple	Acer rubrum	Fair		WOODLAND	S	-
999	RM	9	Red Maple	Acer rubrum	Fair		WOODLAND	S	-
1000	RM	11	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
1001	WP	26	(Eastern) White Pine	Pinus strobus	Fair		WOODLAND	R	REPLACE
1002	WP	19	(Eastern) White Pine	Pinus strobus	Fair		WOODLAND	R	REPLACE
1003	BC	12	Wild Black Cherry	Prunus serotina	Poor		WOODLAND	R	-
1004	BC	7	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
1005	E	9	American Elm	Ulmus americana	Fair		INVASIVE	R	-
1006	RM	4	Red Maple	Acer rubrum	Fair		WOODLAND	R	-
1007	RM	10	Red Maple	Acer rubrum	Fair		WOODLAND	S	-
1008	RM	9	Red Maple	Acer rubrum	Fair		WOODLAND	S	-
1009	BC	8	Wild Black Cherry	Prunus serotina	Poor		WOODLAND	R	-
1010	AP	5	Domestic Apple	Malus sylvestris	Fair		WOODLAND	S	-
1011	BC	4	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	-
1012	BC	9	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	REPLACE
1013	BC	6	Wild Black Cherry	Prunus serotina	Poor		WOODLAND	R	-
1014	BC	4	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	-
1015	BC	8	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	REPLACE
1016	AP	5	Domestic Apple	Malus sylvestris	Fair	x4	WOODLAND	S	-
1017	E	10	American Elm	Ulmus americana	Fair		INVASIVE	S	-
1018	E	18	American Elm	Ulmus americana	Fair		INVASIVE	S	-
1019	AP	7	Domestic Apple	Malus sylvestris	Poor		WOODLAND	R	-
1020	RM	6	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
1021	SS	6	Sassafras	Sassafras albidum	Fair		WOODLAND	S	-
1022	BC	12	Wild Black Cherry	Prunus serotina	Poor		WOODLAND	R	REPLACE
1023	RM	9	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
1024	RM	9	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
1025	WP	4	(Eastern) White Pine	Pinus strobus	Poor		WOODLAND	R	-
1026	RM	7	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
1027	E	9	American Elm	Ulmus americana	Fair		INVASIVE	S	-
1028	BC	8	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	REPLACE
1029	RM	7	Red Maple	Acer rubrum	Fair	x1	WOODLAND	R	REPLACE
1030	E	7	American Elm	Ulmus americana	Fair		INVASIVE	R	REPLACE
1031	RM	10	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
1032	RM	5	Red Maple	Acer rubrum	Fair		WOODLAND	R	-
1033	BC	10	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	REPLACE
1034	RM	10	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
1035	E	11	American Elm	Ulmus americana	Fair		INVASIVE	R	-
1036	SS	6	Sassafras	Sassafras albidum	Fair		WOODLAND	R	-
1037	RM	6	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
1038	RM	6	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
1039	RM	11	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
1040	SS	9	Sassafras	Sassafras albidum	Poor		WOODLAND	R	-
1041	RM	8	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
1042	BC	10	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	REPLACE
1043	BC	5	Wild Black Cherry	Acer rubrum	Fair		WOODLAND	R	REPLACE
1044	BC	5	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
1046	RM	10	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
1047	RM	9	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
1048	RM	9	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
1049	RM	6	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
1050	RM	2	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
1051	BC	11	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
1052	RM	7	Red Maple	Acer rubrum	Fair		WOODLAND	S	-
1053	RM	12	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
1054	BC	7	Wild Black Cherry	Prunus serotina	Poor		WOODLAND	R	-
1055	BC	9	Wild Black Cherry	Prunus serotina	Fair	x1	WOODLAND	R	REPLACE
1056	RM	9	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
1057	RM	9	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
1058	RM	8	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
1059	RM	9	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
1060	RO	15	Red Oak	Quercus rubra	Fair		WOODLAND	S	-
1061	RM	9	Red Maple	Acer rubrum	Fair		WOODLAND	S	-
1062	RO	10	Red Oak	Quercus rubra	Fair		WOODLAND	S	-
1063	RM	8	Red Maple	Acer rubrum	Fair		WOODLAND	S	REPLACE
1064	BC	5	Wild Black Cherry	Prunus serotina	Poor		WOODLAND	S	-
1066	RM	12	Red Maple	Acer rubrum	Fair	x1	WOODLAND	S	-
1067	RM	10	Red Maple	Acer rubrum	Fair	x1	WOODLAND	S	-
1068	BC	9	Wild Black Cherry	Prunus serotina	Fair	x1	WOODLAND	S	-
1069	BC	7	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	REPLACE
1069	BC	9	Wild Black Cherry	Prunus serotina	Poor		WOODLAND	R	-
1070	RO	2	Red Oak	Quercus rubra	Fair		WOODLAND	R	-
1071	BC	12	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	REPLACE
1072	RM	14	Red Maple	Acer rubrum	Fair	x1	WOODLAND	R	-
1073	RM	9	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
1074	RM	8	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
1075	RM	8	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
1076	E	4	American Elm	Ulmus americana	Fair		INVASIVE	R	-
1077	RO	4	Red Oak	Quercus rubra	Fair		WOODLAND	R	REPLACE
1078	E	4	American Elm	Ulmus americana	Fair		INVASIVE	R	-
1079	BC	4	Wild Black Cherry	Prunus serotina	Poor		WOODLAND	R	-
1080	RM	9	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE

TAG NO.	CODE	DBH	COMMON NAME	LATIN NAME	COND	NOTES	CLASS	SAVE / REMOVE	REPLACEMENT
1216	BC	12	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	REPLACE
1217	BC	12	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	REPLACE
1218	RO	9	Red Oak	Quercus rubra	Fair		WOODLAND	R	REPLACE
1219	RM	8	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
1220	RM	8	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
1221	RO	10	Red Oak	Quercus rubra	Fair		WOODLAND	R	REPLACE
1222	BC	10	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
1223	BC	8	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	REPLACE
1224	RM	7	Red Maple	Acer rubrum	Fair		WOODLAND	S	-
1225	RM	10	Red Maple	Acer rubrum	Fair		WOODLAND	S	-
1226	BC	7	Wild Black Cherry	Prunus serotina	Poor		WOODLAND	R	-
1227	RO	4	Red Oak	Quercus rubra	Poor		WOODLAND	R	-
1228	RM	14	Red Maple	Acer rubrum	Fair		WOODLAND	S	-
1229	RM	8	Red Maple	Acer rubrum	Fair	x1	WOODLAND	S	-
1230	RM	5	Red Maple	Acer rubrum	Fair		WOODLAND	R	-
1232	RM	4	Red Maple	Acer rubrum	Fair		WOODLAND	R	-
1233	BC	14	Wild Black Cherry	Prunus serotina	Poor		WOODLAND	R	-
1231	RM	8	Red Maple	Acer rubrum	Fair		WOODLAND	S	-
1234	RM	4	Red Maple	Acer rubrum	Fair		WOODLAND	R	-
1235	RM	6	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
1236	RM	8	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
1237	RM	9	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
1238	REPLACE	8	Red Oak	Quercus rubra	Fair		WOODLAND	R	-
1239	RO	21	Red Oak	Quercus rubra	Good		WOODLAND	R	REPLACE
1240	RM	14	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
1241	WP	22	(Eastern) White Pine	Pinus strobus	Fair		WOODLAND	R	REPLACE
1242	BC	12	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	REPLACE
1243	BC	10	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	REPLACE
1244	BC	10	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	REPLACE
1245	RO	12	Red Oak	Quercus rubra	Fair		WOODLAND	R	REPLACE
1246	BC	5	Wild Black Cherry	Prunus serotina	Poor		WOODLAND	R	-
1247	BC	8	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	REPLACE
1248	BC	8	Wild Black Cherry	Prunus serotina	Poor		WOODLAND	R	-
1249	BC	10	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	REPLACE
1250	RO	12	Red Oak	Quercus rubra	Fair		WOODLAND	R	REPLACE
1251	RM	8	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
1252	RM	12	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
1253	RO	21	Red Oak	Quercus rubra	Fair		WOODLAND	R	REPLACE
1254	RM	10	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
1255	RM	8	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
1256	RO	21	Red Oak	Quercus rubra	Good		WOODLAND	R	REPLACE
1257	RO	13	Red Oak	Quercus rubra	Fair		WOODLAND	R	REPLACE
1258	BC	5	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	-
1259	BC	4	Wild Black Cherry	Prunus serotina	Good		WOODLAND	R	-
1260	RM	9	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
1261	RO	13	Red Oak	Quercus rubra	Fair		WOODLAND	R	REPLACE
1262	RM	7	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
1263	RM	4	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
1264	WP	159	(Eastern) White Pine	Pinus strobus	Fair		WOODLAND	R	REPLACE
1265	RM	4	Red Maple	Acer rubrum	Fair		WOODLAND	R	-
1266	BC	4	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	-
1267	RM	9	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
1268	RM	9	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
1269	RM	4	Red Maple	Acer rubrum	Fair		WOODLAND	R	-
1270	RM	4	Red Maple	Acer rubrum	Fair		WOODLAND	R	-
1271	RM	7	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
1272	RM	5	Red Maple	Acer rubrum	Fair		WOODLAND	R	-
1273	RM	9	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
1274	BC	5	Wild Black Cherry	Prunus serotina	Poor		WOODLAND	R	-
1275	RO	9	Red Oak	Quercus rubra	Fair		WOODLAND	S	-
1276	RO	10	Red Oak	Quercus rubra	Fair		WOODLAND	S	-
1277	BC	5	Wild Black Cherry	Prunus serotina	Poor		WOODLAND	S	-
1278	RO	7	Red Oak	Quercus rubra	Fair		WOODLAND	R	REPLACE
1279	RM	11	Red Maple	Acer rubrum	Fair	x1	WOODLAND	S	-
1280	BC	7	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	REPLACE
1281	RM	13	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
1282	BC	6	Wild Black Cherry	Prunus serotina	Poor		WOODLAND	R	-
1283	BC	7	Wild Black Cherry	Prunus serotina	Poor	x1	WOODLAND	S	-
1284	RO	12	Red Oak	Quercus rubra	Fair		WOODLAND	S	-
1285	RM	24	Red Maple	Acer rubrum	Fair		LANDMARK	R	REPLACE
1286	RO	17	Red Oak	Quercus rubra	Fair		WOODLAND	R	REPLACE
1287	RM	12	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
1288	RO	19	Red Oak	Quercus rubra	Fair		WOODLAND	S	-
1289	BC	10	Wild Black Cherry	Prunus serotina	Poor		WOODLAND	R	-
1290	BC	9	Wild Black Cherry	Prunus serotina	Poor		WOODLAND	R	-
1291	BC	10	Wild Black Cherry	Prunus serotina	Poor		WOODLAND	S	-
1292	RM	7	Red Maple	Acer rubrum	Poor		WOODLAND	S	-
1293	RM	10	Red Maple	Acer rubrum	Very Poor		WOODLAND	S	-
1294	RM	8	Red Maple	Acer rubrum	Poor		WOODLAND	S	-
1295	RM	7	Red Maple	Acer rubrum	Poor		WOODLAND	S	-
1296	RM	4	Red Maple	Acer rubrum	Poor		WOODLAND	S	-
1297	RM	9	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
1298	RM	8	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
1299	RM	8	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
1300	RM	8	Red Maple	Acer rubrum	Fair		WOODLAND	S	-
1301	RO	8	Red Oak	Quercus rubra	Fair		WOODLAND	S	-
1302	RO	8	Red Oak	Quercus rubra	Fair		WOODLAND	S	-
1303	RM	7	Red Maple	Acer rubrum	Fair		WOODLAND	S	-
1304	RO	5	Red Oak	Quercus rubra	Fair		WOODLAND	S	-
1305	BO	7	Black Oak	Quercus velutina	Fair		WOODLAND	R	REPLACE
1307	RM	7	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
1306	RM	4	Red Maple	Acer rubrum	Fair		WOODLAND	R	-
1308	BC	22	Black Oak	Quercus velutina	Fair		WOODLAND	S	-
1309	RM	8	Red Maple	Acer rubrum	Fair		WOODLAND	S	-
1310	RM	8	Red Maple	Acer rubrum	Fair		WOODLAND	S	-
1311	RM	7	Red Maple	Acer rubrum	Fair		WOODLAND	S	-
1312	RM	9	Red Maple	Acer rubrum	Fair		WOODLAND	S	-
1313	RM	5	Red Maple	Acer rubrum	Poor		WOODLAND	R	-
1314	RM	11	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
1315	RM	6	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
1316	RM	12	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
1317	RM	6	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
1318	RM	16	Red Maple	Acer rubrum	Fair		WOODLAND	S	-
1319	BC	7	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	REPLACE
1320	RM	7	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
1321	RM	8	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
1322	RM	8	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
1323	RM	9	Red Maple	Acer rubrum	Poor	x2	WOODLAND	R	-
1324	RM	8	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
1325	RM	4	Red Maple	Acer rubrum	Fair		WOODLAND	R	-
1326	RO	23	Red Oak	Quercus rubra	Fair		WOODLAND	R	REPLACE
1327	RO	7	Red Oak	Quercus rubra	Fair		WOODLAND	R	REPLACE
1328	RO	6	Red Oak	Quercus rubra	Good		WOODLAND	R	REPLACE
1329	BO	10	Black Oak	Quercus velutina	Fair		WOODLAND	R	REPLACE
1330	BO	14	Black Oak	Quercus velutina	Fair		WOODLAND	R	REPLACE
1331	RM	13	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
1332	BC	10	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	REPLACE
1333	BC	10	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
1334	BC	5	Wild Black Cherry	Prunus serotina	Poor		WOODLAND	S	-
1335	RM	6	Red Maple	Acer rubrum	Fair	x1	WOODLAND	S	-
1336	BO	21	Black Oak	Quercus velutina	Fair		WOODLAND	S	-
1337	RM	6	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
1338	BC	4	Wild Black Cherry	Prunus serotina	Poor		WOODLAND	R	-
1339	RM	7	Red Maple	Acer rubrum	Poor		WOODLAND	R	REPLACE
1340	BC	5	Wild Black Cherry	Prunus serotina	Poor		WOODLAND	R	REPLACE
1341	RO	16	Red Oak	Quercus rubra	Fair		WOODLAND	R	REPLACE
1342	RO	4	Red Oak	Quercus rubra	Fair		WOODLAND	R	-
1343	RM	5	Red Maple	Acer rubrum	Fair		WOODLAND	R	-
1344	RM	5	Red Maple	Acer rubrum	Fair		WOODLAND	R	-
1345	BC	7	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	REPLACE
1346	RM	5	Red Maple	Acer rubrum	Fair		WOODLAND	R	-
1347	RM	4	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
1348	RM	8	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
1349	RM	7	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
1350	WP	7	(Eastern) White Pine	Pinus strobus	Fair		WOODLAND	R	REPLACE

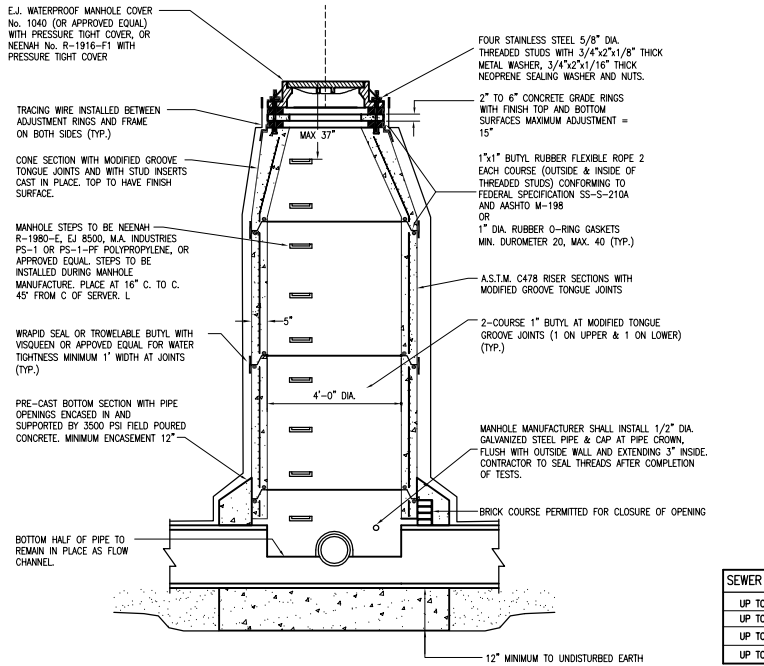
TAG NO.	CODE	DBH	COMMON NAME	LATIN NAME	COND	NOTES	CLASS	SAVE / REMOVE	REPLACEMENT
1351	RM	9	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
1352	BC	9	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	REPLACE
1353	RM	4	Red Maple	Acer rubrum	Fair		WOODLAND	R	-
1354	AP	5	Domestic Apple	Malus sylvestris	Poor		WOODLAND	S	-
1355	WP	25	(Eastern) White Pine	Pinus strobus	Fair		WOODLAND	R	REPLACE
1356	BC	8	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	REPLACE
1357	BC	5	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	-
1358	BO	7	Black Oak	Quercus velutina	Good		WOODLAND	R	REPLACE
1359	RO	5	Red Oak	Quercus rubra	Fair		WOODLAND	R	-
1360	RM	5	Red Maple	Acer rubrum	Fair		WOODLAND	R	-
1361	BC	4	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	-
1362	RO	13	Red Oak	Quercus rubra	Good		WOODLAND	R	REPLACE
1363	RO	6	Red Oak	Quercus rubra	Fair		WOODLAND	R	REPLACE
1364	RM	7	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
1365	BC	12	Wild Black Cherry	Prunus serotina	Fair	x1	WOODLAND	R	REPLACE
1366	RM	4	Red Maple	Acer rubrum	Fair		WOODLAND	R	-
1367	RM	4	Red Maple	Acer rubrum	Fair		WOODLAND	R	-
1368	BC	6	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	REPLACE
1369	RO	12	Red Oak	Quercus rubra	Good		WOODLAND	R	REPLACE
1370	RO	23	Red Oak	Quercus rubra	Good		WOODLAND	S	-
1371	BO	15	Black Oak	Quercus velutina	Fair		WOODLAND	S	-
1372	BO	13	Black Oak	Quercus velutina	Good		WOODLAND	R	REPLACE
1373	BO	8	Black Oak	Quercus velutina	Fair		WOODLAND	R	REPLACE
1374	BO	12	Black Oak	Quercus velutina	Fair		WOODLAND	R	REPLACE
1375	RM	5	Red Maple	Acer rubrum	Fair		WOODLAND	S	-
1376	RM	6	Red Maple	Acer rubrum	Fair		WOODLAND	S	-
1377	RM	7	Red Maple	Acer rubrum	Fair		WOODLAND	S	-
1378	BC	5	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
1379	BC	8	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
1380	BO	9	Black Oak	Quercus velutina	Fair		WOODLAND	S	-
1381	RM	4	Red Maple	Acer rubrum	Fair		WOODLAND	S	-
1382	RO	15	Red Oak	Quercus rubra	Fair		WOODLAND	S	-
1383	RM	18	Red Maple	Acer rubrum	Good		WOODLAND	S	-
1384	BO	16	Black Oak	Quercus velutina	Fair		WOODLAND	S	-
1385	RM	6	Red Maple	Acer rubrum	Fair		WOODLAND	S	-
1386	BO	7	Black Oak	Quercus velutina	Fair		WOODLAND	S	-
1387	RO	17	Red Oak	Quercus rubra	Good		WOODLAND	S	-
1388	RM	4	Red Maple	Acer rubrum	Fair		WOODLAND	S	-
1389	RM	5	Red Maple	Acer rubrum	Fair		WOODLAND	S	-
1390	RM	12	Red Maple	Acer rubrum	Fair		WOODLAND	S	-
1391	RO	19	Red Oak	Quercus rubra	Good	x1	WOODLAND	S	-
1392	RM	10	Red Maple	Acer rubrum	Fair		WOODLAND	S	-
1393	RM	12	Red Maple	Acer rubrum	Poor	x1	WOODLAND	S	-
1394	RM	5	Red Maple	Acer rubrum	Fair		WOODLAND	S	-
1395	RM	4	Red Maple	Acer rubrum	Fair		WOODLAND	S	-
1396	RM	5	Red Maple	Acer rubrum	Fair		WOODLAND	S	-
1397	RM	5	Red Maple	Acer rubrum	Fair		WOODLAND	S	-
1398	RM	8	Red Maple	Acer rubrum	Fair		WOODLAND	S	-
1399	RM	5	Red Maple	Acer rubrum	Fair		WOODLAND	S	-
			No #1400						
1401	BO	12	Black Oak	Quercus velutina	Fair		WOODLAND	R	REPLACE
1402	BC	5	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	-
1403	RO	15	Red Oak	Quercus rubra	Fair		WOODLAND	R	REPLACE
1404	BO	6	Black Oak	Quercus velutina	Fair		WOODLAND	R	REPLACE
1405	BC	7	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	REPLACE
1406	BC	7	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	REPLACE
1407	BC	9	Wild Black Cherry	Prunus serotina	Poor		WOODLAND	R	-
1408	BC	9	Wild Black Cherry	Prunus serotina	Fair	x1	WOODLAND	R	REPLACE
1409	BO	4	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	REPLACE
1410	RO	8	Red Oak	Quercus rubra	Fair		WOODLAND	S	-
1411	BC	9	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	-
1412	RM	7	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
1413	RO	8	Red Oak	Quercus rubra	Fair		WOODLAND	R	REPLACE
1414	BC	6	Wild Black Cherry	Prunus serotina	Poor		WOODLAND	R	-
1415	RM	4	Red Maple	Acer rubrum	Fair		WOODLAND	S	-
1416	AP	6	Domestic Apple	Malus sylvestris	Fair		WOODLAND	S	-
1417	RO	9	Red Oak	Quercus rubra	Fair		WOODLAND	S	-
1418	RM	6	Red Maple	Acer rubrum	Fair		WOODLAND	S	-
1419	RM	8	Red Maple	Acer rubrum	Fair		WOODLAND	S	-
1420	RO	7	Red Oak	Quercus rubra	Fair		WOODLAND	S	-
1421	RO	6	Red Oak	Quercus rubra	Fair		WOODLAND	S	-
1422	BC	7	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	-
1423	BC	6	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	REPLACE
1424	RM	5	Red Maple	Acer rubrum	Fair	x1	WOODLAND	R	-
1425	BC	4	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	-
1426	BC	4	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	-
1427	BO	8	Black Oak	Quercus velutina	Fair		WOODLAND	R	REPLACE
1428	BC	5	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	-
1429	BC	4	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	-
1430	RO	12	Red Oak	Quercus rubra	Good		WOODLAND	R	-
1431	RO	6	Red Oak	Quercus rubra	Good		WOODLAND	R	REPLACE
1432	RO	16	Red Oak	Quercus rubra	Good		WOODLAND	R	REPLACE
1433	RO	9	Red Oak	Quercus rubra	Fair		WOODLAND	R	REPLACE
1434	RO	12	Red Oak	Quercus rubra	Good		WOODLAND	R	REPLACE
1435	RO	10	Red Oak	Quercus rubra	Good		WOODLAND	R	REPLACE
1436	RM	4	Red Maple	Acer rubrum	Fair		WOODLAND	R	-
1437	BO	10	Black Oak	Quercus velutina	Good		WOODLAND	R	REPLACE
1438	RO	18	Red Oak	Quercus rubra	Good		WOODLAND	S	-
1439	BO	15	Black Oak	Quercus velutina	Good	x1	WOODLAND	S	-
1440	BO	10	Black Oak	Quercus velutina	Good		WOODLAND	R	REPLACE
1441	RO	4	Red Oak	Quercus rubra	Good		WOODLAND	S	-
1442	BO	10	Black Oak	Quercus velutina	Good	x1	WOODLAND	S	-
1443	BC	5	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	-
1444	RO	6	Red Oak	Quercus rubra	Good		WOODLAND	R	REPLACE
1445	RO	4	Red Oak	Quercus rubra	Good		WOODLAND	S	-
1446	RO	6	Red Oak	Quercus rubra	Good		WOODLAND	R	REPLACE
1447	RO	5	Red Oak	Quercus rubra	Good		WOODLAND	R	-
1448	RO	6	Red Oak	Quercus rubra	Fair		WOODLAND	R	REPLACE
1449	RO	4	Red Oak	Quercus rubra	Fair		WOODLAND	R	-
1450	BO	9	Black Oak	Quercus velutina	Good		WOODLAND	R	REPLACE
1451	RO	13	Red Oak	Quercus rubra	Good		WOODLAND	R	REPLACE
1452	RO	5	Red Oak	Quercus rubra	Fair		WOODLAND	S	-
1453	RO	28	Red Oak	Quercus rubra	Good	x2	LANDMARK	R	REPLACE
1454	RO	7	Red Oak	Quercus rubra	Good		WOODLAND	S	-
1455	RO	10	Red Oak	Quercus rubra	Good		WOODLAND	S	-
1456	RO	6	Red Oak	Quercus rubra	Fair		WOODLAND	S	-
1458	BO	14	Black Oak	Quercus velutina	Good		WOODLAND	R	REPLACE
1457	RO	6	Red Oak	Quercus rubra	Good		WOODLAND	S	-
1459	RO	6	Red Oak	Quercus rubra	Fair		WOODLAND	S	-
1460	BC	4	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
1461	RO	7	Red Oak	Quercus rubra	Fair		WOODLAND	S	-
1462	RO	6	Red Oak	Quercus rubra	Fair		WOODLAND	S	REPLACE
1463	RO	7	Red Oak	Quercus rubra	Good		WOODLAND	R	REPLACE
1464	BC	8	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	REPLACE
1465	BO	14	Black Oak	Quercus velutina	Good		WOODLAND	R	REPLACE
1466	BC	4	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
1467	BC	9	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	REPLACE
1468	BO	13	Black Oak	Quercus velutina	Good		WOODLAND	R	REPLACE
1469	BC	5	Wild Black Cherry	Prunus serotina	Poor		WOODLAND	R	-
1470	BO	10	Black Oak	Quercus velutina	Good		WOODLAND	R	REPLACE
1471	BC	5	Wild Black Cherry	Prunus serotina	Poor		WOODLAND	S	-
1472	BC	5	Wild Black Cherry	Prunus serotina	Good		WOODLAND	R	-
1473	RO	5	Red Oak	Quercus rubra	Fair		WOODLAND	R	-
1474	BC	6	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	-
1475	BC	6	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	-
1476	RO	5	Red Oak	Quercus rubra	Fair		WOODLAND	R	-
1477	RO	12	Red Oak	Quercus rubra	Good		WOODLAND	R	REPLACE
1478	RO	6	Red Oak	Quercus rubra	Fair		WOODLAND	R	REPLACE
1479	RO	12	Red Oak	Quercus rubra	Good		WOODLAND	R	REPLACE
1480	RO	16	Red Oak	Quercus rubra	Good		WOODLAND	R	REPLACE
1481	RO	10	Red Oak	Quercus rubra	Fair		WOODLAND	R	REPLACE
1482	BO	12	Black Oak	Quercus velutina	Fair		WOODLAND	R	REPLACE
1483	RO	13	Red Oak	Quercus rubra	Good		WOODLAND	R	REPLACE
1484	RO	8	Red Oak	Quercus rubra	Fair		WOODLAND	S	-
1485	BC	9	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-

TAG NO.	CODE	DBH	COMMON NAME	LATIN NAME	COND	NOTES	CLASS	SAVE / REMOVE	REPLACEMENT
1621	SU	12	Sugar Maple	Acer saccharum	Poor		WOODLAND	R	-
1622	RO	32	Red Oak	Quercus rubra	Fair		LANDMARK	S	-
1623	BP	16	Bradford Pear	Pyrus calleryana	Very Poor		WOODLAND	S	-
1624	WO	54	White Oak	Quercus alba	Fair		LANDMARK	R	REPLACE
1625	BO	30	Black Oak	Quercus velutina	Poor	1	LANDMARK	S	-
1626	BC	5	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	-
1627	RO	7	Red Oak	Quercus rubra	Fair		WOODLAND	R	REPLACE
1628	RO	14	Red Oak	Quercus rubra	Fair		WOODLAND	R	REPLACE
1629	BC	6	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	REPLACE
1630	BC	10	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	REPLACE
1631	RM	6	Red Maple	Acer rubrum	Poor		WOODLAND	S	-
1632	RO	17	Red Oak	Quercus rubra	Fair		WOODLAND	S	-
1633	E	12	American Elm	Ulmus americana	Poor		INVASIVE	R	-
1634	BC	7	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	REPLACE
1635	E	15	American Elm	Ulmus americana	Poor		INVASIVE	R	-
1636	B	27	Basswood	Tilia americana	Good		LANDMARK	S	-
1637	RO	9	Red Oak	Quercus rubra	Poor		WOODLAND	S	-
1638	WO	29	White Oak	Quercus alba	Fair		LANDMARK	S	-
1639	WO	32	White Oak	Quercus alba	Fair		LANDMARK	R	REPLACE
1640	WO	36	White Oak	Quercus alba	Good		LANDMARK	R	REPLACE
1641	BO	28	Black Oak	Quercus velutina	Fair		WOODLAND	R	REPLACE
1642	BO	15	Black Oak	Quercus velutina	Fair		WOODLAND	R	REPLACE
1643	BC	6	Wild Black Cherry	Prunus serotina	Poor		WOODLAND	S	-
1644	BO	9	Black Oak	Quercus velutina	Fair		WOODLAND	R	REPLACE
1645	WO	28	White Oak	Quercus alba	Good		LANDMARK	R	REPLACE
1646	SU	9	Sugar Maple	Acer saccharum	Good		WOODLAND	R	REPLACE
1647	BO	15	Black Oak	Quercus velutina	Fair		WOODLAND	R	REPLACE
1648	E	5	American Elm	Ulmus americana	Fair		INVASIVE	S	-
1649	AP	10	Domestic Apple	Malus sylvestris	Fair		WOODLAND	S	-
1650	WO	42	White Oak	Quercus alba	Poor		LANDMARK	R	-
1651	BO	16	Black Oak	Quercus velutina	Very Poor	1	WOODLAND	R	-
1652	BX	10	Box elder	Acer negundo	Very Poor		INVASIVE	S	-
1653	BC	8	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	-
1654	TH	7	Thornapple/Hawthorne	Cragaeus spp.	Very Poor		WOODLAND	R	-
1655	SM	13	Silver Maple	Acer saccharinum	Good		INVASIVE	S	-
1656	SU	14	Sugar Maple	Acer saccharum	Fair		WOODLAND	R	REPLACE
1657	SU	12	Sugar Maple	Acer saccharum	Fair		WOODLAND	S	-
1658	RO	9	Red Oak	Quercus rubra	Poor		WOODLAND	S	-
1659	WA	7	White Ash	Fraxinus americana	Poor		INVASIVE	S	-
1660	SM	10	Silver Maple	Acer saccharinum	Fair		INVASIVE	S	-
1661	BC	9	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	REPLACE
1662	BC	12	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
1663	WO	32	White Oak	Quercus alba	Good		LANDMARK	S	-
1664	BC	9	Wild Black Cherry	Prunus serotina	Poor		WOODLAND	S	-
1665	BC	4	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
1666	SU	14	Sugar Maple	Acer saccharum	Fair		WOODLAND	R	REPLACE
1667	BC	5	Wild Black Cherry	Prunus serotina	Poor		WOODLAND	S	-
1668	BC	7	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
1669	RO	8	Red Oak	Quercus rubra	Fair		WOODLAND	S	-
1670	RO	18	Red Oak	Quercus rubra	Fair		WOODLAND	R	REPLACE
1671	SU	18	Sugar Maple	Acer saccharum	Good		WOODLAND	R	REPLACE
1672	RO	21	Red Oak	Quercus rubra	Good		WOODLAND	R	REPLACE
1673	RO	5	Red Oak	Quercus rubra	Fair		WOODLAND	R	REPLACE
1674	RO	18	Red Oak	Quercus rubra	Good		WOODLAND	R	REPLACE
1675	YB	14	Yellow Birch	Betula alleghaniensis	Fair		WOODLAND	S	-
1676	SU	14	Sugar Maple	Acer saccharum	Good		WOODLAND	S	-
1677	SU	8	Sugar Maple	Acer saccharum	Fair		WOODLAND	S	-
1678	BO	24	Black Oak	Quercus velutina	Good		LANDMARK	R	REPLACE
1679	SU	14	Sugar Maple	Acer saccharum	Fair		WOODLAND	R	REPLACE
1680	BC	7	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	REPLACE
1681	WO	23	White Oak	Quercus alba	Poor		WOODLAND	R	-
1682	BO	16	Black Oak	Quercus velutina	Fair		WOODLAND	R	REPLACE
1683	BC	6	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
1684	RM	5	Red Maple	Acer rubrum	Fair		WOODLAND	S	-
1685	RM	9	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
1686	BO	19	Black Oak	Quercus velutina	Fair		WOODLAND	S	-
1687	WO	16	White Oak	Quercus alba	Good		WOODLAND	S	-
1688	SU	18	Sugar Maple	Acer saccharum	Good		WOODLAND	S	-
1689	WO	19	White Oak	Quercus alba	Good		WOODLAND	S	-
1690	BC	5	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	-
1691	RO	14	Red Oak	Quercus rubra	Good		WOODLAND	R	REPLACE
1692	RO	14	Red Oak	Quercus rubra	Fair		WOODLAND	R	REPLACE
1693	BC	4	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	-
1694	WO	7	White Oak	Quercus alba	Good		WOODLAND	R	REPLACE
1695	BO	6	Black Oak	Quercus velutina	Fair		WOODLAND	R	REPLACE
1696	NM	5	Norway Maple	Acer platanoides	Good		WOODLAND	R	-
1697	SU	6	Sugar Maple	Acer saccharum	Fair		WOODLAND	R	REPLACE
1698	RO	18	Red Oak	Quercus rubra	Fair		WOODLAND	R	REPLACE
1699	BC	7	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	REPLACE
1700	BC	6	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	REPLACE
1701	RM	14	Red Maple	Acer rubrum	Good		WOODLAND	S	-
1702	RM	5	Red Maple	Acer rubrum	Fair		WOODLAND	S	-
1703	RM	5	Red Maple	Acer rubrum	Fair		WOODLAND	S	-
1704	BO	14	Black Oak	Quercus velutina	Good		WOODLAND	S	-
1705	BC	14	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
1706	BC	6	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
1707	BC	8	Wild Black Cherry	Prunus serotina	Good		WOODLAND	R	REPLACE
1708	BO	12	Black Oak	Quercus velutina	Poor		WOODLAND	R	-
1709	BO	13	Black Oak	Quercus velutina	Good		WOODLAND	R	REPLACE
1710	BO	10	Black Oak	Quercus velutina	Good		WOODLAND	R	REPLACE
1711	BC	6	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	REPLACE
1712	RO	8	Red Oak	Quercus rubra	Good		WOODLAND	R	REPLACE
1713	RO	18	Red Oak	Quercus rubra	Good		WOODLAND	R	REPLACE
1714	BO	16	Black Oak	Quercus velutina	Good		WOODLAND	R	REPLACE
1715	BC	8	Wild Black Cherry	Prunus serotina	Good		WOODLAND	R	REPLACE
1716	RO	14	Red Oak	Quercus rubra	Good		WOODLAND	R	REPLACE
1717	BO	7	Black Oak	Quercus velutina	Good		WOODLAND	R	REPLACE
1718	BO	8	Black Oak	Quercus velutina	Good		WOODLAND	R	REPLACE
1719	RM	5	Red Maple	Acer rubrum	Good		WOODLAND	R	-
1720	RO	17	Red Oak	Quercus rubra	Good		WOODLAND	R	REPLACE
1721	BO	17	Black Oak	Quercus velutina	Good		WOODLAND	R	REPLACE
1722	BO	16	Black Oak	Quercus velutina	Good		WOODLAND	R	REPLACE
1723	RO	18	Red Oak	Quercus rubra	Good		WOODLAND	R	REPLACE
1724	RO	7	Red Oak	Quercus rubra	Poor		WOODLAND	R	-
1725	RO	42	Red Oak	Quercus rubra	Poor		LANDMARK	R	-
1726	RO	7	Red Oak	Quercus rubra	Good		WOODLAND	R	REPLACE
1727	BO	9	Black Oak	Quercus velutina	Fair		WOODLAND	R	REPLACE
1728	RO	5	Red Oak	Quercus rubra	Good		WOODLAND	R	-
1729	RO	14	Red Oak	Quercus rubra	Good		WOODLAND	R	REPLACE
1730	RO	12	Red Oak	Quercus rubra	Good		WOODLAND	R	REPLACE
1731	BO	6	Black Oak	Quercus velutina	Fair		WOODLAND	S	-
1732	BO	8	Black Oak	Quercus velutina	Good		WOODLAND	R	REPLACE
1733	RO	12	Red Oak	Quercus rubra	Good		WOODLAND	S	-
1734	BO	7	Black Oak	Quercus velutina	Good		WOODLAND	S	-
1735	BO	12	Black Oak	Quercus velutina	Good		WOODLAND	S	-
1736	RO	16	Red Oak	Quercus rubra	Poor		WOODLAND	S	-
1737	RM	6	Red Maple	Acer rubrum	Good		WOODLAND	S	-
1738	RO	8	Red Oak	Quercus rubra	Good		WOODLAND	S	-
1739	BC	5	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	-
1740	BO	16	Black Oak	Quercus velutina	Good		WOODLAND	R	REPLACE
1741	BO	13	Black Oak	Quercus velutina	Good		WOODLAND	R	REPLACE
1742	RO	5	Red Oak	Quercus rubra	Fair		WOODLAND	R	REPLACE
1743	RO	9	Red Oak	Quercus rubra	Good		WOODLAND	R	REPLACE
1744	RO	6	Red Oak	Quercus rubra	Good		WOODLAND	R	REPLACE
1745	RM	5	Red Maple	Acer rubrum	Fair		WOODLAND	R	-
1746	YB	10	Yellow Birch	Betula alleghaniensis	Good		WOODLAND	R	REPLACE
1747	SU	18	Sugar Maple	Acer saccharum	Good		WOODLAND	S	-
1748	BC	9	Wild Black Cherry	Prunus serotina	Poor		WOODLAND	S	-
1749	RO	14	Red Oak	Quercus rubra	Good		WOODLAND	R	REPLACE
1750	BO	12	Black Oak	Quercus velutina	Good		WOODLAND	S	-
1751	BO	12	Black Oak	Quercus velutina	Good		WOODLAND	R	REPLACE
No #1752 (del)									
1753	BC	12	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
1754	WA	6	White Ash	Fraxinus americana	Fair		INVASIVE	R	-
1755	RO	12	Red Oak	Quercus rubra	Fair		WOODLAND	S	-

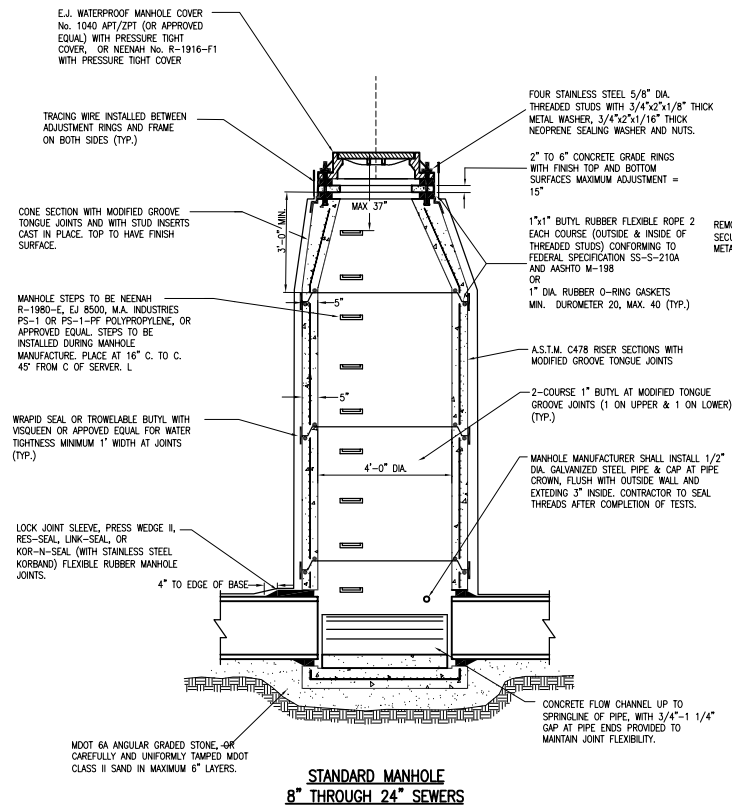
TAG NO.	CODE	DBH	COMMON NAME	LATIN NAME	COND	NOTES	CLASS	SAVE / REMOVE	REPLACEMENT
1756	RO	5	Red Oak	Quercus rubra	Fair		WOODLAND	S	-
1757	BC	13	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
1758	RO	38	Red Oak	Quercus rubra	Good		LANDMARK	S	-
1759	RO	7	Red Oak	Quercus rubra	Fair		WOODLAND	S	-
1760	BO	5	Black Oak	Quercus velutina	Good		WOODLAND	S	-
1761	RM	4	Red Maple	Acer rubrum	Good		WOODLAND	S	-
1762	PO	7	Pin Oak	Quercus palustris	Good		WOODLAND	S	-
1763	BP	5	Bradford Pear	Pyrus calleryana	Poor		WOODLAND	S	-
1764	WA	8	White Ash	Fraxinus americana	Fair		INVASIVE	R	-
1765	RM	7	Red Maple	Acer rubrum	Good		WOODLAND	S	-
1766	BC	9	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
1767	YB	17	Yellow Birch	Betula alleghaniensis	Good		WOODLAND	S	-
1768	BO	7	Black Oak	Quercus velutina	Fair		WOODLAND	S	-
1769	BP	7	Bradford Pear	Pyrus calleryana	Very Poor		WOODLAND	S	-
1770	RO	13	Red Oak	Quercus rubra	Fair		WOODLAND	S	-
1771	BP	7	Bradford Pear	Pyrus calleryana	Poor		WOODLAND	S	-
1772	RO	6	Red Oak	Quercus rubra	Fair		WOODLAND	R	REPLACE
1773	RO	15	Red Oak	Quercus rubra	Fair		WOODLAND	S	-
1774	RM	5	Red Maple	Acer rubrum	Good		WOODLAND	R	-
1775	CT	29	Cottonwood	Populus deltoides	Good		INVASIVE	S	-
1776	CT	26	Cottonwood	Populus deltoides	Fair		INVASIVE	S	-
1777	BO	7	Black Oak	Quercus velutina	Fair		WOODLAND	S	-
1778	BC	7	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
1779	YB	15	Yellow Birch	Betula alleghaniensis	Good		WOODLAND	S	-
1780	E	19	American Elm	Ulmus americana	Good		INVASIVE	S	-
1781	RM	6	Red Maple	Acer rubrum	Fair		WOODLAND	S	-
1782	RO	9	Red Oak	Quercus rubra	Fair		WOODLAND	S	-
1783	BC	8	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
1784	RM	7	Red Maple	Acer rubrum	Fair		WOODLAND	S	-
1785	RO	25	Red Oak	Quercus rubra	Fair		LANDMARK	S	-
1786	YB	14	Yellow Birch	Betula alleghaniensis	Fair		WOODLAND	S	-
1787	BL	7	Black Locust	Robinia pseudacacia	Fair		WOODLAND	S	-
1788	BX	6	Box elder	Acer negundo	Fair		INVASIVE	S	-
1789	BC	12	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
1790	BC	7	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
1791	BC	6	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
1792	RO	12	Red Oak	Quercus rubra	Fair		WOODLAND	S	-
1793	BC	7	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
1794	BX	12	Box elder	Acer negundo	Fair		INVASIVE	R	-
1795	BC	7	Wild Black Cherry	Prunus serotina	Fair	x1	WOODLAND	S	-
1796	BC	7	Wild Black Cherry	Prunus serotina	Fair	x1	WOODLAND	S	-
1797	BC	7	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
1798	RO	10	Red Oak	Quercus rubra	Fair		WOODLAND	S	-
1799	CT	16	Cottonwood	Populus deltoides	Fair		INVASIVE	S	-
1800	CT	38	Cottonwood	Populus deltoides	Good		INVASIVE	S	-
1801	RO	6	Red Oak	Quercus rubra	Fair		WOODLAND	S	-
1802	CT	15	Cottonwood	Populus deltoides	Fair		INVASIVE	S	-
1803	BO	12	Black Oak	Quercus velutina	Fair		WOODLAND	S	-
1804	BC	4	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
1805	BC	7	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
1806	RO	7	Red Oak	Quercus rubra	Good		WOODLAND	S	-
1807	BX	7	Box elder	Acer negundo	Fair		INVASIVE	S	-
1808	BX	8	Box elder	Acer negundo	Fair		INVASIVE	S	-
1809	BC	9	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
1810	CT	26	Cottonwood	Populus deltoides	Fair		INVASIVE	S	-
1811	RO	7	Red Oak	Quercus rubra	Good		WOODLAND	S	-
1812	CT	12	Cottonwood	Populus deltoides	Fair		INVASIVE	S	-
1813	BO	23	Black Oak	Quercus velutina	Fair		WOODLAND	S	-
1814	BC	7	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
1815	RO	7	Red Oak	Quercus rubra	Fair		WOODLAND	S	-
1816	BC	4	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
1817	BC	5	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
1818	BC	6	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
1819	BC	9	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
1820	BC	6	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
1821	BC	8	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
1822	BC	7	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
1823	BO	7	Black Oak	Quercus velutina	Fair		WOODLAND	S	-
1824	CT	34	Cottonwood	Populus deltoides	Fair		INVASIVE	S	-
1825	BC	7	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
1826	BC	6	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
1827	PO	13	Pin Oak	Quercus palustris	Good		WOODLAND	S	-
1828	BC	6	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
1829	BC	8	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
1830	BC	7	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
1831	BC	5	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
1832	BC	7	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
1833	BC	9	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
1834	RM	12	Red Maple	Acer rubrum	Fair		WOODLAND	S	-
1835	RO	12	Red Oak	Quercus rubra	Fair		WOODLAND	R	REPLACE
1836	RO	9	Red Oak	Quercus rubra	Fair		WOODLAND	S	-
1837	RM	12	Red Maple	Acer rubrum	Good		WOODLAND	S	-
1838	RO	9	Red Oak	Quercus rubra	Fair		WOODLAND	S	-
1839	RO	12	Red Oak	Quercus rubra	Fair		WOODLAND	R	REPLACE
1840	BC	9	Black Oak	Quercus velutina	Fair		WOODLAND	S	-
1841	RM	6	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
1842	RM	8	Red Maple	Acer rubrum	Good	x1	WOODLAND	S	-
1843	PW	6	White Poplar	Populus alba	Fair		INVASIVE	S	-
1844	RM	7	Red Maple	Acer rubrum	Good	x1	WOODLAND	S	-
1845	BO	10	Black Oak	Quercus velutina	Good		WOODLAND	S	-
1846	BC	6	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
1847	BC	5	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
1848	BC	12	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
1849	BC	8	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
1850	BP	5	Bradford Pear	Pyrus calleryana	Fair		WOODLAND	S	-
1851	RO	9	Red Oak	Quercus rubra	Good		WOODLAND	R	REPLACE
1852	BC	7	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
1853	BC	6	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
1854	BC	7	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	REPLACE
1855	BC	9	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	REPLACE
1856	BC	9	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
1857	RM	5	Red Maple	Acer rubrum	Fair		WOODLAND	R	-
1858	BC	13	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	REPLACE
1859	BC	9	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
1860	BC	10	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
1861	BC	9	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
1862	BC	8	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
1863	RO	13	Red Oak	Quercus rubra	Good		WOODLAND	S	-
1864	BC	6	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
1865	BC	10	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
1866	BC	5	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
1867	RO	12	Red Oak	Quercus rubra	Good		WOODLAND	S	-
1868	BC	7	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
1869	BC	9	Wild Black Cherry	Prunus serotina	Fair	x1	WOODLAND	R	REPLACE
1870	BC	10	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
1871	BP	7	Bradford Pear	Pyrus calleryana	Fair		WOODLAND	S	-
1872	BC	13	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
1873	YB	9	Yellow Birch	Betula alleghaniensis	Fair		WOODLAND	S	-
1874	RO	8	Red Oak	Quercus rubra	Fair		WOODLAND	S	-
1875	BP	5	Bradford Pear	Pyrus calleryana	Fair		WOODLAND	R	-
1876	BC	8	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	REPLACE
1877	RO	7	Red Oak	Quercus rubra	Fair		WOODLAND	R	REPLACE
1878	RM	7	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
1879	RO	8	Red Oak	Quercus rubra	Fair		WOODLAND	S	-
1880	BC	5	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
1881	BC	9	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
1882	RO	12	Red Oak	Quercus rubra	Fair		WOODLAND	S	-
1883	CT	10	Cottonwood	Populus deltoides	Fair		INVASIVE	S	-
1884	RO	9	Red Oak	Quercus rubra	Fair		WOODLAND	S	-
1885	BC	8	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
1886	RM	7	Red Maple	Acer rubrum	Fair		WOODLAND	S	-
1887	WD	13	(Eastern) White Pine	Pinus strobus	Fair		WOODLAND	S	-
1888	YB	12	Yellow Birch	Betula alleghaniensis	Fair		WOODLAND	S	-
1889	YB	12	Yellow Birch	Betula alleghaniensis	Fair		WOODLAND	S	-
1890	YB	10	Yellow Birch	Betula alleghaniensis	Fair		WOODLAND	S	-

TAG NO.	CODE	DBH	COMMON NAME	LATIN NAME	COND	NOTES	CLASS	SAVE / REMOVE	REPLACEMENT
2242	BP	4	Bradford Pear	Pyrus calleryana	Fair		WOODLAND	S	-
2243	BO	19	Black Oak	Quercus velutina	Good		WOODLAND	S	-
2244	BP	15	Bradford Pear	Pyrus calleryana	Fair		WOODLAND	S	-
2245	BO	8	Black Oak	Quercus velutina	Fair		WOODLAND	S	-
2246	BO	8	Black Oak	Quercus velutina	Fair		WOODLAND	S	-
2247	BO	22	Black Oak	Quercus velutina	Fair		WOODLAND	S	-
2248	BO	17	Black Oak	Quercus velutina	Fair		WOODLAND	S	-
2249	BO	4	Black Oak	Quercus velutina	Good		WOODLAND	S	-
2250	BO	25	Black Oak	Quercus velutina	Fair		LANDMARK	R	REPLACE
2251	BC	8	Wild Black Cherry	Prunus serotina	Good	x2	WOODLAND	S	REPLACE
2252	RO	7	Red Oak	Quercus rubra	Fair		WOODLAND	S	-
2253	RO	7	Red Oak	Quercus rubra	Good		WOODLAND	S	-
2254	AP	6	Domestic Apple	Malus sylvestris	Poor		WOODLAND	R	-
2255	RM	7	Red Maple	Acer rubrum	Fair		WOODLAND	S	-
2256	BC	8	Wild Black Cherry	Prunus serotina	Good		WOODLAND	S	-
2257	PW	8	White Poplar	Populus alba	Good		WOODLAND	S	-
2258	PW	5	White Poplar	Populus alba	Good		WOODLAND	S	-
2259	BC	22	Wild Black Cherry	Prunus serotina	Good	x3	WOODLAND	R	REPLACE
2260	BC	5	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	-
2261	PW	5	White Poplar	Populus alba	Good		WOODLAND	S	-
2262	PW	4	White Poplar	Populus alba	Good		WOODLAND	S	-
2263	PW	8	White Poplar	Populus alba	Good		WOODLAND	S	-
2264	PW	6	White Poplar	Populus alba	Good		WOODLAND	S	-
2265	PW	7	White Poplar	Populus alba	Good		WOODLAND	S	-
2266	PW	5	White Poplar	Populus alba	Good		WOODLAND	S	-
2267	BC	4	Wild Black Cherry	Prunus serotina	Good		WOODLAND	S	-
2268	PW	6	White Poplar	Populus alba	Good		WOODLAND	S	-
2269	PW	7	White Poplar	Populus alba	Good		WOODLAND	S	-
2270	PW	7	White Poplar	Populus alba	Good		WOODLAND	S	-
2271	PW	7	White Poplar	Populus alba	Good		WOODLAND	S	-
2272	PW	7	White Poplar	Populus alba	Good		WOODLAND	S	-
No #2273 (left)									
2274	PW	4	White Poplar	Populus alba	Good		WOODLAND	S	-
2275	PW	7	White Poplar	Populus alba	Good		WOODLAND	S	-
2276	PW	6	White Poplar	Populus alba	Good		WOODLAND	S	-
2277	BO	4	Red Oak	Quercus rubra	Fair		WOODLAND	S	-
2278	PW	4	White Poplar	Populus alba	Good		WOODLAND	S	-
2279	PW	4	White Poplar	Populus alba	Good		WOODLAND	S	-
2280	PW	6	White Poplar	Populus alba	Good		WOODLAND	S	-
2281	PW	6	White Poplar	Populus alba	Good		WOODLAND	S	-
2282	PW	5	White Poplar	Populus alba	Good		WOODLAND	S	-
2283	PW	6	White Poplar	Populus alba	Good		WOODLAND	S	-
2284	PW	7	White Poplar	Populus alba	Good		WOODLAND	S	-
2285	PW	6	White Poplar	Populus alba	Fair		WOODLAND	S	-
2286	PW	6	White Poplar	Populus alba	Good		WOODLAND	S	-
2287	PW	4	White Poplar	Populus alba	Good		WOODLAND	S	-
2288	PW	6	White Poplar	Populus alba	Good		WOODLAND	S	-
2289	PW	6	White Poplar	Populus alba	Good		WOODLAND	S	-
2290	PW	6	White Poplar	Populus alba	Good		WOODLAND	S	-
2291	PW	8	White Poplar	Populus alba	Good		WOODLAND	R	-
2292	PW	8	White Poplar	Populus alba	Good		WOODLAND	R	-
2293	BC	8	Wild Black Cherry	Prunus serotina	Good		WOODLAND	R	REPLACE
2294	RM	7	Red Maple	Acer rubrum	Good		WOODLAND	R	REPLACE
2295	AP	8	Domestic Apple	Malus sylvestris	Fair		WOODLAND	R	REPLACE
2296	WP	28	(Eastern) White Pine	Pinus strobus	Fair		WOODLAND	R	REPLACE
2297	BO	8	Black Oak	Quercus velutina	Good		WOODLAND	S	-
2298	SU	12	Sugar Maple	Acer saccharum	Good		WOODLAND	S	-
2299	BC	12	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
2300	RM	5	Red Maple	Acer rubrum	Good		WOODLAND	S	-
2301	BC	8	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
2302	BO	8	Black Oak	Quercus velutina	Good		WOODLAND	S	-
2303	E	6	American Elm	Ulmus americana	Poor		WOODLAND	S	-
2304	BC	7	Wild Black Cherry	Prunus serotina	Good		WOODLAND	S	-
2305	BL	5	Black Locust	Robinia pseudoacacia	Fair		WOODLAND	S	-
2306	RO	7	Red Oak	Quercus rubra	Good		WOODLAND	S	-
2307	RM	9	Red Maple	Acer rubrum	Good		WOODLAND	S	-
2308	BC	6	Wild Black Cherry	Prunus serotina	Good		WOODLAND	S	-
2309	E	9	American Elm	Ulmus americana	Good		WOODLAND	S	-
2310	BC	28	Wild Black Cherry	Prunus serotina	Fair	x8	LANDMARK	S	-
2311	PO	6	Pin Oak	Quercus palustris	Fair		WOODLAND	S	-
2312	BC	7	Wild Black Cherry	Prunus serotina	Good		WOODLAND	S	-
2313	E	5	American Elm	Ulmus americana	Good		WOODLAND	S	-
2314	E	4	American Elm	Ulmus americana	Good		WOODLAND	S	-
2315	BC	6	Wild Black Cherry	Prunus serotina	Good		WOODLAND	S	-
2316	BC	7	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
2317	BC	7	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
2318	AP	8	Domestic Apple	Malus sylvestris	Poor	x5	WOODLAND	S	-
2319	BC	6	Wild Black Cherry	Prunus serotina	Poor	x2	WOODLAND	S	-
2320	BC	6	Wild Black Cherry	Prunus serotina	Good		WOODLAND	R	REPLACE
2321	BC	8	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	REPLACE
2322	BC	8	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	REPLACE
2323	WP	18	(Eastern) White Pine	Pinus strobus	Good		WOODLAND	S	-
2324	RM	5	Red Maple	Acer rubrum	Good		WOODLAND	S	-
2325	RM	7	Red Maple	Acer rubrum	Good		WOODLAND	S	-
2326	PO	6	Pin Oak	Quercus palustris	Good		WOODLAND	S	-
2327	BO	8	Black Oak	Quercus velutina	Good		WOODLAND	S	-
2328	RO	4	Red Oak	Quercus rubra	Good		WOODLAND	S	-
2329	BC	7	Wild Black Cherry	Prunus serotina	Good		WOODLAND	S	-
2330	E	7	American Elm	Ulmus americana	Poor		WOODLAND	R	-
2331	BC	10	Wild Black Cherry	Prunus serotina	Good		WOODLAND	R	REPLACE
2332	WP	16	(Eastern) White Pine	Pinus strobus	Good		WOODLAND	R	REPLACE
2333	RM	10	Red Maple	Acer rubrum	Good		WOODLAND	R	REPLACE
2334	WP	21	(Eastern) White Pine	Pinus strobus	Good		WOODLAND	R	REPLACE
2335	BL	8	Black Locust	Robinia pseudoacacia	Good		WOODLAND	S	-
2336	E	8	American Elm	Ulmus americana	Fair		WOODLAND	S	-
2337	E	6	American Elm	Ulmus americana	Good		WOODLAND	R	-
2338	RM	7	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
2339	WP	16	(Eastern) White Pine	Pinus strobus	Good		WOODLAND	R	REPLACE
2340	WP	16	(Eastern) White Pine	Pinus strobus	Good		WOODLAND	R	REPLACE
2341	WP	14	(Eastern) White Pine	Pinus strobus	Fair		WOODLAND	R	REPLACE
2342	RM	7	Red Maple	Acer rubrum	Good		WOODLAND	R	REPLACE
2343	AP	6	Domestic Apple	Malus sylvestris	Poor	x5	WOODLAND	R	-
2344	BC	14	Wild Black Cherry	Prunus serotina	Good	x1	WOODLAND	R	REPLACE
2345	BC	5	Wild Black Cherry	Prunus serotina	Good		WOODLAND	R	-
2346	BC	8	Wild Black Cherry	Prunus serotina	Good		WOODLAND	R	REPLACE
2347	WP	9	(Eastern) White Pine	Pinus strobus	Good		WOODLAND	S	-
2348	BC	14	Wild Black Cherry	Prunus serotina	Good		WOODLAND	S	-
2349	BC	8	Wild Black Cherry	Prunus serotina	Good		WOODLAND	S	-
2350	WP	17	(Eastern) White Pine	Pinus strobus	Good		WOODLAND	R	REPLACE
2351	BC	7	Wild Black Cherry	Prunus serotina	Good		WOODLAND	R	REPLACE
2352	BC	14	Wild Black Cherry	Prunus serotina	Good		WOODLAND	R	REPLACE
2353	RO	23	Red Oak	Quercus rubra	Good		WOODLAND	R	REPLACE
2354	BC	6	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	REPLACE
2355	BL	12	Black Locust	Robinia pseudoacacia	Poor		WOODLAND	R	-
2356	BC	7	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	REPLACE
2357	BC	14	Wild Black Cherry	Prunus serotina	Good		WOODLAND	R	REPLACE
2358	BC	12	Wild Black Cherry	Prunus serotina	Good	x1	WOODLAND	R	REPLACE
2359	WP	11	(Eastern) White Pine	Pinus strobus	Good		WOODLAND	R	REPLACE
2360	WP	10	(Eastern) White Pine	Pinus strobus	Fair		WOODLAND	R	REPLACE
2361	WP	16	(Eastern) White Pine	Pinus strobus	Fair		WOODLAND	R	REPLACE
2362	WP	14	(Eastern) White Pine	Pinus strobus	Good		WOODLAND	R	REPLACE
2363	BP	21	Box elder	Acer negundo	Poor		WOODLAND	S	-
2364	AP	8	Domestic Apple	Malus sylvestris	Fair	x2	WOODLAND	S	-
2365	BO	4	Black Oak	Quercus velutina	Good	x1	WOODLAND	S	-
2366	BC	7	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	REPLACE
2367	RO	9	Red Oak	Quercus rubra	Good		WOODLAND	R	REPLACE
2368	BC	8	Wild Black Cherry	Prunus serotina	Poor		WOODLAND	R	-
2369	VO	5	White Oak	Quercus alba	Good		WOODLAND	R	-
2370	BO	12	Black Oak	Quercus velutina	Fair		WOODLAND	R	REPLACE
2371	RO	6	Red Oak	Quercus rubra	Good		WOODLAND	R	-
2372	RO	10	Red Oak	Quercus rubra	Good		WOODLAND	R	REPLACE
2373	BC	5	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	REPLACE
2374	BO	8	Black Oak	Quercus velutina	Good		WOODLAND	R	REPLACE
2375	BO	12	Black Oak	Quercus velutina	Good		WOODLAND	R	REPLACE
2376	WP	16	(Eastern) White Pine	Pinus strobus	Good		WOODLAND	R	REPLACE
2377	BC	11	Wild Black Cherry	Prunus serotina	Good		WOODLAND	R	REPLACE

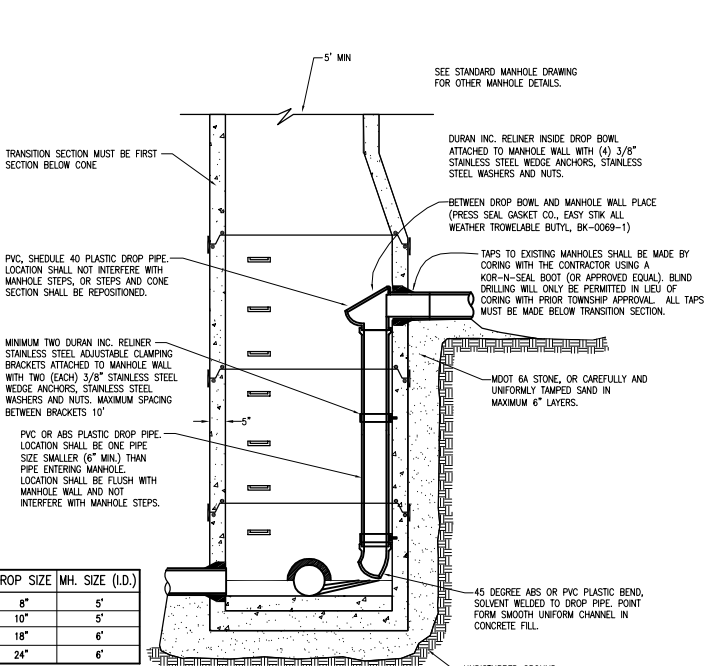
TAG NO.	CODE	DBH	COMMON NAME	LATIN NAME	COND	NOTES	CLASS	SAVE / REMOVE	REPLACEMENT
2378	BC	13	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	REPLACE
2379	RO	10	Red Oak	Quercus rubra	Good	x2	WOODLAND	R	REPLACE
2380	BO	4	Black Oak	Quercus velutina	Good		WOODLAND	R	-
2381	BO	5	Black Oak	Quercus velutina	Good		WOODLAND	R	-
2382	RO	5	Red Oak	Quercus rubra	Fair		WOODLAND	S	-
2383	RO	10	Red Oak	Quercus rubra	Good	x3	WOODLAND	R	REPLACE
2384	BC	10	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
2385	RO	4	Red Oak	Quercus rubra	Good		WOODLAND	R	-
2386	BO	5	Black Oak	Quercus velutina	Fair		WOODLAND	S	-
2387	BO	8	Black Oak	Quercus velutina	Good	x2	WOODLAND	S	-
2388	BC	6	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	REPLACE
2389	BC	13	Wild Black Cherry	Prunus serotina	Good		WOODLAND	R	REPLACE
2390	BO	20	Black Oak	Quercus velutina	Good	x2	WOODLAND	R	REPLACE
2391	BX	12	Box elder	Acer negundo	Fair		INVASIVE	R	-
2392	BP	7	Bradford Pear	Pyrus calleryana	Fair		WOODLAND	R	REPLACE
2393	BC	6	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	REPLACE
2394	BC	10	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	REPLACE
2395	TH	7	Thornapple/Hawthorne	Craspedegys spp.	Fair		WOODLAND	R	REPLACE
2396	BC	14	Wild Black Cherry	Prunus serotina	Good		WOODLAND	R	REPLACE
2397	WP	15	(Eastern) White Pine	Pinus strobus	Good		WOODLAND	R	REPLACE
2398	RM	9	Red Maple	Acer rubrum	Good		WOODLAND	R	REPLACE
2399	BO	6	Black Oak	Quercus velutina	Fair		WOODLAND	R	REPLACE
2400	RM	5	Red Maple	Acer rubrum	Good		WOODLAND	R	-
2401	BC	5	Wild Black Cherry	Prunus serotina	Fair	x1	WOODLAND	R	-
2402	BC	19	Wild Black Cherry	Prunus serotina	Fair	x1	WOODLAND	R	REPLACE
2403	BC	6	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	REPLACE
2404	BP	10	Bradford Pear	Pyrus calleryana	Fair	x2	WOODLAND	R	REPLACE
2405	BX	6	Box elder	Acer negundo	Poor	x1	INVASIVE	R	-
2406	BC	8	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	REPLACE
2407	BO	27	Black Oak	Quercus velutina	Fair		LANDMARK	R	REPLACE
2408	RM	12	Red Maple	Acer rubrum	Good		WOODLAND	S	-
2409	BC	7	Wild Black Cherry	Prunus serotina	Poor		WOODLAND	R	-
2410	RM	5	Red Maple	Acer rubrum	Good		WOODLAND	R	-
2411	BC	7	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
2412	BC	5	Wild Black Cherry	Prunus serotina	Poor		WOODLAND	S	-
2413	BC	12	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
2414	BC	10	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
2415	BC	6	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
2416	RM	9	Red Maple	Acer rubrum	Fair		WOODLAND	S	-
2417	RM	11	Red Maple	Acer rubrum	Good	x2	WOODLAND	S	-
2418	BC	5	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	-
2419	BC	8	Wild Black Cherry	Prunus serotina	Fair	x1	WOODLAND	S	-
2420	BC	8	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
2421	RM	11	Red Maple	Acer rubrum	Good	x1	WOODLAND	R	REPLACE
2422	BC	11	Wild Black Cherry	Prunus serotina	Good		WOODLAND	S	-
2423	RO	12	Red Oak	Quercus rubra	Good		WOODLAND	S	-
2424	PW	5	White Poplar	Populus alba	Good		INVASIVE	S	-
2425	RO	12	Red Oak	Quercus rubra	Good		WOODLAND	S	-
2426	BO	15	Black Oak	Quercus velutina	Fair		WOODLAND	S	-
2427	RM	13	Red Maple	Acer rubrum	Poor		WOODLAND	S	-
2428	BC	9	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
2429	RO	15	Red Oak	Quercus rubra	Fair		INVASIVE	S	-
2430	BX	11	Box elder	Acer negundo	Fair		INVASIVE	R	-
2431	RM	13	Red Maple	Acer rubrum	Fair		WOODLAND	S	-
2432	BX	14	Box elder	Acer negundo	Fair		INVASIVE	R	-
2433	BX	11	Box elder	Acer negundo	Fair		INVASIVE	S	-
2434	BX	13	Box elder	Acer negundo	Fair		INVASIVE	S	-
2435	BX	8	Box elder	Acer negundo	Fair		INVASIVE	S	-
2436	AP	5	Domestic Apple	Malus sylvestris	Fair		WOODLAND	R	-
2437	BC	6	Wild Black Cherry	Prunus serotina	Poor		WOODLAND	R	-
2438	RO	14	Red Oak	Quercus rubra	Fair	x2	WOODLAND	R	REPLACE
2439	BX	13	Box elder	Acer negundo	Fair		INVASIVE	S	-
2440	BX	30	Box elder	Acer negundo	Good		INVASIVE	S	-
2441	BX	14	Box elder	Acer negundo	Poor		INVASIVE	S	-
2442	RM	8	Red Maple	Acer rubrum	Fair		WOODLAND	S	-
2443	BX	13	Box elder	Acer negundo	Fair		INVASIVE	S	-
2444	BX	10	Box elder	Acer negundo	Poor		INVASIVE	S	-
2445	AP	6	Domestic Apple	Malus sylvestris	Fair		WOODLAND	S	-
2446	BX	8	Box elder	Acer negundo	Very Poor		INVASIVE	S	-
2447	BX	10	Box elder	Acer negundo	Fair		INVASIVE	S	-
2448	AP	4	Domestic Apple	Malus sylvestris	Fair		WOODLAND	R	-
2449	BC	5	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
2450	AP	6	Domestic Apple	Malus sylvestris	Fair		WOODLAND	S	-
2451	AP	10	Domestic Apple	Malus sylvestris	Fair		WOODLAND	S	-
2452	RM	11	Red Maple	Acer rubrum	Fair		WOODLAND	S	-
2453	RO	10	Red Oak	Quercus rubra	Fair		WOODLAND	S	-
2454	BO	6	Black Oak	Quercus velutina	Fair		WOODLAND	S	-
2455	BC	12	Wild Black Cherry	Prunus serotina	Poor	x1	WOODLAND	R	-
2456	BC	8	Wild Black Cherry	Prunus serotina	Poor	x1	WOODLAND	R	-
2457	RM	8	Red Maple	Acer rubrum	Poor		WOODLAND	R	-
2458	RM	30	Red Maple	Acer rubrum	Fair	x2	LANDMARK	R	REPLACE
2459	BC	6	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
2460	RO	20	Red Oak	Quercus rubra	Fair		WOODLAND	S	-
2461	RM	9	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
2462	BC	11	Wild Black Cherry	Prunus serotina	Poor		WOODLAND	R	-
2463	RO	8	Red Oak	Quercus rubra	Fair		WOODLAND	R	REPLACE
2464	BC	14	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
2465	BC	12	Wild Black Cherry	Prunus serotina	Poor	x1	WOODLAND	S	-
2466	BC	10	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
2467	BC	4	Wild Black Cherry	Prunus serotina	Poor		WOODLAND	S	-
2468	RM	9	Red Maple	Acer rubrum	Good		WOODLAND	R	-
2469	BC	7	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	REPLACE
2470	BO	14	Black Oak	Quercus velutina	Good		WOODLAND	R	REPLACE
2471	BC	5	Wild Black Cherry	Prunus serotina	Good		WOODLAND	R	-
2472	BC	6	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	REPLACE
2473	BC	12	Wild Black Cherry	Prunus serotina	Fair	x1	WOODLAND	R	REPLACE
2474	BC	10	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
2475	BC	13	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
2476	RM	13	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
2477	BC	12	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
2478	RM	5	Red Maple	Acer rubrum	Fair		WOODLAND	S	-
2479	RM	6	Red Maple	Acer rubrum	Fair		WOODLAND	S	-
2480	RO	12	Red Oak	Quercus rubra	Fair		WOODLAND	S	-
2481	RM	10	Red Maple	Acer rubrum	Fair		WOODLAND	R	REPLACE
2482	BC	8	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
2483	RM	4	Red Maple	Acer rubrum	Good		WOODLAND	S	-
2484	RM	8	Red Maple	Acer rubrum	Fair		WOODLAND	S	-
2485	BC	10	Wild Black Cherry	Prunus serotina	Good		WOODLAND	S	-
2486	BC	12	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
2487	BP	7	Bradford Pear	Pyrus calleryana	Fair		WOODLAND	R	REPLACE
2488	RM	10	Red Maple	Acer rubrum	Good		WOODLAND	S	-
2489	RM	4	Red Maple	Acer rubrum	Good		WOODLAND	S	-
2490	RM	12	Red Maple	Acer rubrum	Good		WOODLAND	R	REPLACE
2491	RM	11	Red Maple	Acer rubrum	Good	x1	WOODLAND	R	REPLACE
2492	RO	13	Red Oak	Quercus rubra	Good		WOODLAND	R	REPLACE
2493	BC	8	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	REPLACE
2494	RM	12	Red Maple	Acer rubrum	Good		WOODLAND	R	REPLACE
2495	RM	10	Red Maple	Acer rubrum	Good		WOODLAND	R	REPLACE
2496	BC	9	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	REPLACE
2497	BC	9	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
2498	RM	7	Red Maple	Acer rubrum	Good		WOODLAND	R	REPLACE
2499	BP	12	Bradford Pear	Pyrus calleryana	Good		WOODLAND	R	REPLACE
2500	RO	22	Red Oak	Quercus rubra	Good		WOODLAND	R	REPLACE
2501	AP	5	Domestic Apple	Malus sylvestris	Good		WOODLAND	S	-
2502	RM	20	Red Maple	Acer rubrum	Good		WOODLAND	R	REPLACE
2503	BC	14	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	REPLACE
2504	BX	15	Box elder	Acer negundo	Fair		INVASIVE	R	-
2505	SU	24	Sugar Maple	Acer saccharum	Good		LANDMARK	R	REPLACE
2506	BC	22	Wild Black Cherry	Prunus serotina	Poor		WOODLAND	R	-
2507	RO	22	Red Oak	Quercus rubra	Fair		WOODLAND	S	-
2508	RO	10	Red Oak	Quercus rubra	Fair		WOODLAND	R	REPLACE
2509	RM	11	Red Maple	Acer rubrum	Good		WOODLAND	R	REPLACE
2510	BC	6	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	REPLACE
2511	BC	10	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-
2512	BC	13	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	S	-



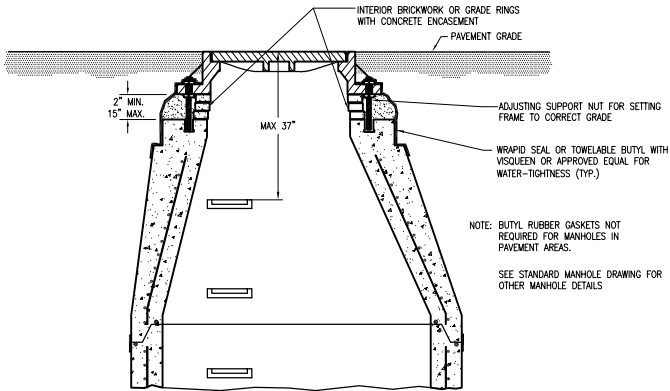
MINIMUM MANHOLE REQUIREMENTS
ON MANHOLES CONSTRUCTED OVER EXISTING SEWERS
FOR LOCAL SANITARY SEWER EXTENSIONS CONNECTING
DIRECTLY OR INDIRECTLY TO OAKLAND COUNTY DRAIN
COMMISSION SEWER



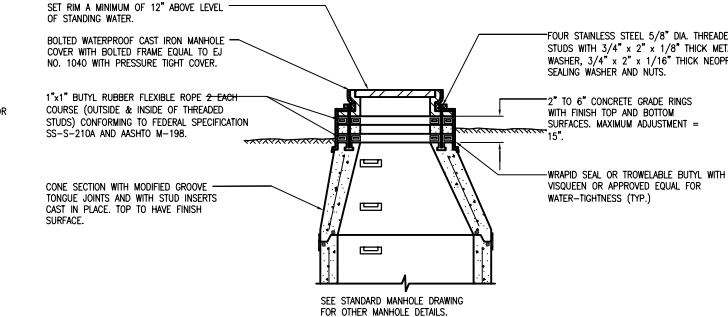
STANDARD MANHOLE
8" THROUGH 24" SEWERS



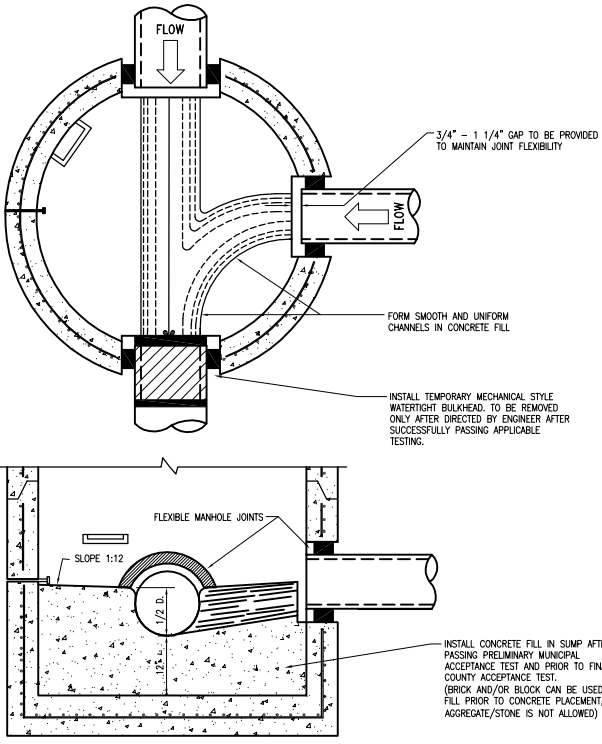
INTERNAL DROP MANHOLE CONNECTION



CONSTRUCTION DETAILS
FOR
MANHOLE TOPS WITHIN PAVEMENT AREAS



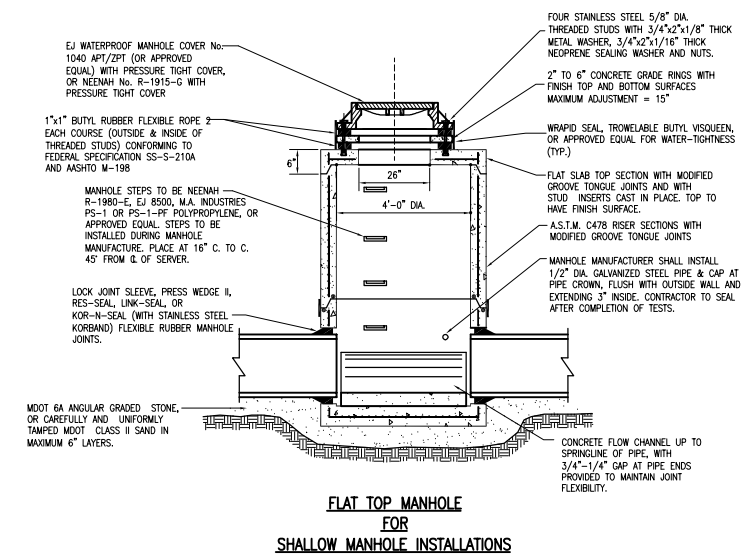
CONSTRUCTION DETAILS FOR
MANHOLE TOPS WITHIN FLOOD PRONE AREAS



SUMP MANHOLE
FOR
TESTING, CLEANING & DEWATERING

SANITARY SEWER CONSTRUCTION NOTES

- All construction shall conform to the current standards and specifications of the Charter Township of Orion and the Oakland County Water Resource Commissioner (O.C.W.R.C.). All sanitary sewer construction shall have full-time inspection directed by a professional engineer provided by, or caused to be provided by, the Charter Township of Orion.
- At all connections to O.C.W.R.C. sewers or to extensions thereto, and before the start of construction, the Contractor must request and have in his possession an approved Sewer Inspection Permit issued by the O.C.W.R.C. The Contractor shall be responsible for all O.C.W.R.C. charges and shall contact O.C.W.R.C. for their fees, bonds and deposit requirements. The Contractor shall notify the Charter Township of Orion, Orchard, Hiltz & McCliment and the O.C.W.R.C. 72 hours, or three working days, prior to the beginning of any construction. Final air test must be witnessed by the O.C.W.R.C. personnel and must be scheduled in advance. Prior to County infiltration tests shall be as specified in O.C.D.P.W. "Acceptance Tests", dated September 1972. Only Modified Groove Tongue, ASTM C 425, ASTM C 443, O-Ring, Unioic, Armit, Nobel, Ring-Tite, Fluid-Tite or equal, as approved by O.C.W.R.C. may be used for sewer joints. All joints shall meet requirements of ASTM C 425 or C 443. No clay pipe or schedule 35 will be allowed for main line sanitary sewer or for sewer leads.
- No sewer installation shall have an infiltration exceeding 100 gallons per inch diameter per mile of pipe per 24 hour period, and no single run of sewer between manholes shall exceed 100 gallons per inch diameter per mile. All sewer runs of 8 inches in diameter or greater shall be tested. Air tests in lieu of infiltration tests shall be as specified in O.C.D.P.W. "Acceptance Tests", dated September 1972. Only Modified Groove Tongue, ASTM C 425, ASTM C 443, O-Ring, Unioic, Armit, Nobel, Ring-Tite, Fluid-Tite or equal, as approved by O.C.W.R.C. may be used for sewer joints. All joints shall meet requirements of ASTM C 425 or C 443. No clay pipe or schedule 35 will be allowed for main line sanitary sewer or for sewer leads.
- At all connections to an existing O.C.W.R.C. sewer or to extensions there to, a temporary watertight bulkhead with a threaded, capped or valved 1 inch diameter pipe to permit measuring infiltration shall be provided to be removed only after directed by the engineer. A 12 inch temporary sump and a watertight mechanical bulkhead shall be installed on the first manhole upstream of the proposed connection. The temporary sump shall be filled in after successful completion of any infiltration test up to the standard fillet provided for the flow channel, and the bulkhead shall be removed after directed by engineer. Infiltration testing is required for all sewers twenty-four (24) inch diameter and greater, or for all sewer pipe diameters where the ground water level is seven (7) feet above the top of the sewer pipe.
- All building leads and risers shall be 6 inch diameter, S.D.R. 23.5 ABS OR PVC pipe with chemically fused joints or an approved equal pipe and joint. Sewer pipe wye or tee openings shall contain factory installed premium joint material of the type identical to that of the building lead pipe used. Building leads to be furnished with removable air-tight and water-tight stoppers.
- All new manholes shall have O.C.W.R.C. approved flexible, water-tight seals where pipes pass through walls. Manholes shall be precast sections with modified groove tongue and rubber gasket type joints. Precast manhole sections shall be O.C.W.R.C. approved modified eccentric cone type. All manholes shall be provided with bolted, water-tight covers.
- At all connections to manholes on O.C.W.R.C. sewers or extensions thereto, drop connections will be required when the difference in invert elevations exceed 18 inches. Only outside drop connections will be approved for drops that are less than twenty (20) feet. If the drop is greater than twenty (20) feet, an internal drop may be used if approved by the township and the O.C.W.R.C.
- Wherever existing manholes are to be tapped, the top shall be made by coring. The Contractor shall place a KOR-N-SEAL boot (or approved equal) after coring is completed. Blind drilling will not be permitted in lieu of coring.
- New manholes constructed directly on O.C.W.R.C. sewers shall be provided with covers reading "Oakland County-Sanitary" in raised letters. New manholes built over any existing sanitary sewers shall have monolithic bottoms.
- No ground water, storm water, construction water, downspout drainage or weep-tile drainage shall be allowed to enter any sanitary sewer installation.
- Three (3) working days prior to construction, the Contractor shall contact MISS DIG (1-800-482-7171) for underground facilities locations.
- 18 inch minimum vertical separation and 10 feet horizontal separation must be maintained between sanitary sewer and water main.
- The sanitary sewer contractor shall notify the inspection section of the Great Lakes Water Authority (GLWA) at (313) 833-4949 at least 3 working days prior to beginning of construction.
- No clay pipe will be allowed for main line sanitary sewer or for sanitary sewer leads.
- A video (with log and lead locations) shall be submitted and approved by the Township prior to final acceptance. Said videotape shall be performed a minimum of 30 days after construction is completed. The sanitary sewer must be cleaned prior to videoing. Water must be run through the system from the upstream manhole prior to videoing. The videoing will not be accepted if the sewer is not cleaned prior to the inspection.
- Where sanitary sewer cleanouts fall within a paved area (parking lot, service drive area, etc.), the cleanout shall have a cast iron cover that is centered in a 2'x2'x6" concrete slab having a compressive strength of 3000 psi at 28-day cure time. All sewer leads require at least one cleanout within 5' of the building. Additional cleanouts are required at all horizontal bends when lead length is greater than 100'.
- Tracing wire shall be provided for all sewers regardless of material. Wire shall be copper clad, 12 gauge solid or woven green coated, insulated per Township requirements. Connection is required at all service leads and manholes, with exposed wire tied installed between the adjustment ring and frame. Conductivity shall be tested by the Township prior to acceptance of sanitary sewer. All splices shall be made using a gel-cap product which provides a water proof seal, such as 3M's Direct Bury Splice Kit #P054007/09964 or approved equal.



FLAT TOP MANHOLE
FOR
SHALLOW MANHOLE INSTALLATIONS

DRAWING PATH: P:\0101_0125\012180010_Orion_Standard Detail_Updates\Drawings\Plotting\Orion_Scan02_updated_6-12-18.dwg Jun 29, 2018 - 10:29am

SPECIFICATIONS FOR POLYVINYL CHLORIDE (PVC) PIPE (LEADS ONLY)

MATERIALS AND CERTIFICATIONS

PVC Pipe and Fittings shall be as described under ASTM Designation D 3034-81, Standard Specification for Polyvinyl Chloride Sewer Pipe and Fittings.

All pipe shall be certified by the manufacturer to meet the applicable ASTM specification requirements. Certification forms together with a report of the test results shall be provided to the construction inspector with pipe deliveries and copies shall be forwarded to the Engineer or the Owner. Certification forms shall include project name, location, Contractor, and test lot number. Lot sizes shall be acceptable to the Engineer.

All pipe and fittings shall be suitably marked to provide manufacturer's name or trademark, lot or production number (including date and location of manufacture), ASTM designation, PVC cell classification, SDR number, and nominal diameter. Fittings, however, need not contain lot number, cell classification, or SDR number. Pipe shall have a "home" mark.

BEDDING

Bedding for PVC pipe shall be in accordance with ASTM D 2321-74, except (1) only Class I and Class II materials may be used, (2) embedment shall extend to minimum 12" above top of pipe, and (3) flooding or puddling shall not be used. It is essential that it be recognized that the successful use of flexible pipe requires bedding that provides unyielding side support and complete bedding contact under pipe haunches. Bedding material must be properly placed and compacted provide lateral restraint against deflection in the pipe diameter. Pipe must be bedded to true line and grade throughout its length. Bell holes shall be provided where required.

Where unstable bottoms are encountered, the Contractor shall provide a foundation consisting of an approved graded and processed angular stone to act as an impervious mat to prevent migration or vertical movement of unstable soils or bedding materials. Where trench sheeting, plates, or a trench box are used due to severe ground conditions, all voids to the side and below the top of the pipe caused by the sheeting, plates, or box withdrawal shall be completely filled or the supports left in place below the top of the pipe.

Concrete cradle bedding shall not be used where allowable trench widths are exceeded. In lieu of concrete cradle bedding standard pipe bedding shown shall be provided to the full width between undisturbed trench walls or at least to 2.5 pipe diameters on both sides of the pipe.

Due to potential damage to exterior walls of plastic pipe, caused by rocks, frozen material, or large objects (particularly in cold weather conditions), the Contractor shall carefully avoid dumping any materials other than approved bedding sand or stone on the pipe until a 12" cover is placed on it. Pipe walls and joints shall also be protected from abrasion and damage during handling, and shall be fully inspected just prior to placing in the trench.

Care shall be taken during bedding compaction to avoid distorting the shape of the pipe or damaging its wall. Mobile equipment shall not be used over the pipe trench until 48" of cover has been placed.

House connections shall be made to wye. Field taps of sewer are prohibited. Bedding for house connections sewers shall be equal to that of the main sewer bedding. Risers in deep and unstable trenches should be bedded in Class I angular stone to avoid settlement. Concrete shall not be used for bedding. End caps or plugs shall be braced or anchored to withstand air test pressures. Caps or plugs shall not be chemically welded in place.

JOINTS

Joins for pipe and fittings shall be of the elastomeric gasket push-on type. Such joints shall conform to ASTM Designation D 3212-81, and the pipe manufacturer shall file with the O.C.W.R.C. a copy of certified test results of its jointing system prior to use. Gasket joints shall be installed in accordance with procedures specified by the pipe manufacturer, such that the gasket will be compressed (not displaced) in the joint to form a positive seal. Care shall be taken to ensure all joints being pushed to the full "home" position and held together in the "home" position during any grade or line adjustments.

CUTTING AND HANDLING

Cutting of pipe lengths, where required, shall be performed by the use of tools or equipment that will provide a neat, perpendicular cut without damage to the plastic. All burrs shall be removed by the use of a file, knife, or abrasive paper. Spigot ends on cut pipe shall be beveled similar to factory beveling to prevent gasket damage.

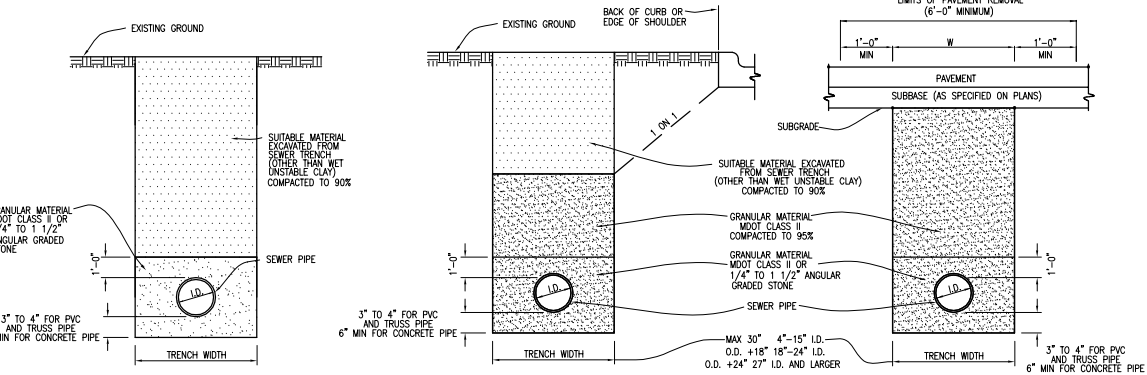
Bowing or warping of plastic pipe can occur with temperature fluctuations. The Contractor shall store and protect the pipe to minimize bowing. Nominal pipe lengths of 10', 12'6", or 20' having deviations from straight greater than 1" shall not be used.

SPECIAL CONDITIONS

The completed installation shall at no point have out-of-round pipe deflections greater than 7 1/2%. The Engineer shall have the option of requiring deflectometer or go/no-go gauging tests run prior to acceptance on pipelines where high deflections are suspected.

All standard O.C.W.R.C. specifications and details shall apply to this work except where covered otherwise by these supplemental specifications. O.C.W.R.C. air test requirements shall be met. To maintain the flexibility of the pipe materials, concrete encasement of drop connections shall not be used. Where adapters to other materials are required, only approved adapters and joints may be used. Where the connections are made to existing manholes, the manhole shall be cored and a rubber watertop shall be used around the pipe.

"As-built" plans shall be provided to the O.C.W.R.C. and the local unit of Government by the Engineer and "as-built" plans shall specifically designate where ABS and PVC Truss Pipe was installed.



SEWER NOT UNDER ROADBED TRENCH A

SEWER UNDER ROADBED OR WITHIN INFLUENCE OF ROADBED TRENCH B

UTILITY TRENCHES

SPECIFICATIONS FOR TRUSS PIPE

MATERIALS AND CERTIFICATIONS

Contech Truss Pipe and Fittings shall be as described under ASTM Designation D2680, Standard Specification for Acrylonitrile-Butadiene-Styrene (ABS) and Poly Vinyl Chloride (PVC) Composite Sewer Pipe. Appendix XI of said specification shall be as modified by the bedding requirements outlined below.

All pipe shall be certified by the manufacturer to meet the applicable ASTM specification requirements. Certification forms, together with a report of the test results, shall be provided to the inspector with pipe deliveries and copies shall be forwarded to the Engineer or the Owner. Certification forms shall include project name, location, Contractor, and test lot number. Lot sizes shall be acceptable to the Engineer.

All pipe and fittings shall be suitably marked to provide manufacturer's name, lot or production number (including date and location of manufacture), ASTM designation, material type (ABS or PVC) and nominal diameter where applicable. Fittings, however, need not contain lot or production number. Pipe shall have a "home" mark. Truss Pipe with an absence of filler material at the ends greater than 1/4" deep shall be subject to rejection or acceptable repair.

BEDDING

Bedding for Truss Pipe shall be in accordance with ASTM D2321-74, except, (1) only Class I and Class II materials may be used, (2) embedment shall extend to minimum 12" above top of pipe, and (3) flooding or puddling shall not be used. It is essential that it be recognized that the successful use of flexible and semi-flexible pipe require bedding that provides unyielding side support and complete bedding contact under pipe haunches. Bedding material must be properly placed and compacted to provide lateral restraint against deflection in the pipe diameter. Pipe must be bedded to true line and grade throughout its length.

Where unstable bottoms are encountered, the Contractor shall provide a foundation consisting of an approved graded and processed angular stone to act as an impervious mat to prevent migration or vertical movement of unstable soils or bedding materials. Where trench sheeting, plates, or a trench box are used due to severe ground conditions, all voids to side and below the top of the pipe caused by the sheeting, plates, or box withdrawal shall be completely filled or the supports left in place below the top of the pipe.

Concrete cradle bedding shall not be used where allowable trench widths are exceeded. In lieu of concrete cradle bedding, standard pipe bedding shown shall be provided to the full width between undisturbed trench walls or at least 2.5 pipe diameters on both sides of the pipe. Due to potential damage to exterior walls of truss pipe, caused by rocks, frozen material, or large objects (particularly in cold weather conditions), the Contractor shall carefully avoid dumping any materials other than approved bedding sand or stone on the pipe until a 12" cover is placed on it. Pipe walls and joints shall also be protected from abrasion and damage during handling, and shall be fully inspected just prior to placing in the trench.

Care shall be taken during bedding compaction to avoid distorting the shape of the pipe or damaging its exterior wall. Mobile equipment shall not be used over the pipe trench until 48" of cover has been placed.

House connections shall be made to wye or tee fittings. Field taps of sewer are prohibited. Bedding for house connection sewers shall be equal to that of the main sewer bedding. Risers in deep and unstable trenches should be bedded in Class I angular stone to avoid settlement. Concrete shall not be used for bedding. End caps or plugs shall be braced or anchored to withstand air test pressures. Caps or plugs shall not be chemically welded in place.

JOINTS

Joins for pipe and fittings shall be of the elastomeric gasket push-on type. Such joints shall conform to ASTM Designations D2680 and D2235 for ABS Truss Pipe and D2680 and D2855 for PVC Truss Pipe. Additionally, all exposed ends of Truss Pipe shall be fully and thoroughly coated with plastic jointing cement prior to making joints so as to seal ends to eliminate the possibility of false low pressure air tests. Elastomeric gasket push on type joints may be utilized for PVC Truss Pipe in accordance with ASTM Designation D3212. Care shall be taken to ensure all joints being pushed to the full "home" position and held tightly in the "home" position during any grade or line adjustments. Pipe shall be rotated during joint insertion to insure a complete spread of jointing cement. ABS and PVC Plastic Cement Primers and ABS and PVC Plastic Pipe Cements shall arrive at the job site in sealed and labeled containers. "Johnny Mops" or similar swab type applicators shall be used apply primer and cement. Opened containers in the trench shall be protected from dirt, water and other contaminants. The pipe manufacturer shall file with the O.C.W.R.C. a copy of certified test results of its jointing system prior to use. Gasket joints shall be installed in accordance with procedures specified by the pipe manufacturer, such that the gasket will be compressed (not displaced) in the joint to form a positive seal. Care shall be taken to ensure all joints being pushed to the full "home" position and held together in the "home" position during any grade or line adjustments.

CUTTING AND HANDLING

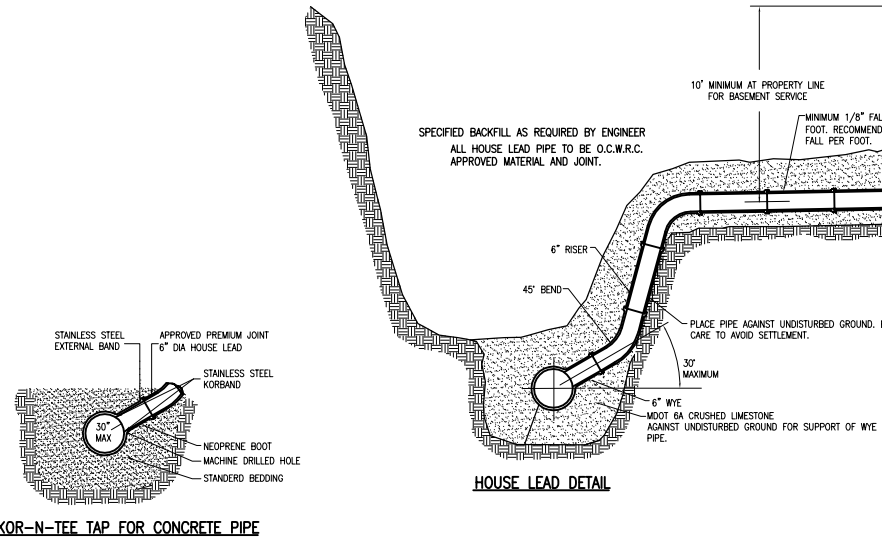
Cutting of pipe lengths, where required, shall be performed by the use of tools or equipment that will provide a neat, perpendicular cut without damage to the plastic or the filler material. Bowing or warping of ABS and PVC pipe can occur with temperature fluctuations. The Contractor shall store and protect the pipe to minimize bowing. Nominal 12'6" pipe lengths having deviations from straight greater than 1" shall not be used.

SPECIAL CONDITIONS

The completed installation shall at no point have out-of-round pipe deflections greater than 5%. The Engineer shall have the option of requiring deflectometer or go/no-go gauging tests run prior to acceptance on pipelines where high deflections are suspected.

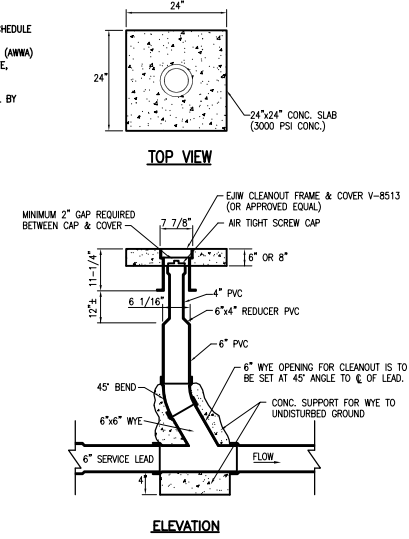
All standard O.C.W.R.C. specifications and details shall apply to this work except where covered otherwise by these supplemental specifications. O.C.W.R.C. air test requirements shall be met. To maintain the flexibility of the pipe materials, concrete encasement of drop connections shall not be used. Where adapters to other materials are required, only approved adapters and joints may be used. Where the connections are made to existing manholes, the manhole shall be cored and a rubber watertop shall be used around the pipe.

"As-built" plans shall be provided to the O.C.W.R.C. and the local unit of Government by the Engineer and "as-built" plans shall specifically designate where ABS and PVC Truss Pipe was installed.

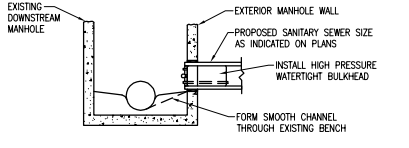


OAKLAND COUNTY WATER RESOURCE COMMISSION GRAVITY BUILDING LEAD REQUIREMENTS AND DETAILS

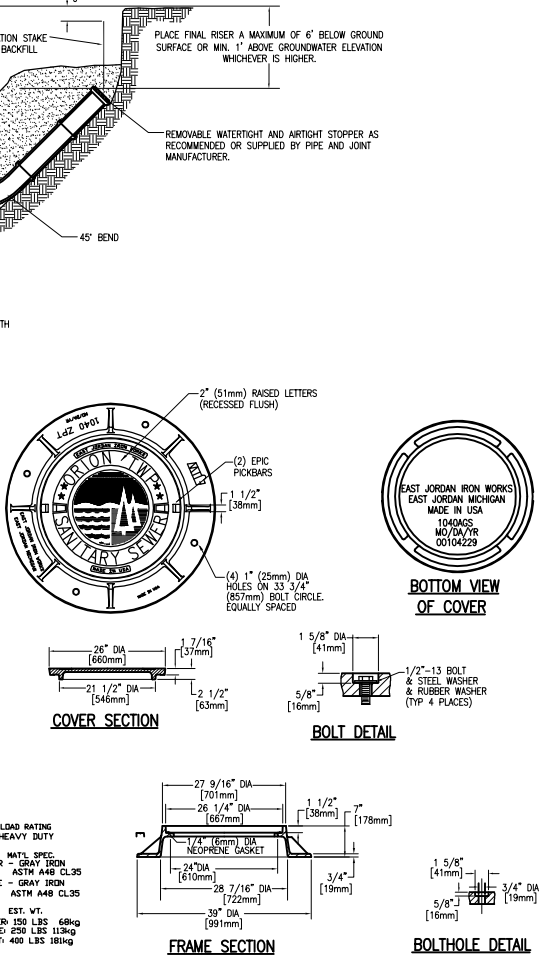
1. ALL BUILDING LEAD WORK MUST BE PERFORMED UNDER OAKLAND COUNTY WATER RESOURCE COMMISSION (OCWR) AND/OR THE CHARTER TOWNSHIP OF ORION.
2. FOR ALL OCWRG-OPERATED SYSTEMS, CALL (248) 858-1110
3. 24-HOURS IN ADVANCE OF WORK TO SCHEDULE INSPECTION
4. NO SANITARY SEWER MAY BE USED AS A CLEANOUT OR DEWATERING OUTLET
4. WHERE AN EXISTING BUILDING LEAD IS BEING EXTENDED, DISSIMILAR TYPES AND SIZES OF PIPE SHALL BE JOINED USING AN OCWRG APPROVED ADAPTER.
5. APPROVED BUILDING LEAD PIPE FOR GRAVITY SEWER LEADS:
 - A. PVC PLASTIC, ASTM D3034 SDR 23.5 OR ASTM D2685, SCHEDULE 40
 - B. DUCTILE IRON PIPE, AMERICAN WATER WORKS ASSOCIATION (AWWA) C-104/A214 CLASS 54. JOINTS SHALL BE SUPER BEL TIE, TYTON, TY-SEAL, MULTI-TITE, DUAL-TITE, OR VERI-TITE.
 - C. ANY DEVIATIONS FROM SPECIFIED ABOVE REQUIRE APPROVAL BY OCDC.
6. ALLOWABLE TYPES OF SEWER PIPE ADAPTERS:
 - A. FERNOCO ADAPTER/REDUCER DONUTS.
 - B. FERNOCO FLEXIBLE COUPLING (ONLY ALLOWABLE ON 6" OR LESS HOUSE LEADS).
 - C. MISSION CLAY BAND-SEAL COUPLING.
 - D. SMITH-BLAIN STAINLESS STEEL REPAIR CLAMP.
 - E. HURON-CLINTON O-RING ADAPTER.
 - F. HAMILTON-KENT GEAR GRIP ADAPTER.
 - G. PLANT FABRICATED JOINT CONVERSION PIPE.



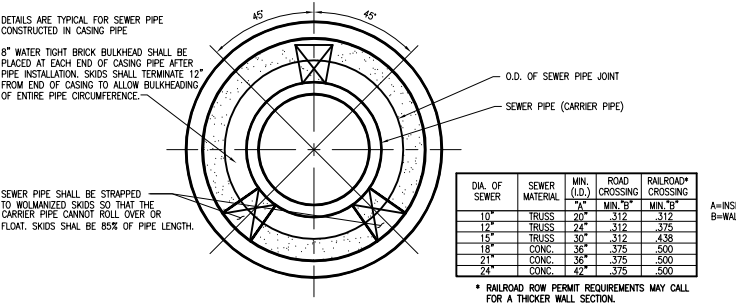
DETAIL OF SANITARY SEWER CLEANOUT IN PAVED AREA



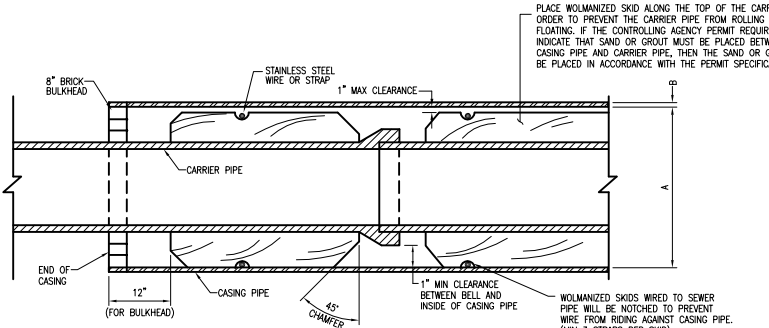
- TESTING BULKHEAD WITH PIPE TAP**
- * AT ALL CONNECTIONS TO AN EXISTING O.C.W.R.C. SEWER OR EXTENSIONS THERETO, A WATERTIGHT BULKHEAD WITH A THREADED CAPPED OR VALVED 1 INCH DIA. PIPE TO PERMIT MEASURING INFILTRATION SHALL BE PROVIDED. TO BE REMOVED ONLY AFTER DIRECTED BY ENGINEER.
 - * INFILTRATION TESTING IS REQUIRED FOR ALL SEWERS TWENTY-FOUR (24) INCH DIAMETER AND LARGER OR FOR ALL SEWER PIPE DIAMETERS WHERE THE GROUND WATER LEVEL IS SEVEN (7) FEET ABOVE THE TOP OF THE SEWER PIPE.



C.I. MANHOLE COVER E.J. 1040 APT/ZPT



PIPE BARREL SUPPORT FOR SEWER PIPE CONSTRUCTED IN CASING PIPE



STANDARD CASING SECTION

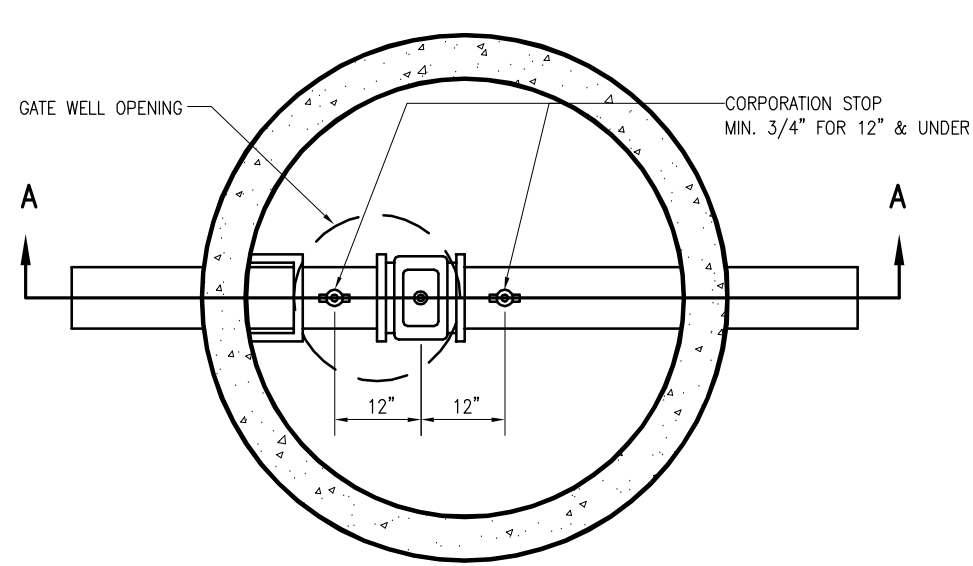
OHM
ARCHITECTS ENGINEERS PLANNERS
34000 PLYMOUTH RD
LIVONIA, MI 48150
P: (734) 522-6711
OHM-ADVISORS.COM

97

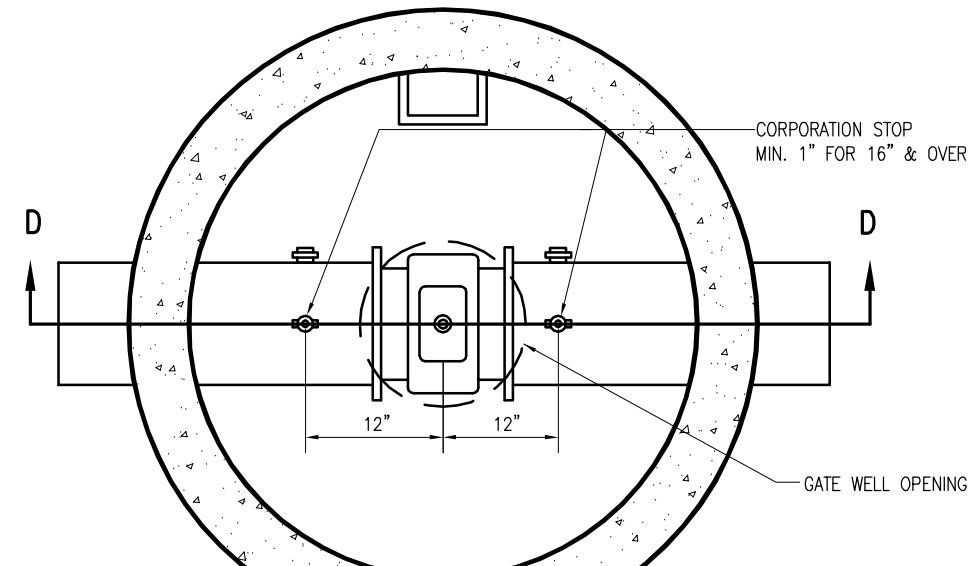
CHARTER TOWNSHIP OF ORION
SANITARY SEWER STANDARD DETAILS

DATE: 6/29/2018
PROJ. NUMBER: 10125012180010
ENG: SWR
CITY/VILLAGE/TOWNSHIP: ORION
COUNTY: OAKLAND
PR: CAD
SCALE: H: NTS V: NTS
SHEET: 2 OF 2

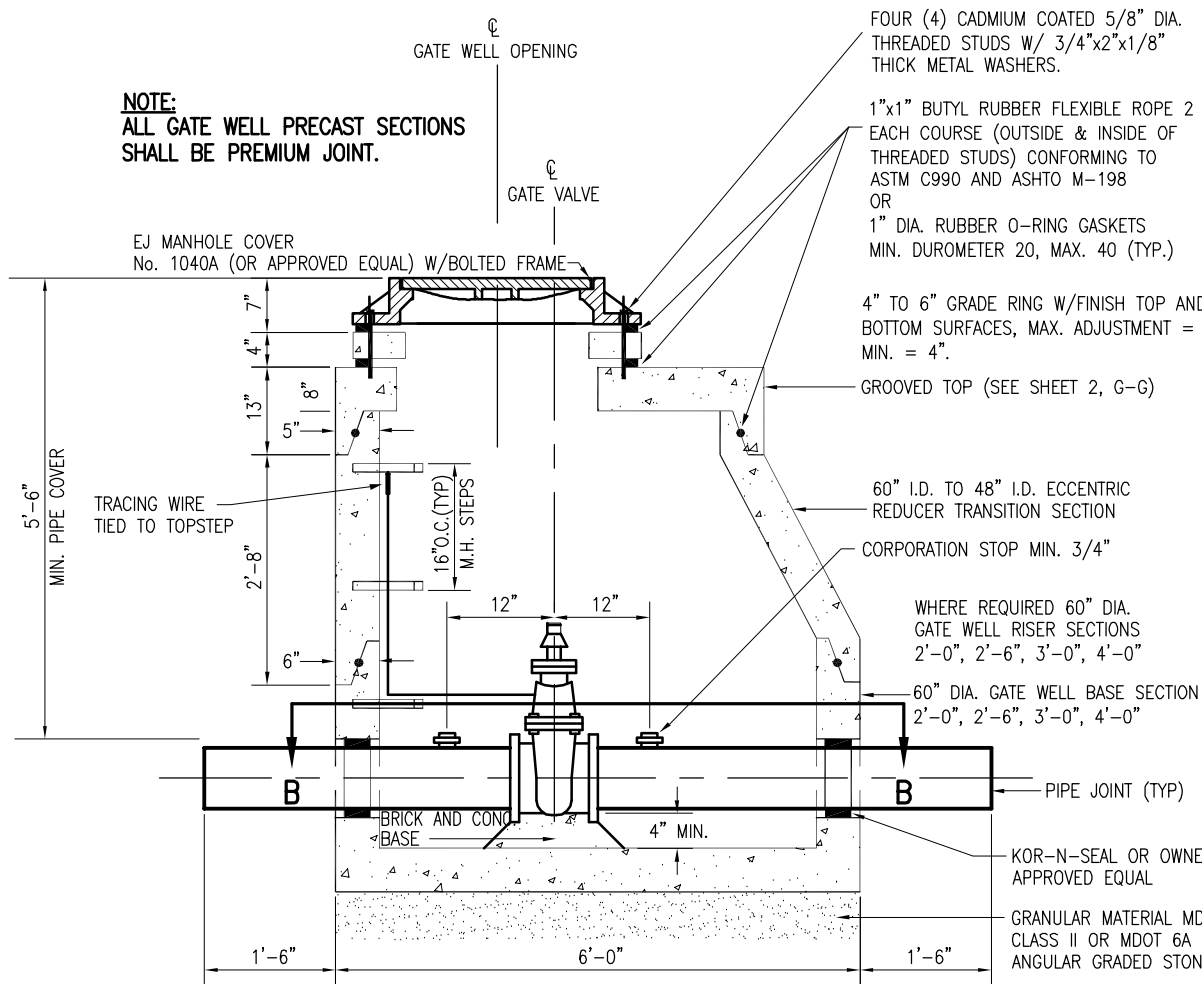
COPYRIGHT 2017 OHM ALL DRAWINGS AND WRITTEN MATERIALS APPEARING HEREIN CONSTITUTE THE ORIGINAL AND UNPUBLISHED WORK OF OHM AND THE SAME MAY NOT BE DUPLICATED, DISTRIBUTED, OR DISCLOSED WITHOUT PRIOR WRITTEN CONSENT OF OHM



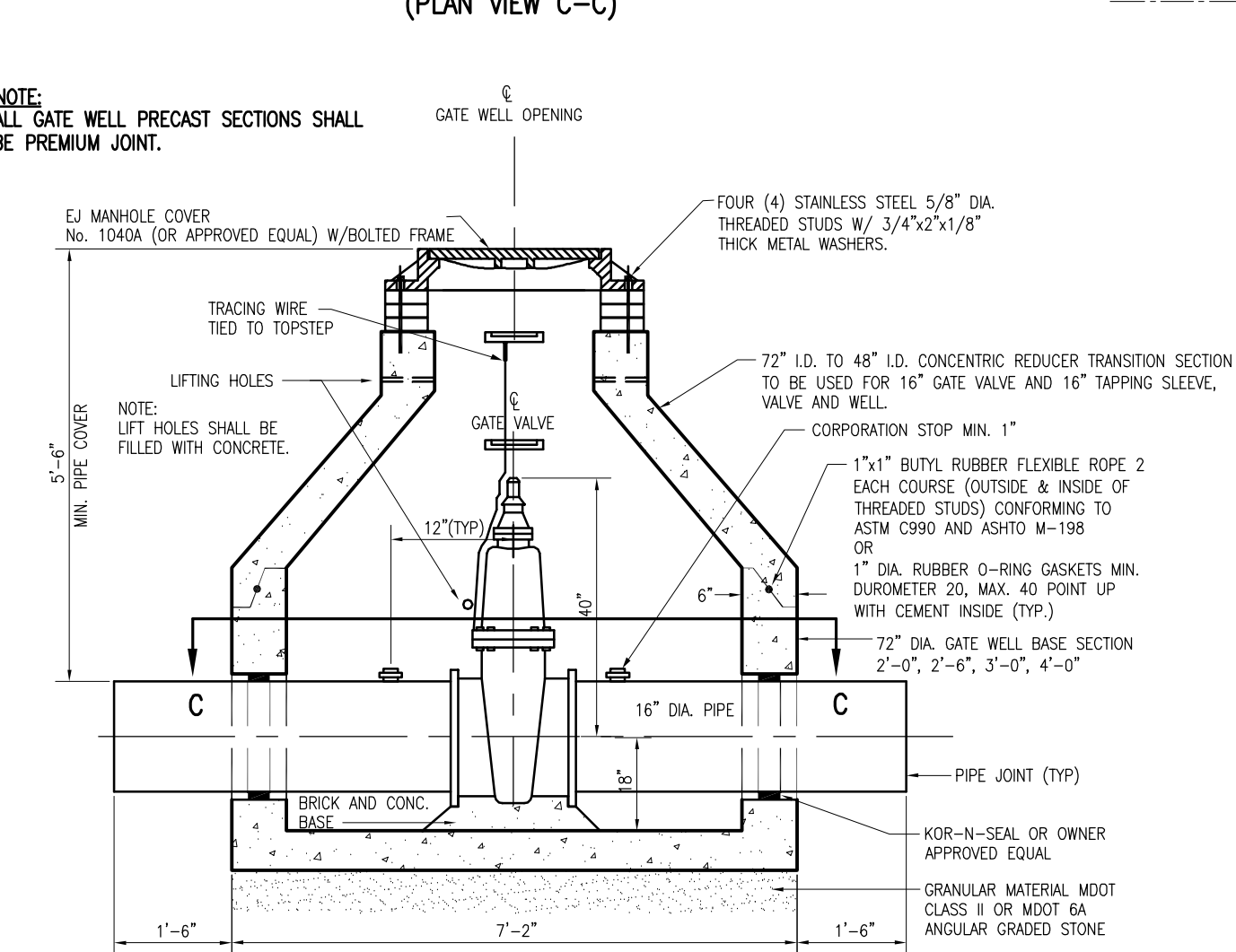
6", 8" & 12" GATE WELL
(PLAN VIEW B-B)



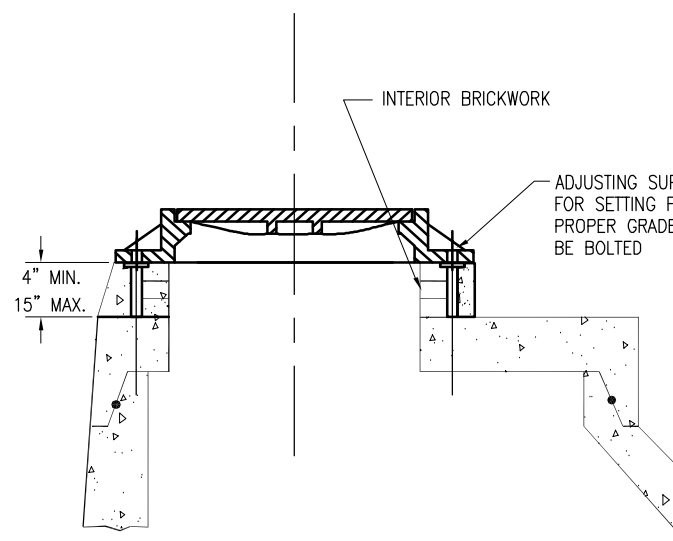
16" & 24" GATE WELL
(PLAN VIEW C-C)



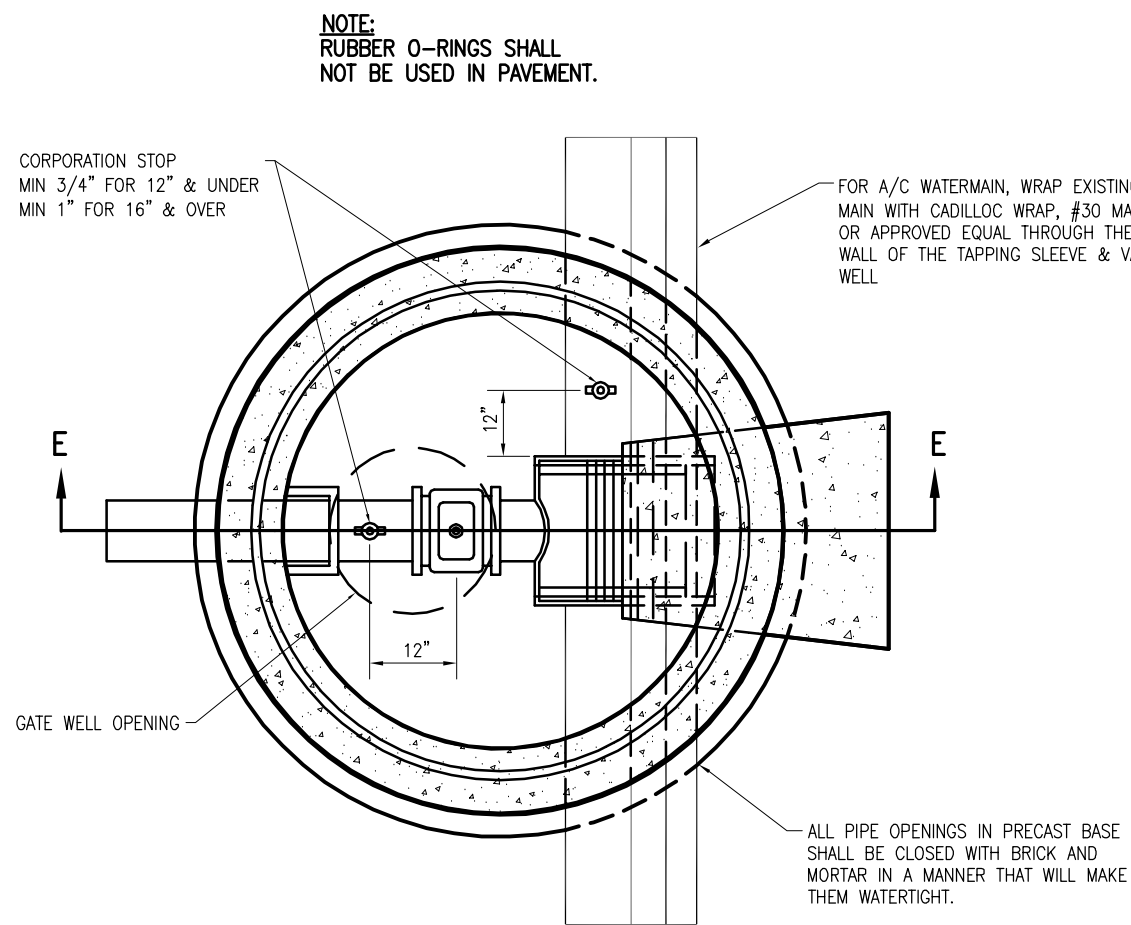
6", 8" AND 12" GATE WELL
(A-A)



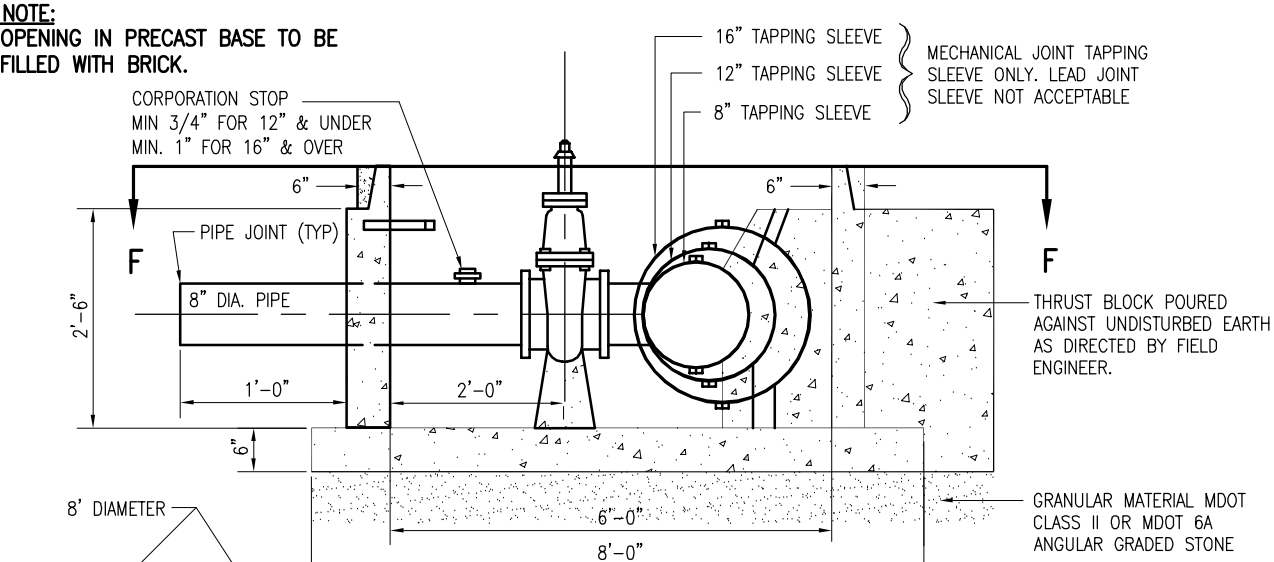
16" & 24" GATE WELL
(D-D)



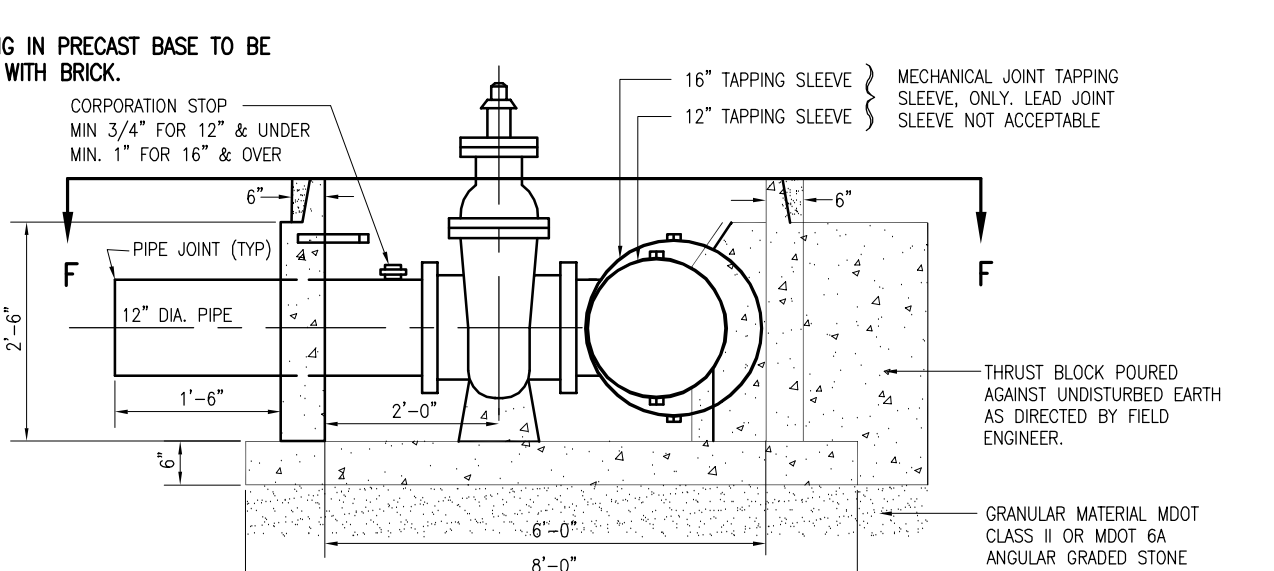
GATE WELL TOPS WITHIN PAVEMENT AREAS



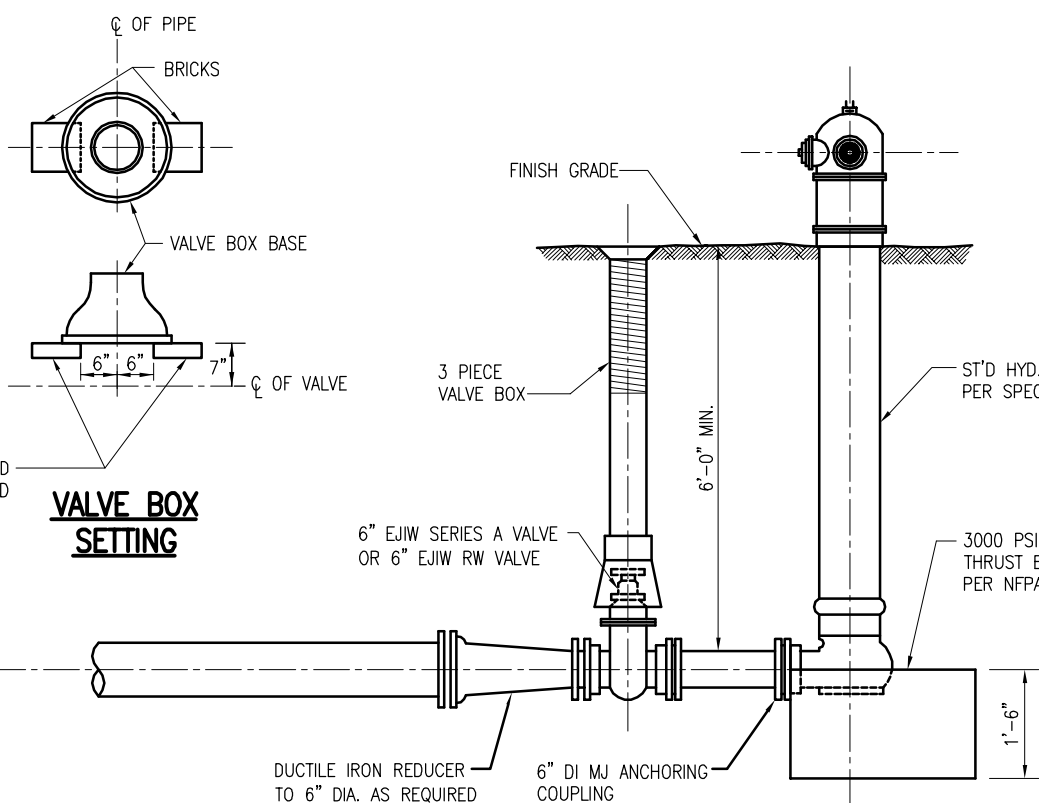
TAPPING SLEEVE VALVE & WELL TYPICAL
(PLAN VIEW F-F)



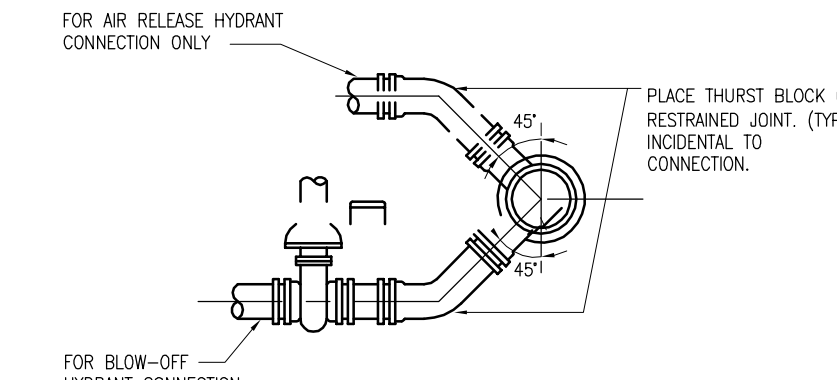
16"x 8", 12"x 8", 8"x 8" TAPPING SLEEVE, VALVE & WELL
(E-E)



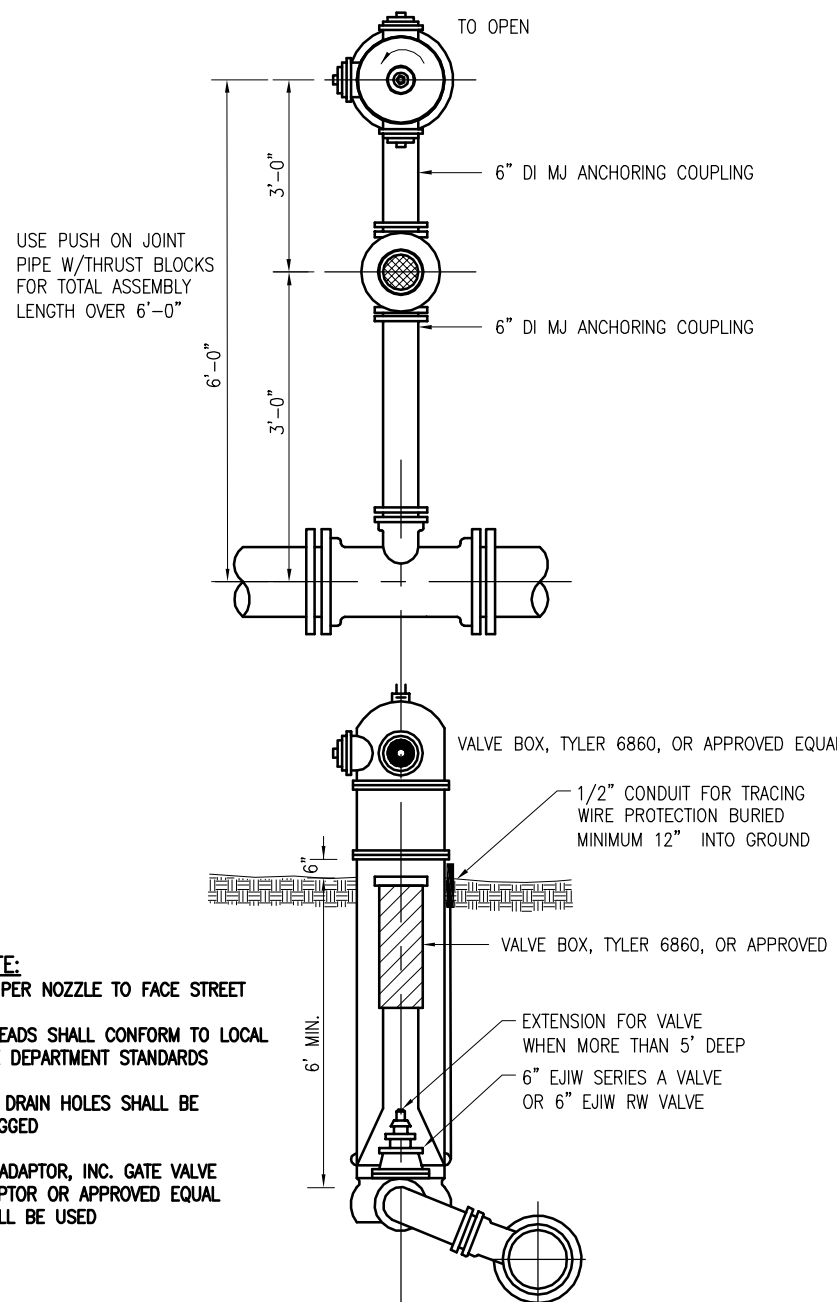
16"x 12", 12"x 12" TAPPING SLEEVE, VALVE & WELL
(E-E)



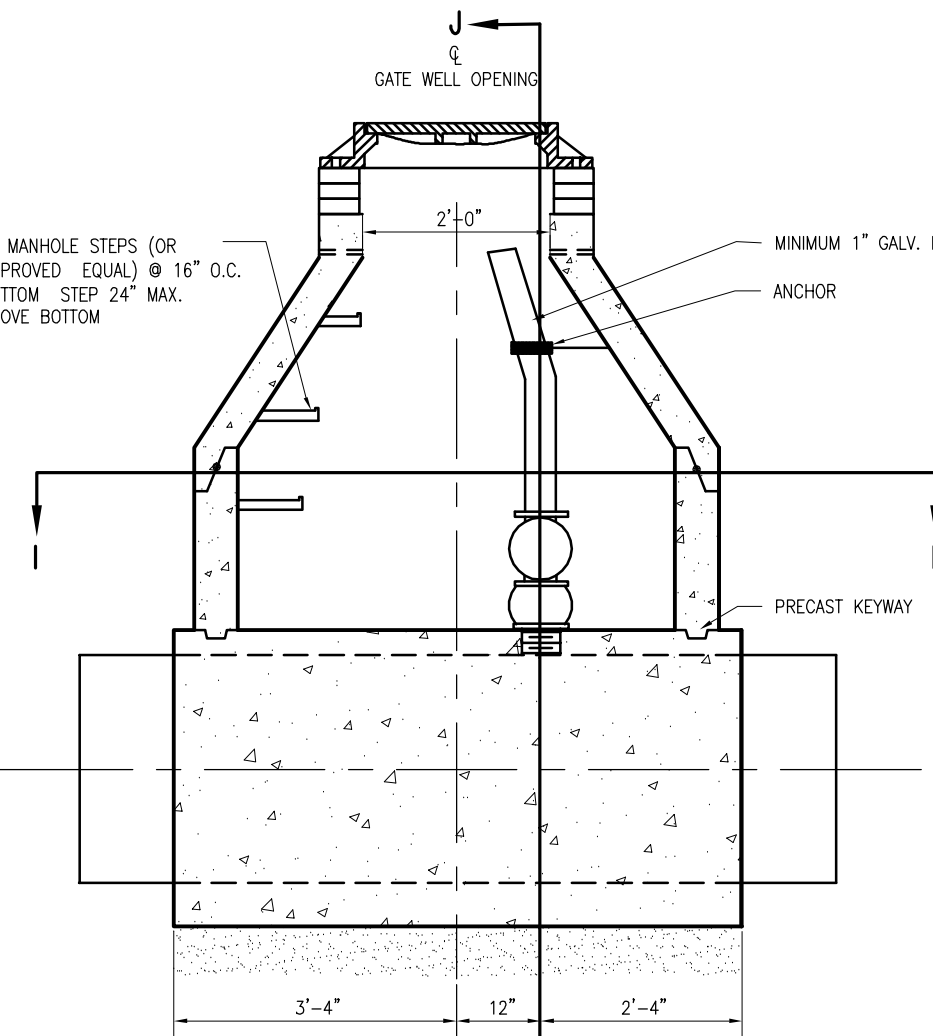
END OF WATER LINE ASSEMBLY FOR 6" & 8" DIA. MAINS



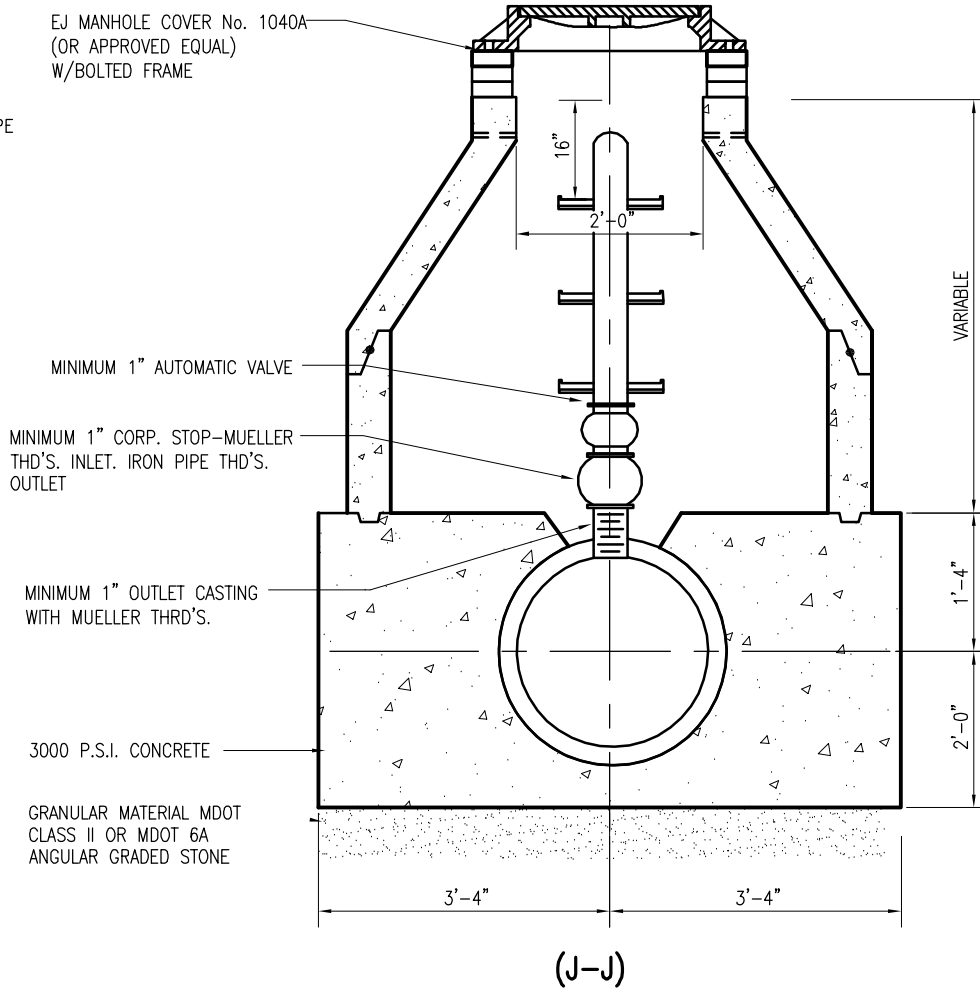
HYDRANT AIR RELEASE AND BLOW-OFF CONNECTION



DETAIL OF HYDRANT SETTINGS



STANDARD AIR RELEASE & WELL FOR 16" & 20" WATER MAIN



(J-J)

- GENERAL NOTES:**
- All construction procedures and materials used on all water main projects shall conform to American Water Works Association (AWWA), Great Lakes Water Authority (GLWA) and Orion Township current Standards and Specifications.
 - No installation of water main is to be attempted without Township's inspector being present. Unless otherwise specified on plans, top of all water mains shall be 5.5 ft. below existing or proposed road centerline, or 5.5 ft. below existing or proposed ground, whichever results in lower elevation.
 - The design engineer shall furnish Orion Township with "record plan" water main plans upon job completion. Plans shall locate all water mains, hydrants and gate valves and wells.
 - All required cross connection devices shall be installed as required by the local plumbing inspector and in accordance with the standards of the Michigan Department of Public Health.
 - Three (3) working days before you dig, dial MISS DIG at 1-800-482-7171.
 - Contractor shall notify the GLWA Field Office (833-4682) 3 working days prior to start of construction and request an inspection of the job.
 - All ductile iron pipe and all pipe fittings shall be made in the U.S.A. and shall comply with AWWA C111-17 and/or AWWA C115-11.
 - All bolts on all flanged and mechanical joint fittings shall be domestic origin high strength, low alloy COR-BLUE steel bolts or approved equal. These bolts shall meet the current provisions of American National Standard ANSI/AWWA C111/A21.11-90 for rubber gasket joints for ductile iron pressure pipes and fittings. Bolt manufacturer's certifications of compliance must accompany each shipment.
 - BACKFILL NOTE: Under road surfaces, pavement, sidewalk, curb, driveways and where the edge of the trench is within 3 (three) feet of the pavement or as called for on the plans, the trench depth shall be 4 (four) inches lower than the proposed water main elevation. The trench width shall be the outside diameter plus 12 (twelve) inches for pipe diameters up to 36 (thirty-six) inches (See Detail on Sheet 2). The trench shall be backfilled by placing granular material by the "controlled Density Method" or other means having approval of the engineer and compacting it to 95 (ninety-five) percent of its maximum unit weight.
 - Tracing wire shall be provided for all water main, regardless of material. Wire shall be copper clad, 12 gauge solid or woven blue coated, insulated per Township requirements. Connection is required at all service leads, hydrants, and gate wells, with exposed wire tied to topstep. Conductivity shall be tested by the Township prior to the acceptance of the main. All splices shall be made using a gel-cap product which provides a water proof seal, such as 3M's Direct Bury Splice Kit #P054007/09964 or approved equal. All tracing wire connected to hydrants shall be housed in 1/2" stainless steel conduit buried a minimum 12" into ground.
 - Polywrap shall be placed as required by the Township.
 - Where water main is located under pavement, the Township shall not be responsible for repairing pavement within the easement in the event that maintenance or repairs to the water main become necessary.

- TESTING:**
- Pressure testing of watermain including standard fire suppression leads and riser into the building will be conducted by OHM witnessing on behalf of the Municipality. Water main testing shall be per AWWA. Notify OHM (Site Coordinator) of schedule (3 working days prior to test). Prior to any utility testing, the remaining escrow amount will be reviewed to verify that there is enough escrow to complete the project.
 - Pressure testing of remote FDC's and fire suppression lines extending between buildings will be conducted by Orion Township Fire Department. Water main testing shall be per NFPA 13 2016. Notify Jeff Williams, Fire Marshal for Orion Township 248-391-0304 x 2003 of schedule (3 working days prior to test).
 - Prior to chlorinating the water main, the main shall be filled with potable water to eliminate air pockets and flushed to remove particulates. The flushing velocity in the main shall not be less than 3.0 ft/sec per AWWA C600-17. The main shall be disinfected per AWWA C651-14 and then flushed following the chlorination.
 - Bacteriological testing shall be conducted per AWWA C651-14. No bacterial tests will be performed until pressure tests have been passed. Two sets of bacteria samples (two consecutive days, at least 24 hours apart) will be obtained by a licensed testing agency and method of installation will be approved by the engineer prior to installation. Cost of the sampling/testing is the responsibility of the Contractor/Developer. Hard copy results must be on file at OHM prior to any tie-in. Contractor shall have the samples taken and analyzed at a Michigan Department of Environmental Quality (MDEQ) approved lab. Two current local labs are:

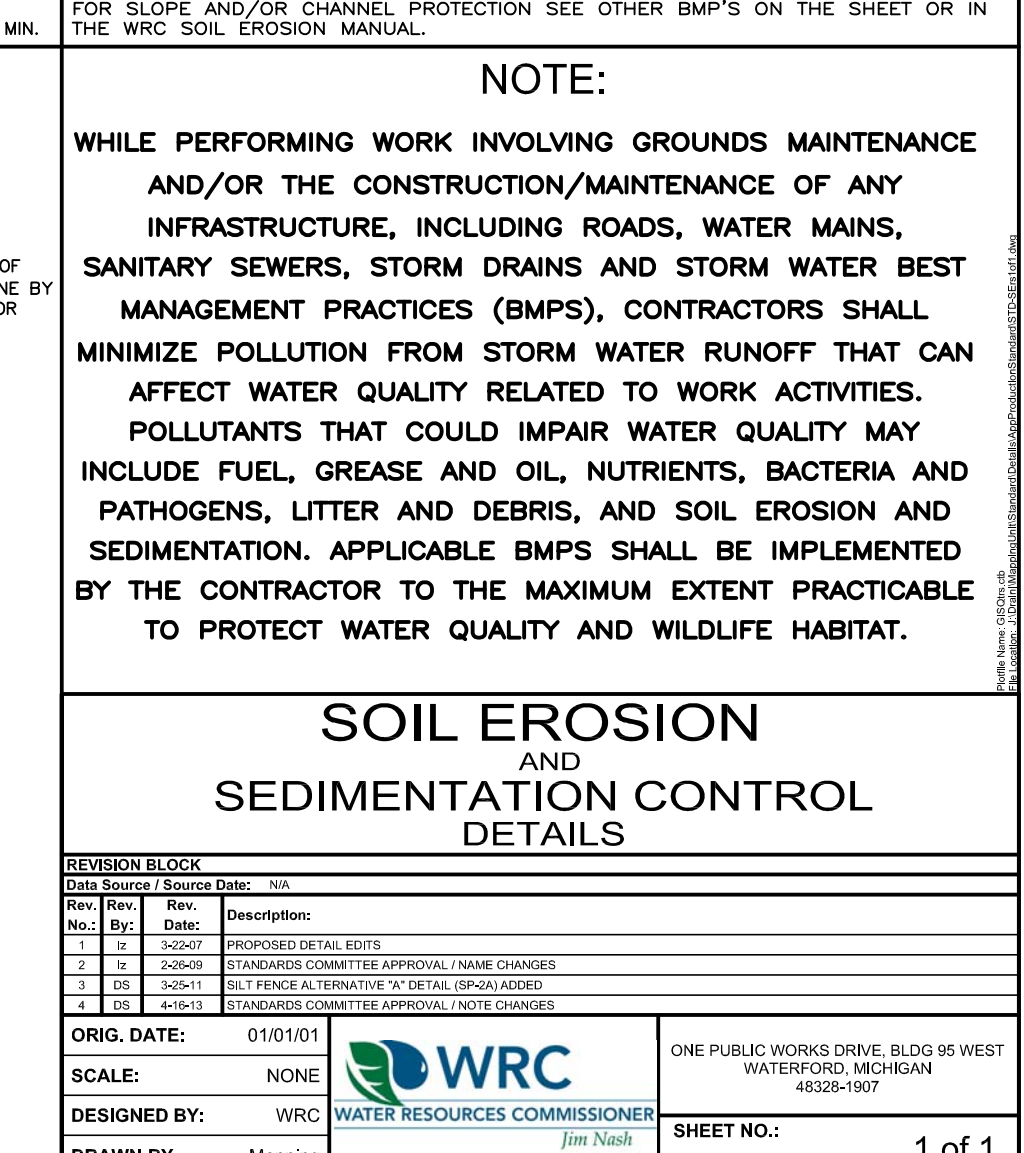
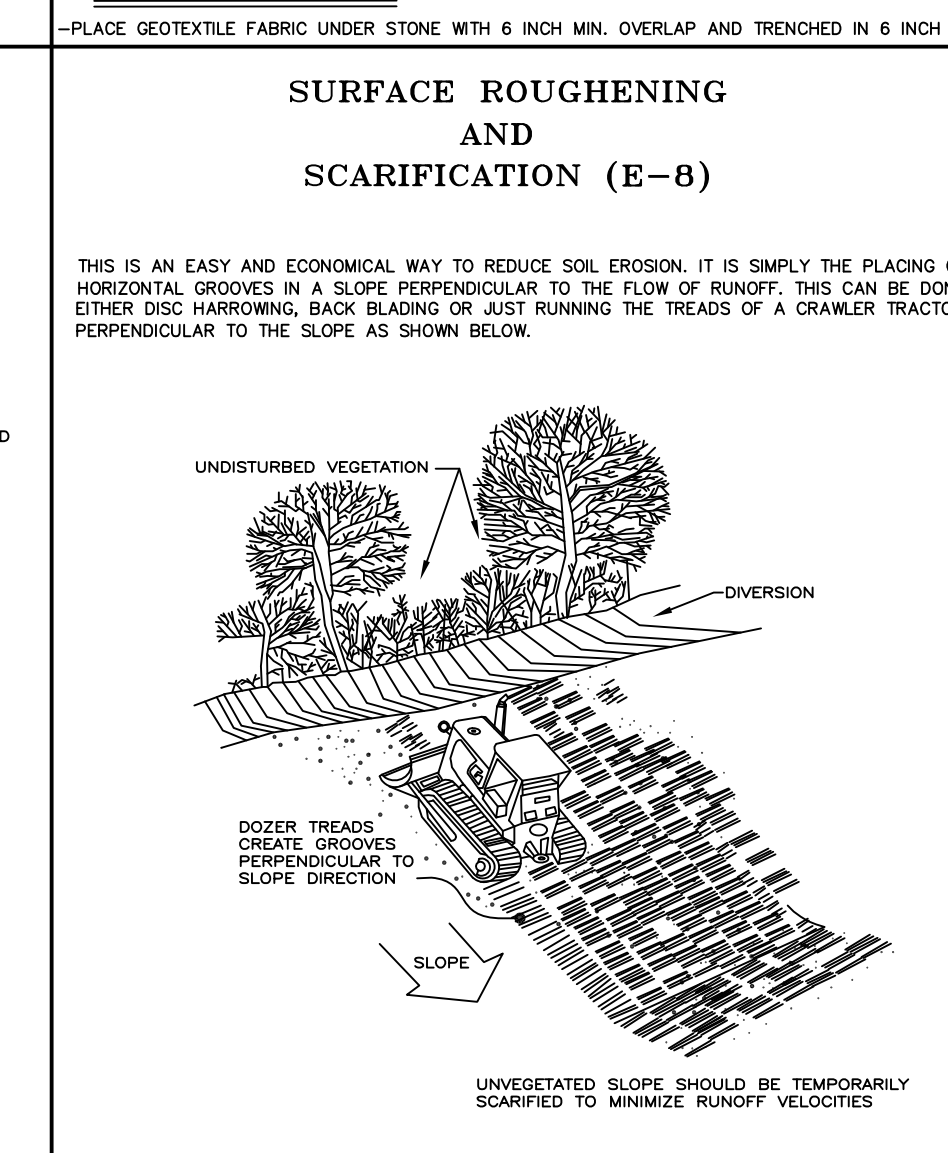
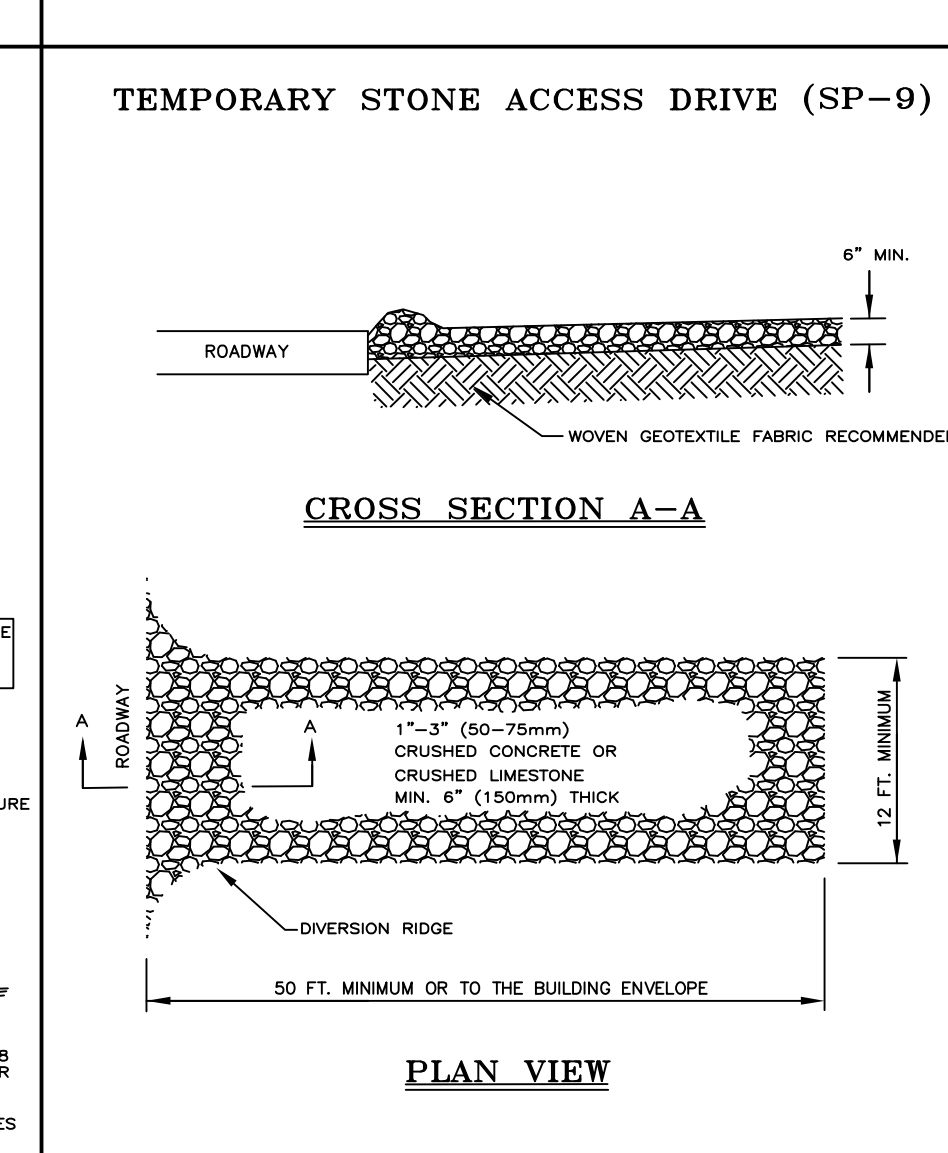
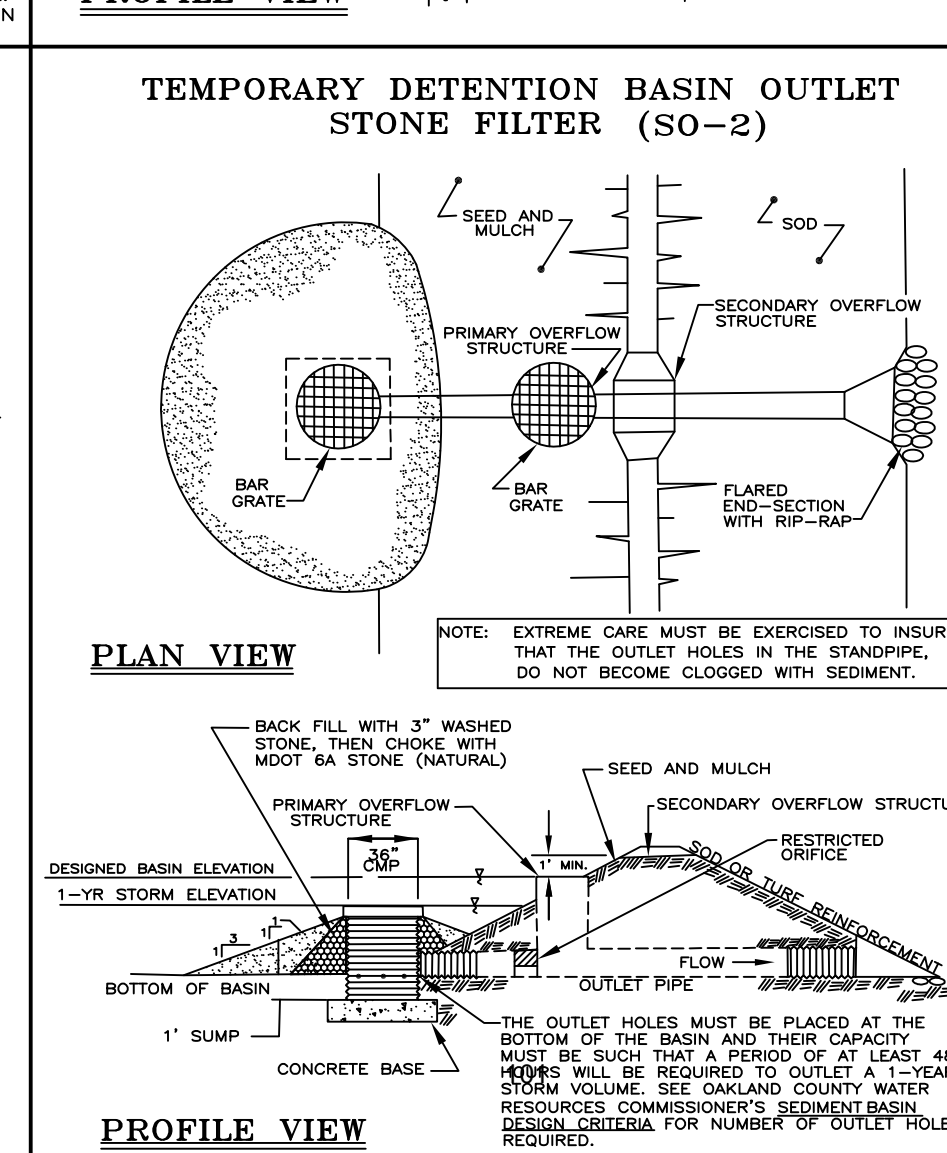
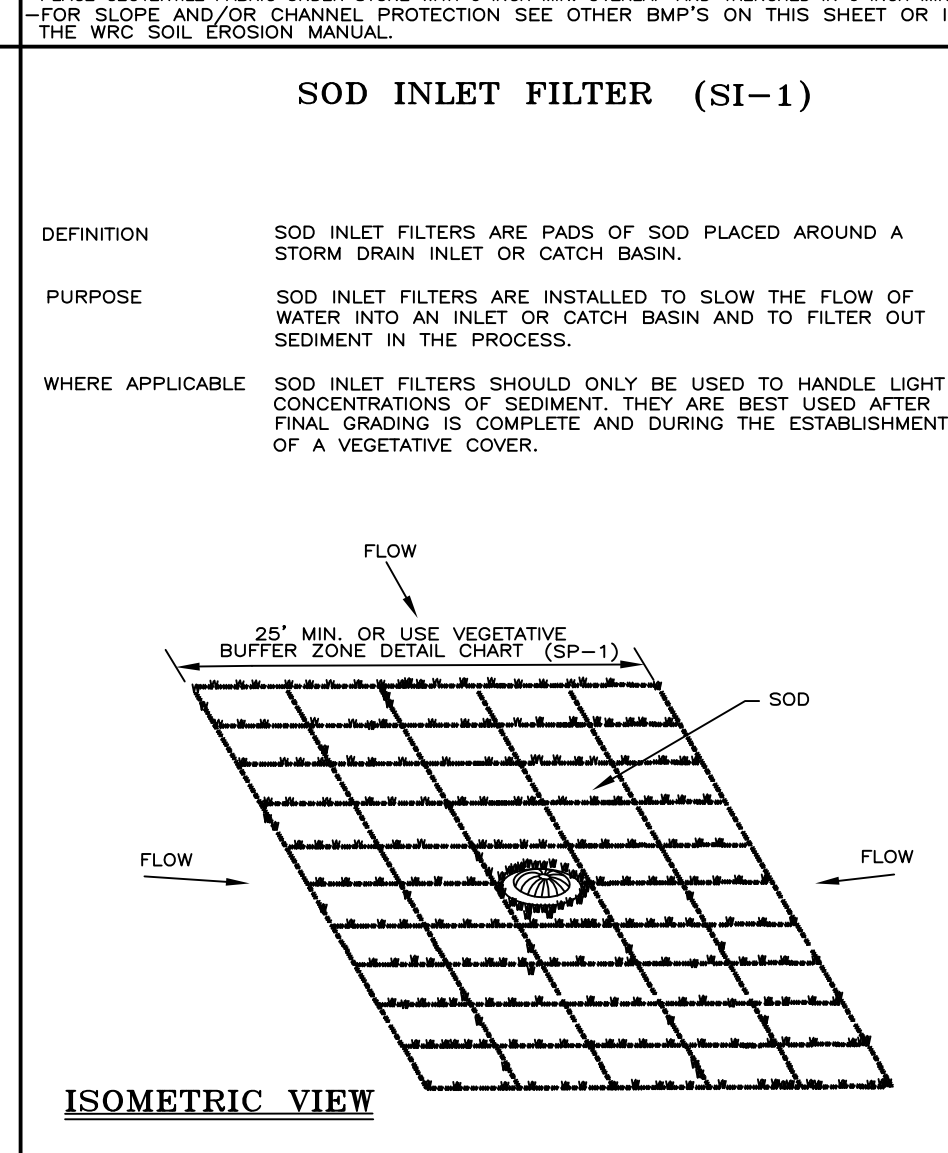
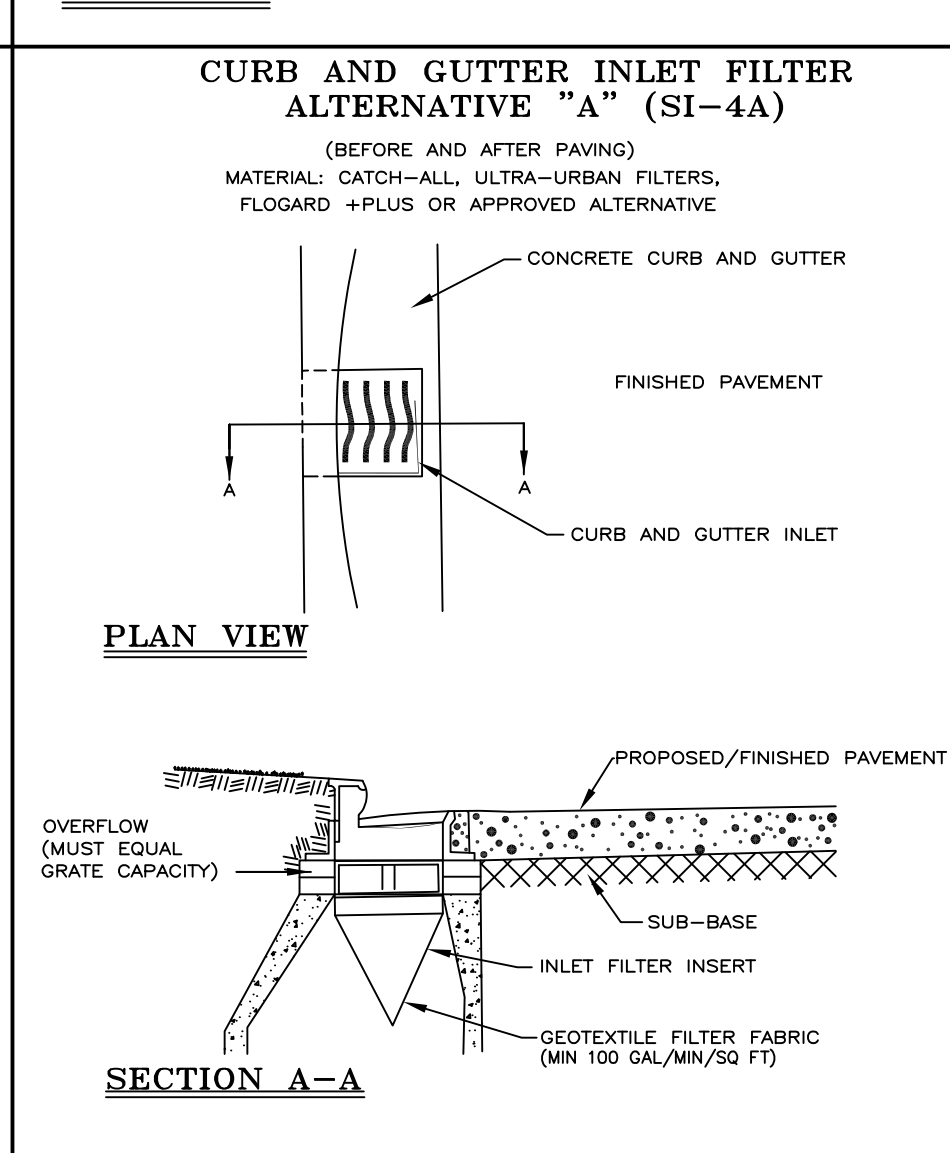
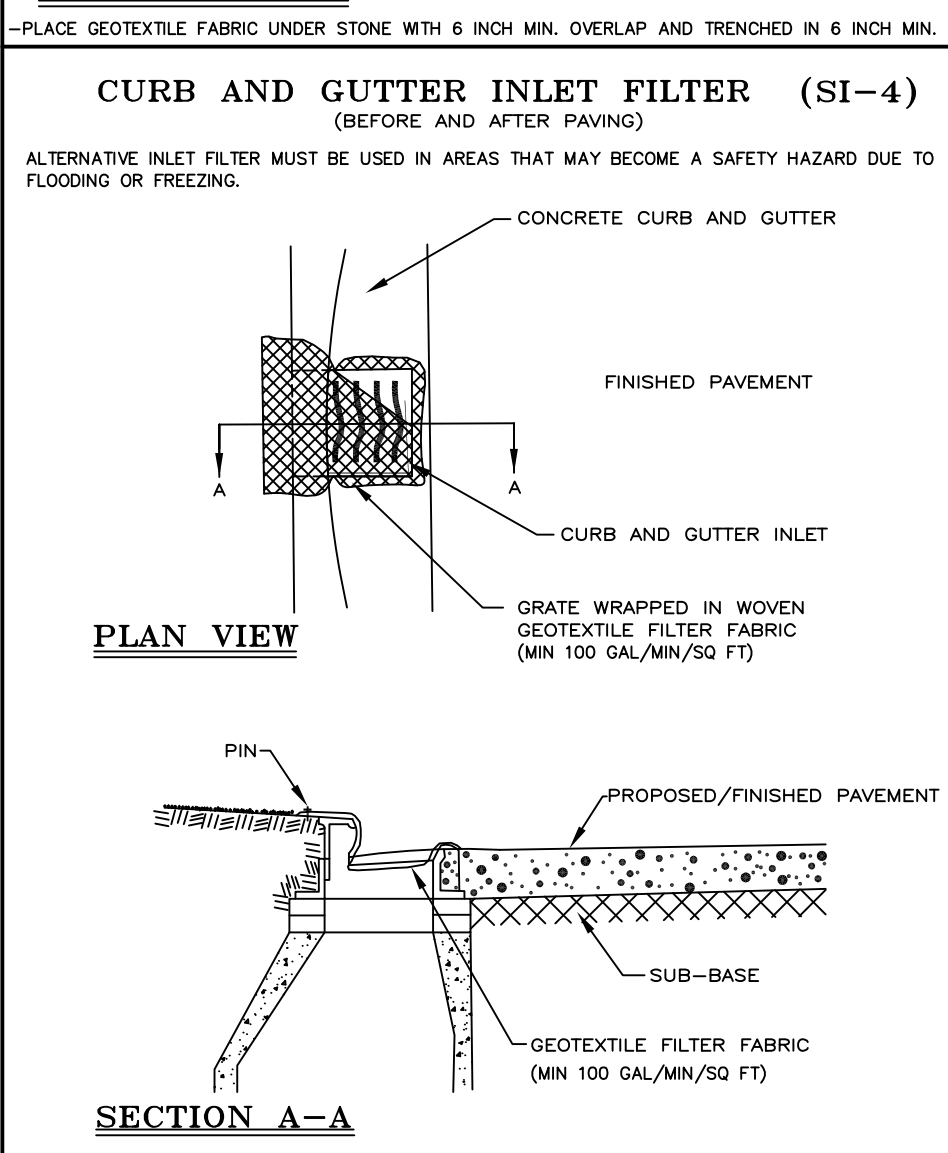
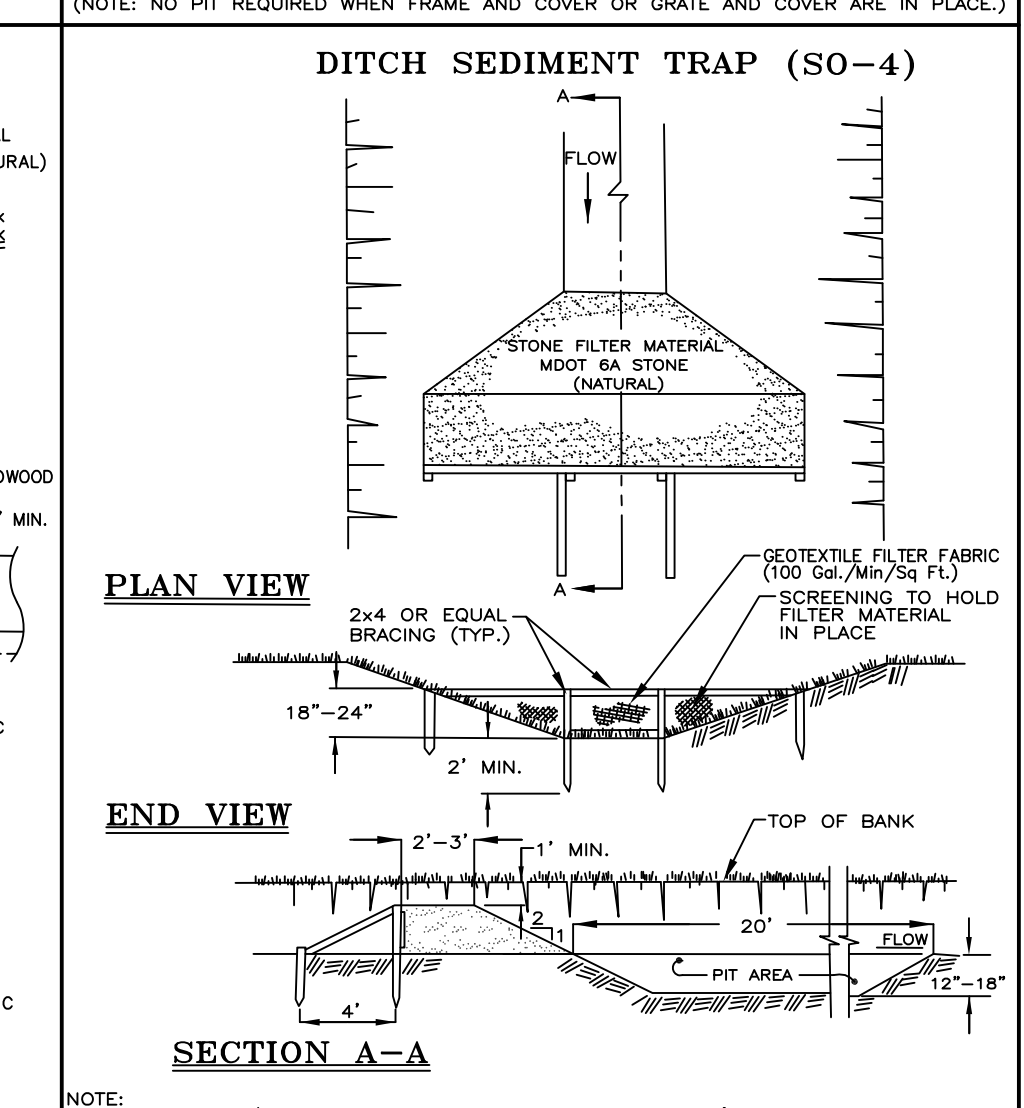
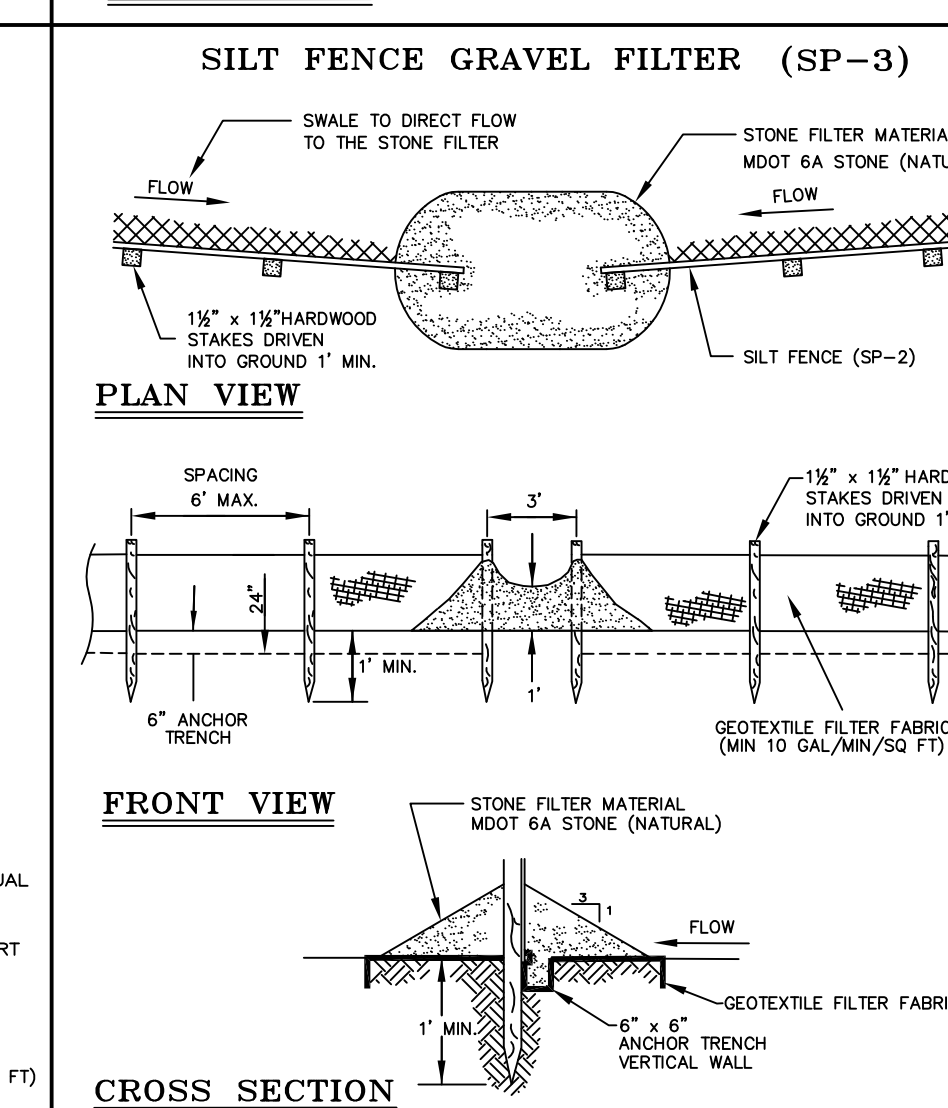
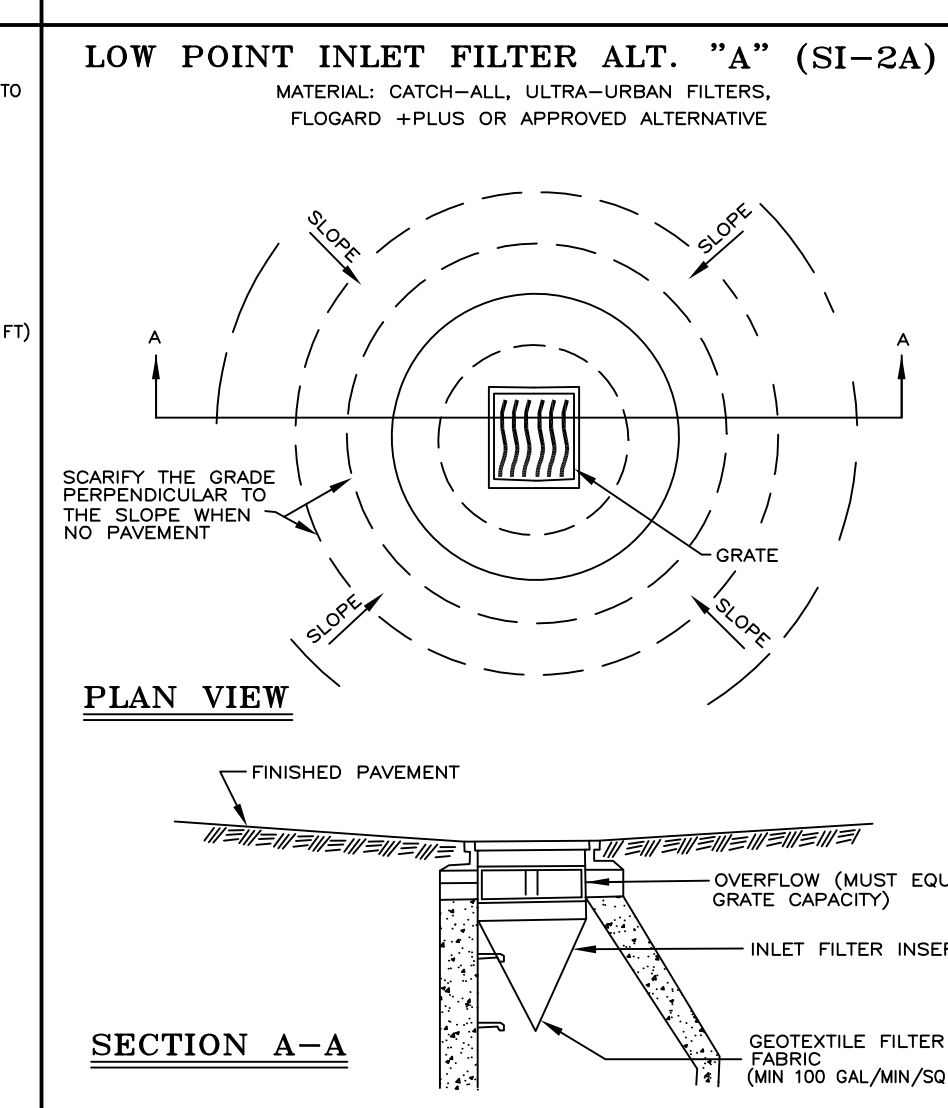
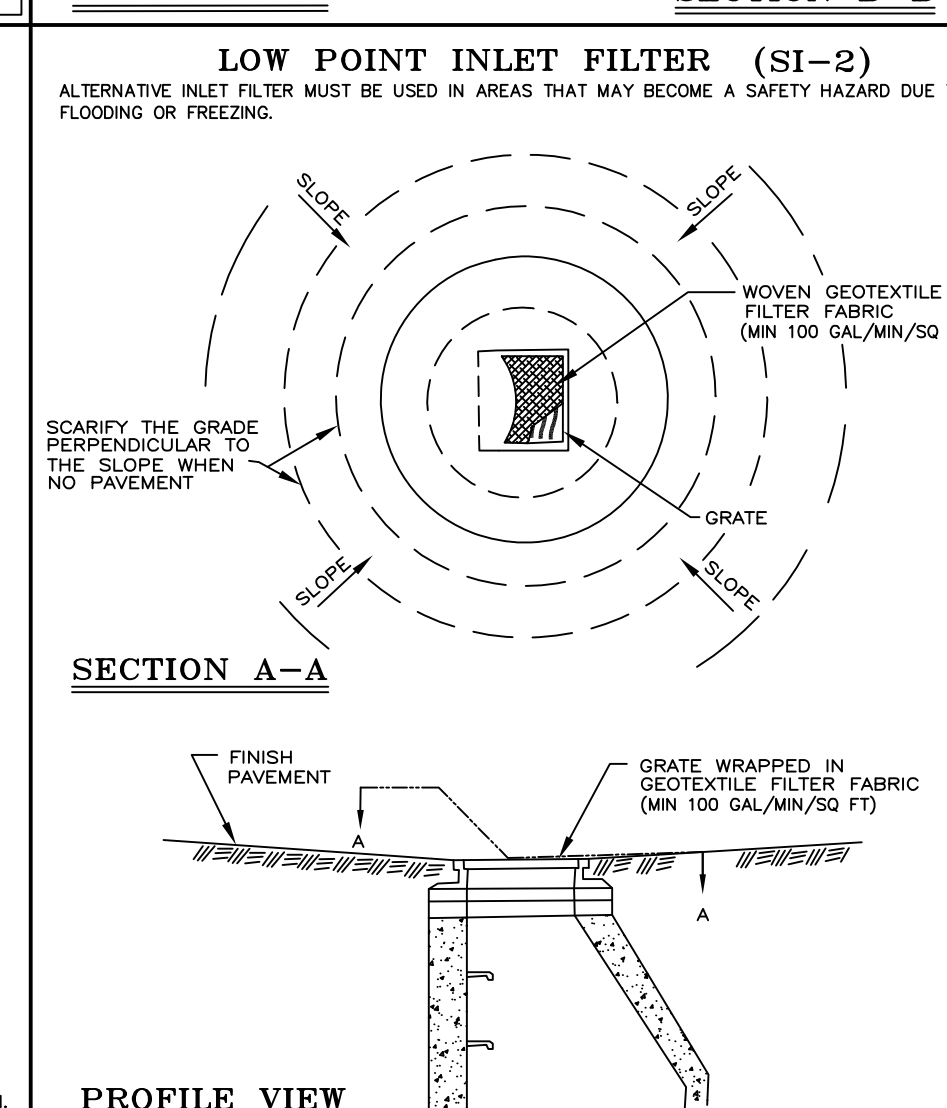
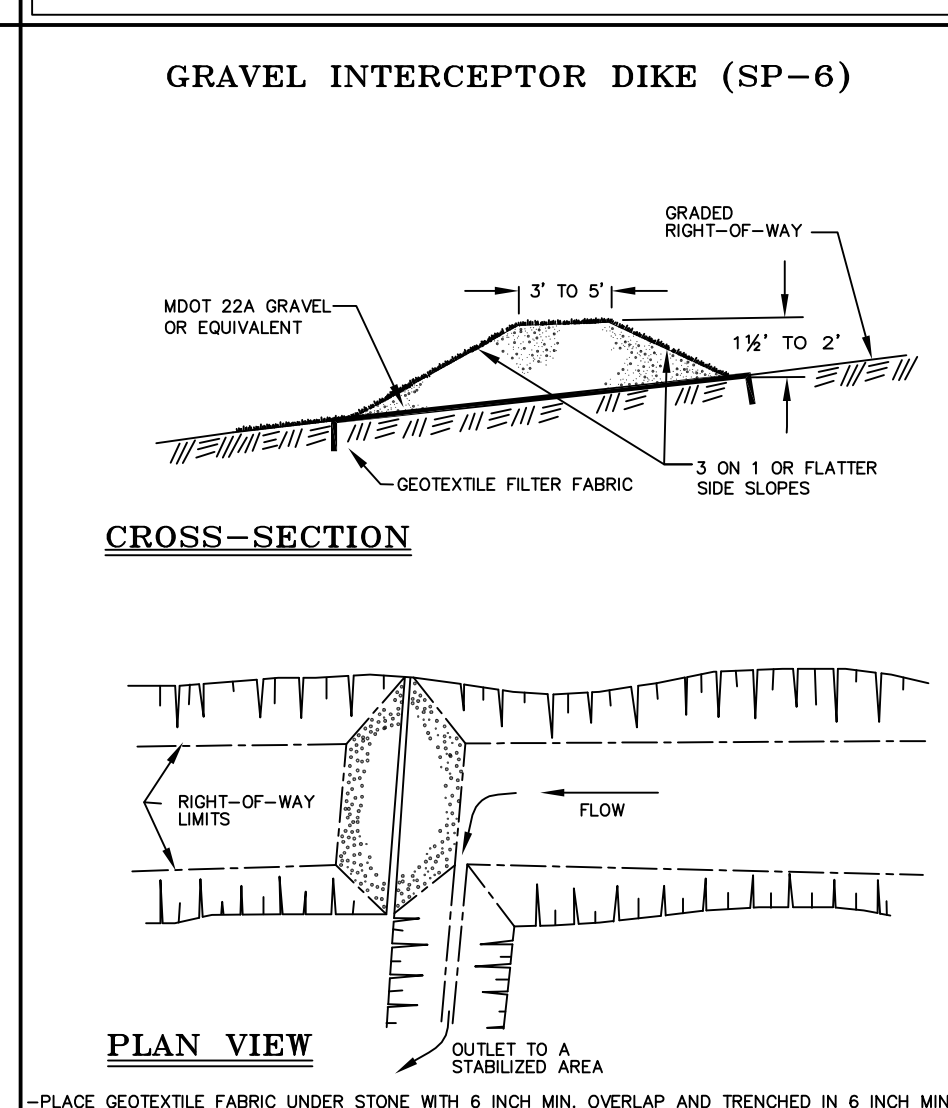
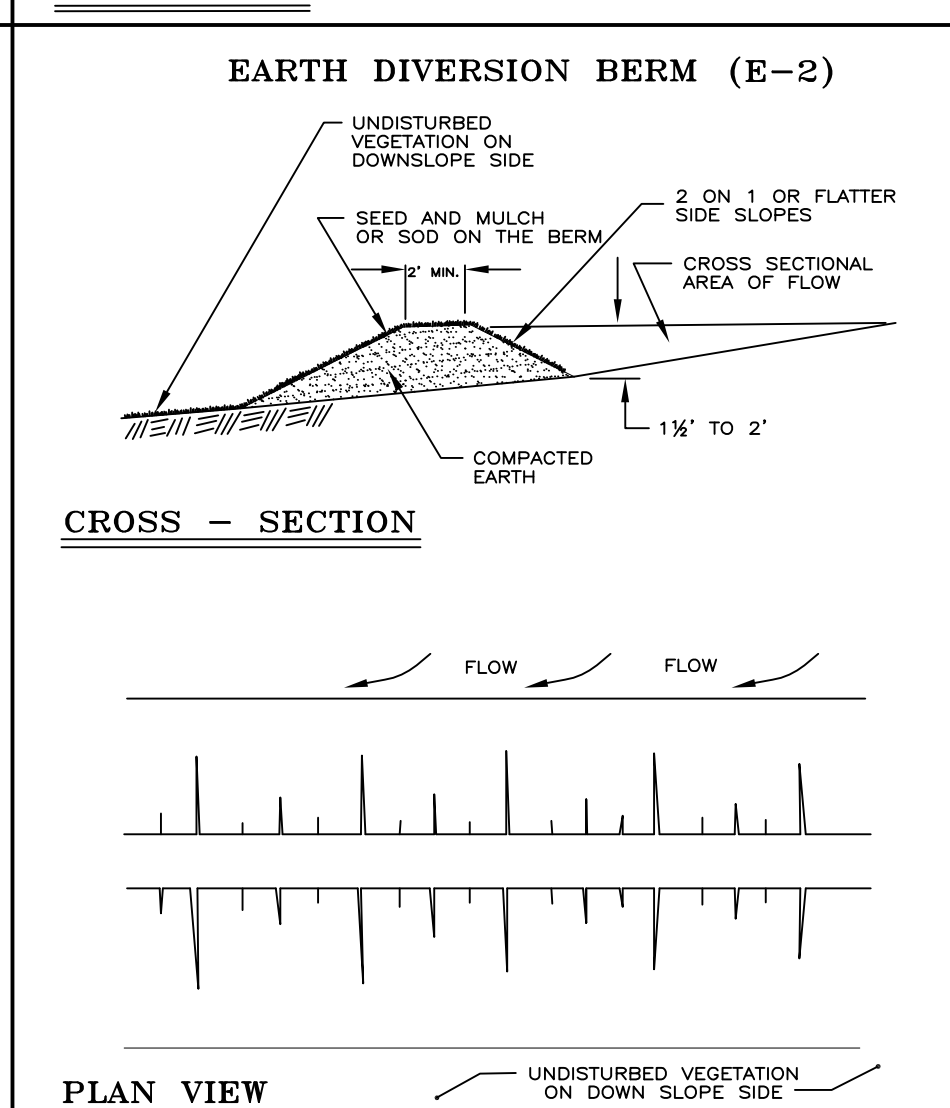
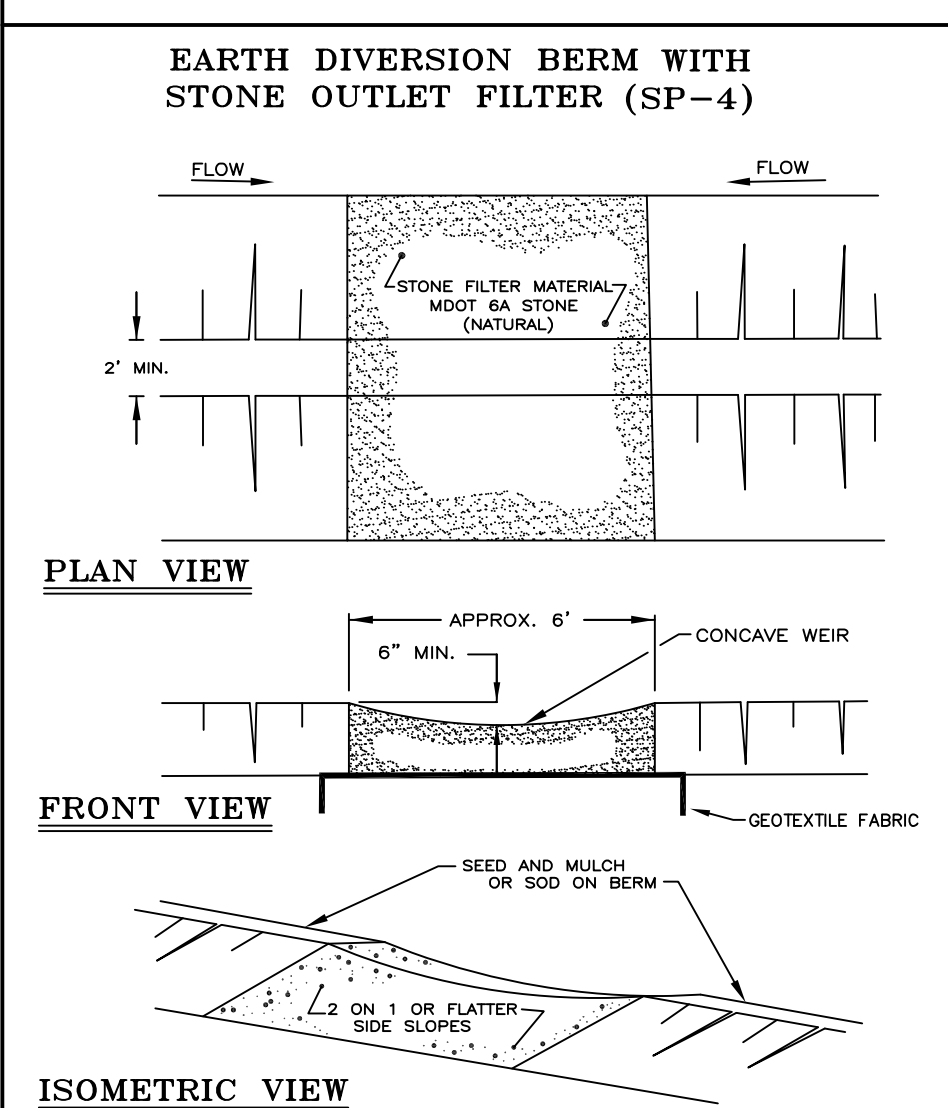
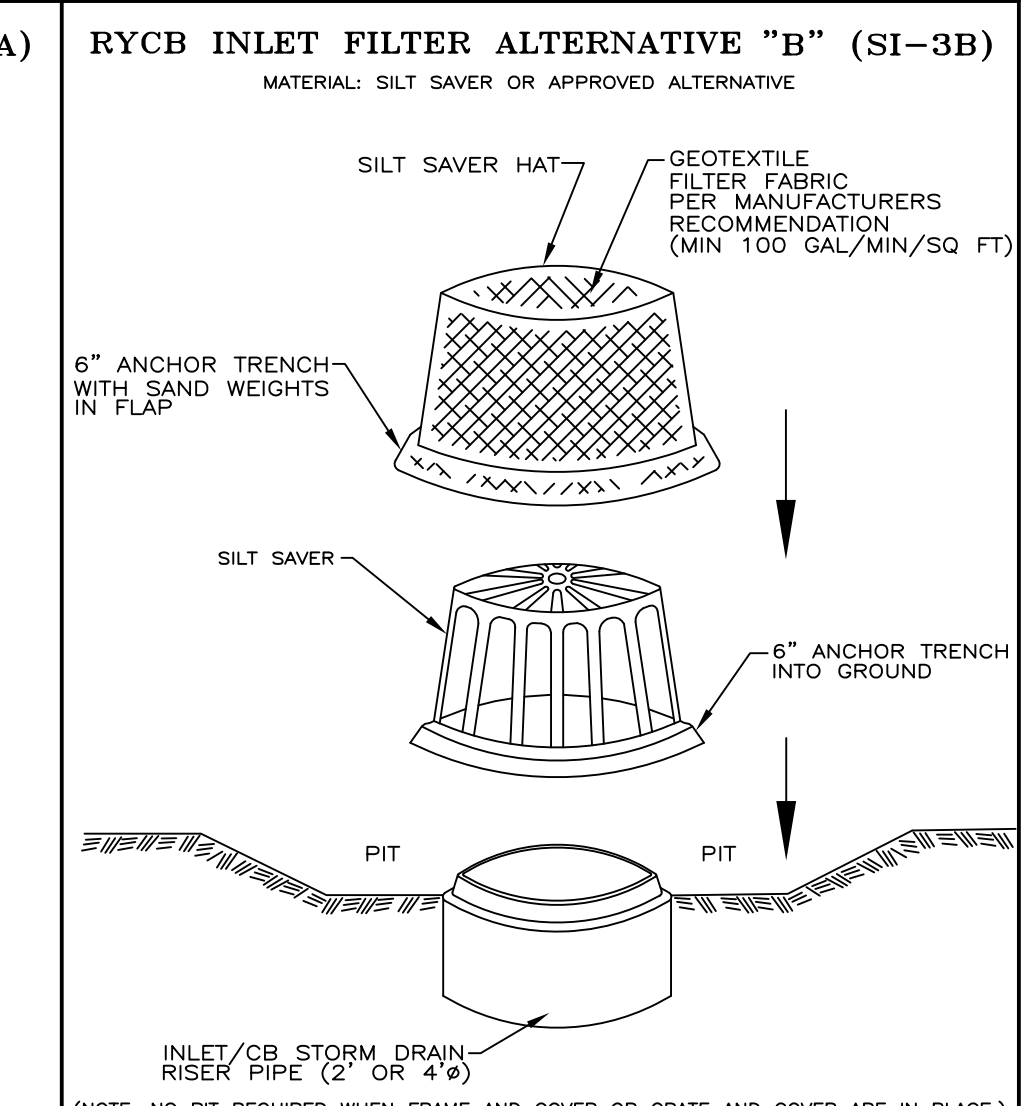
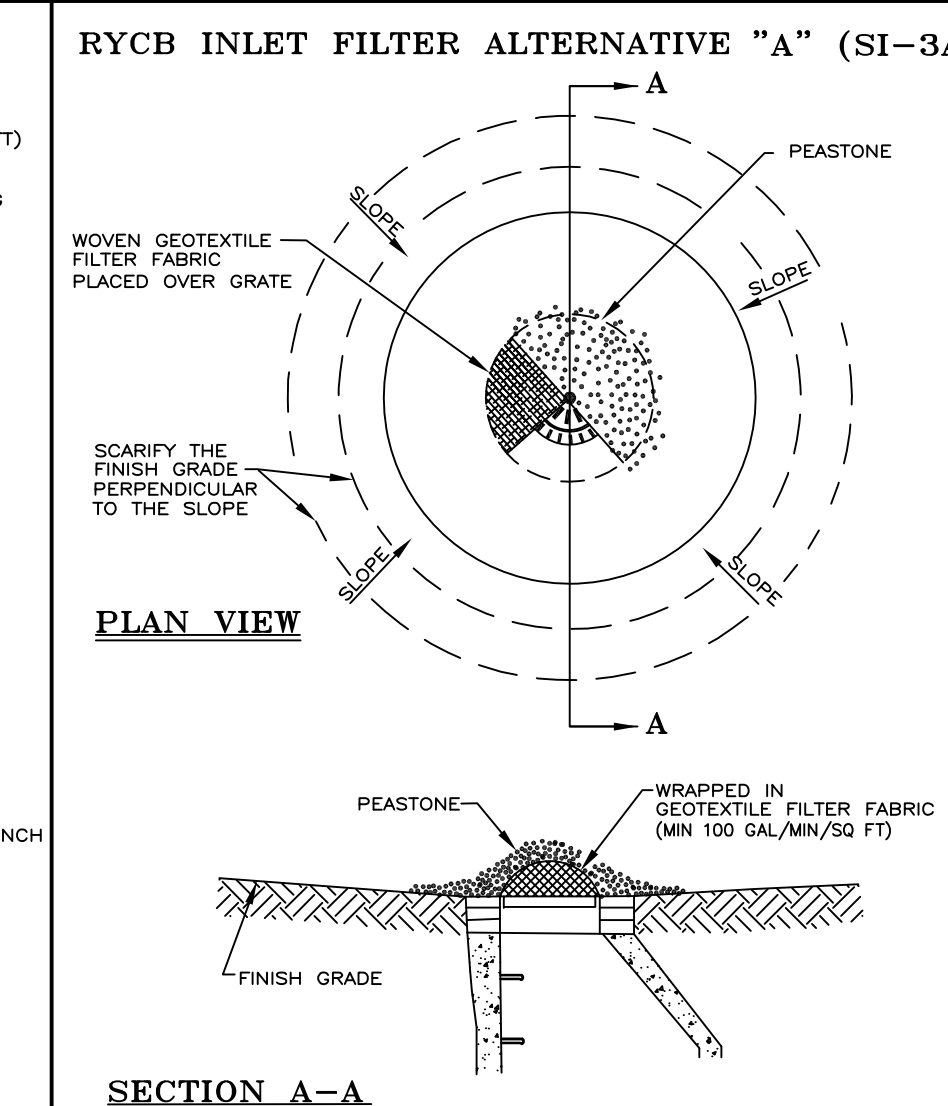
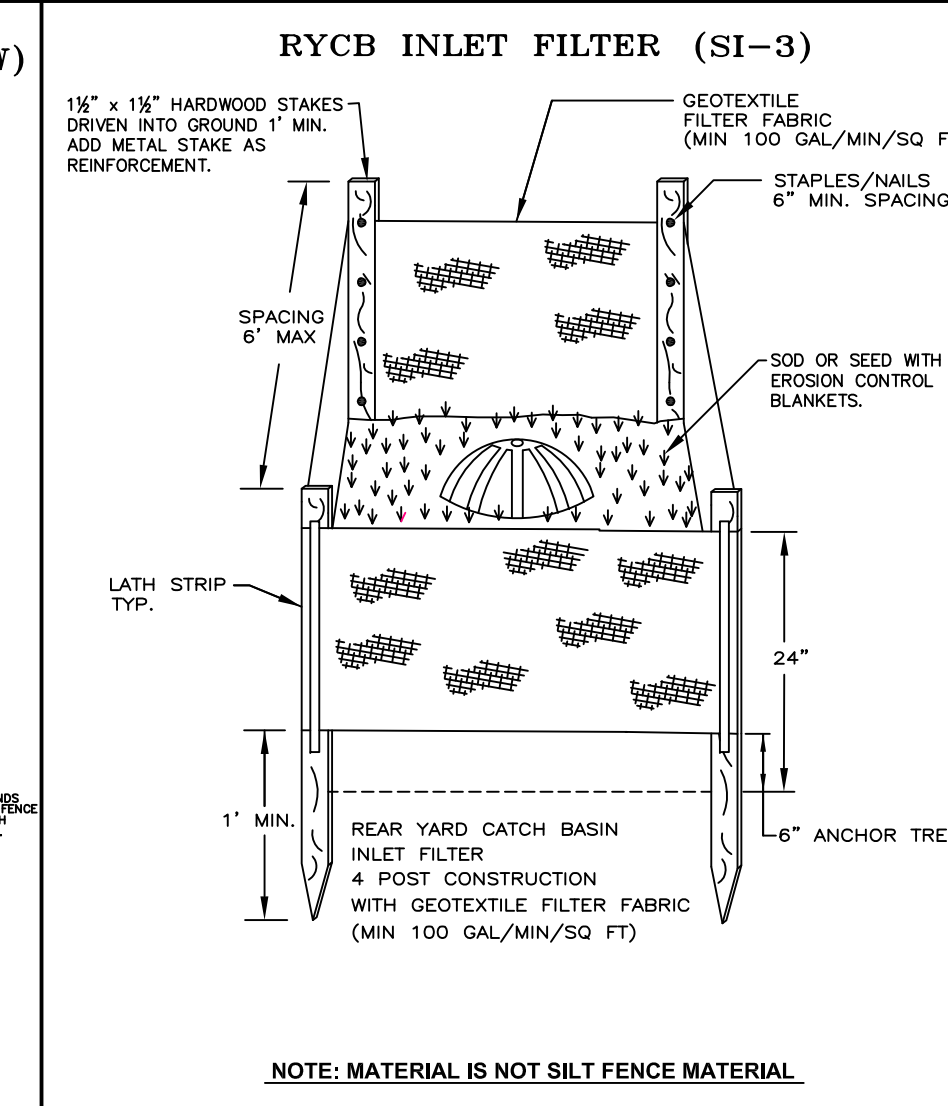
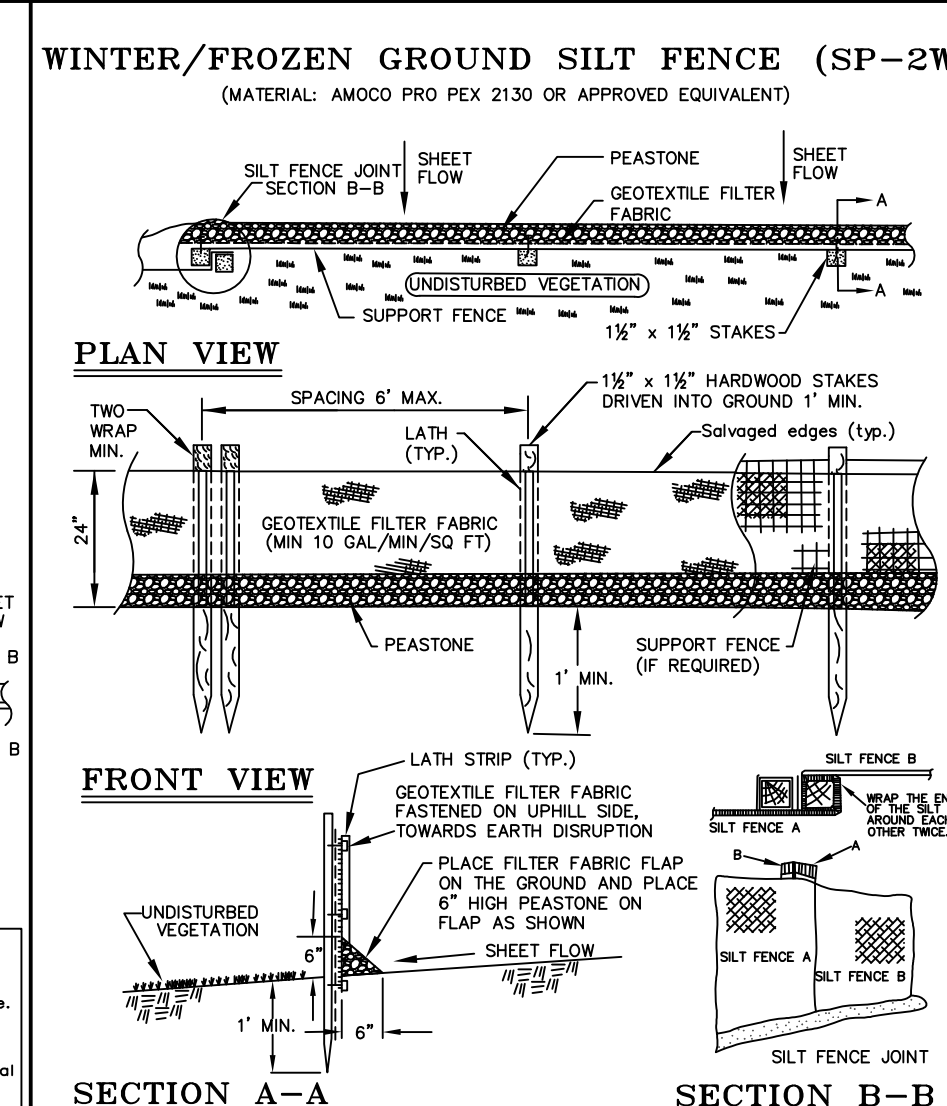
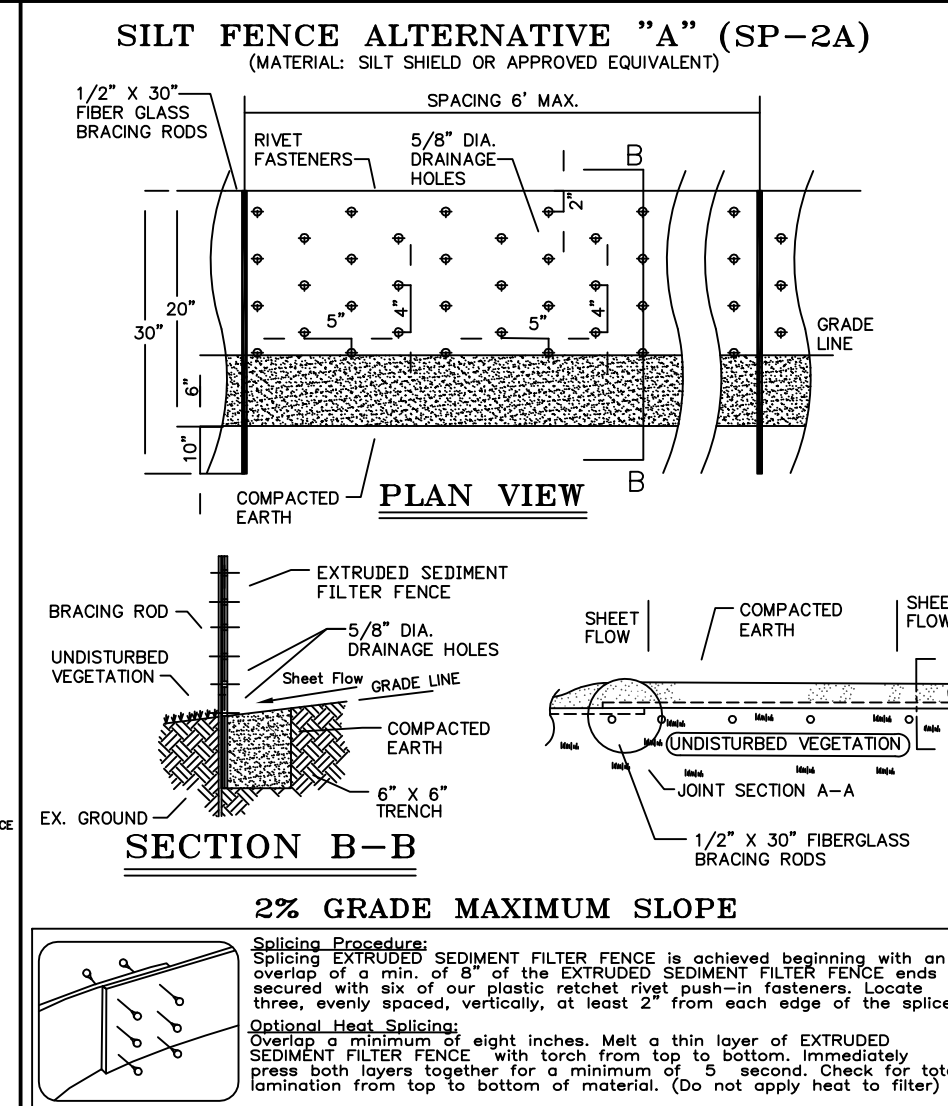
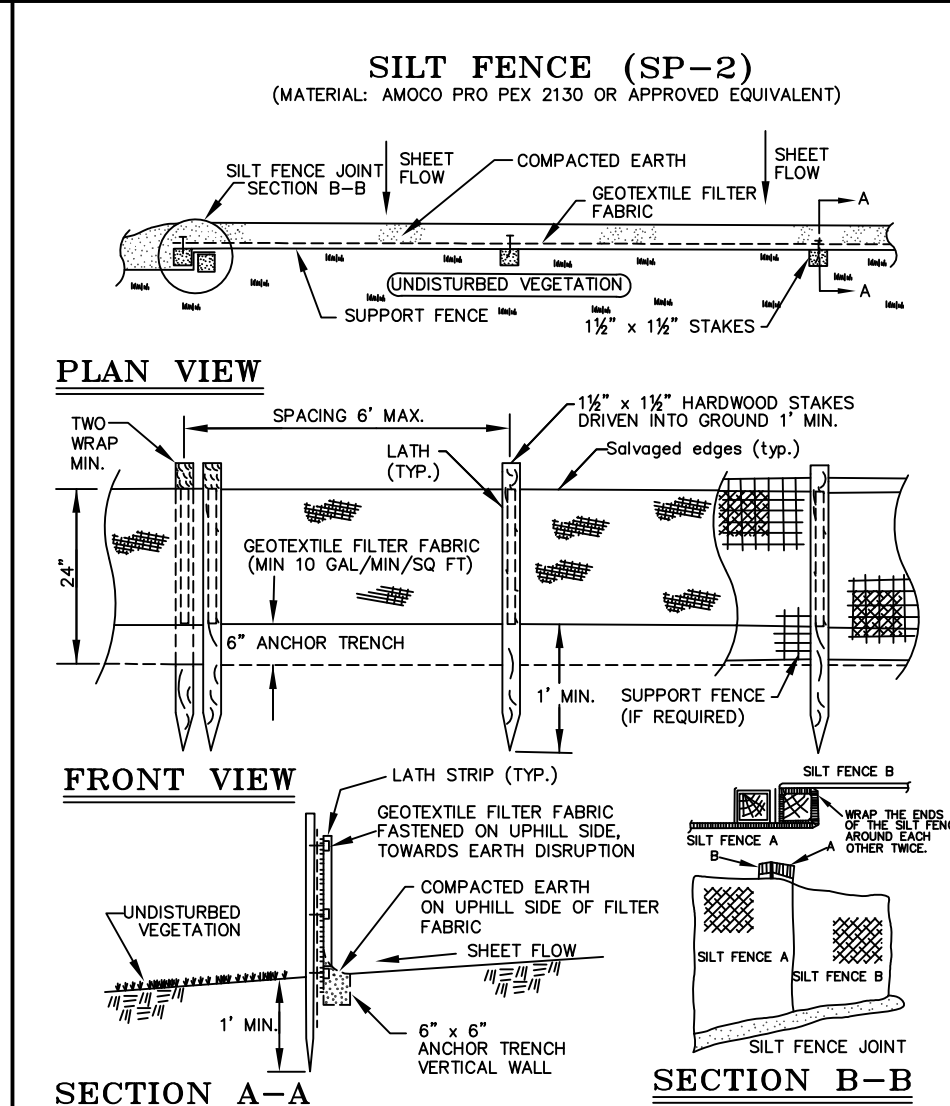
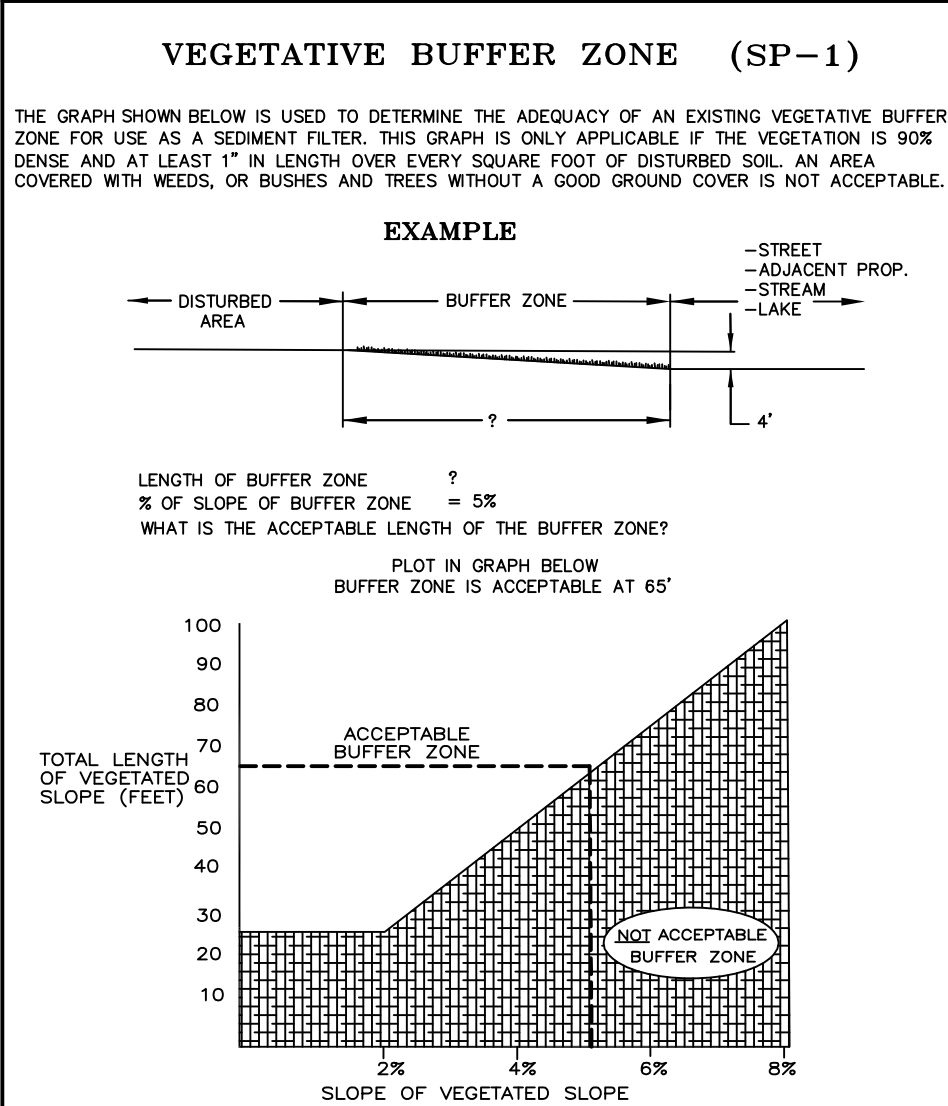
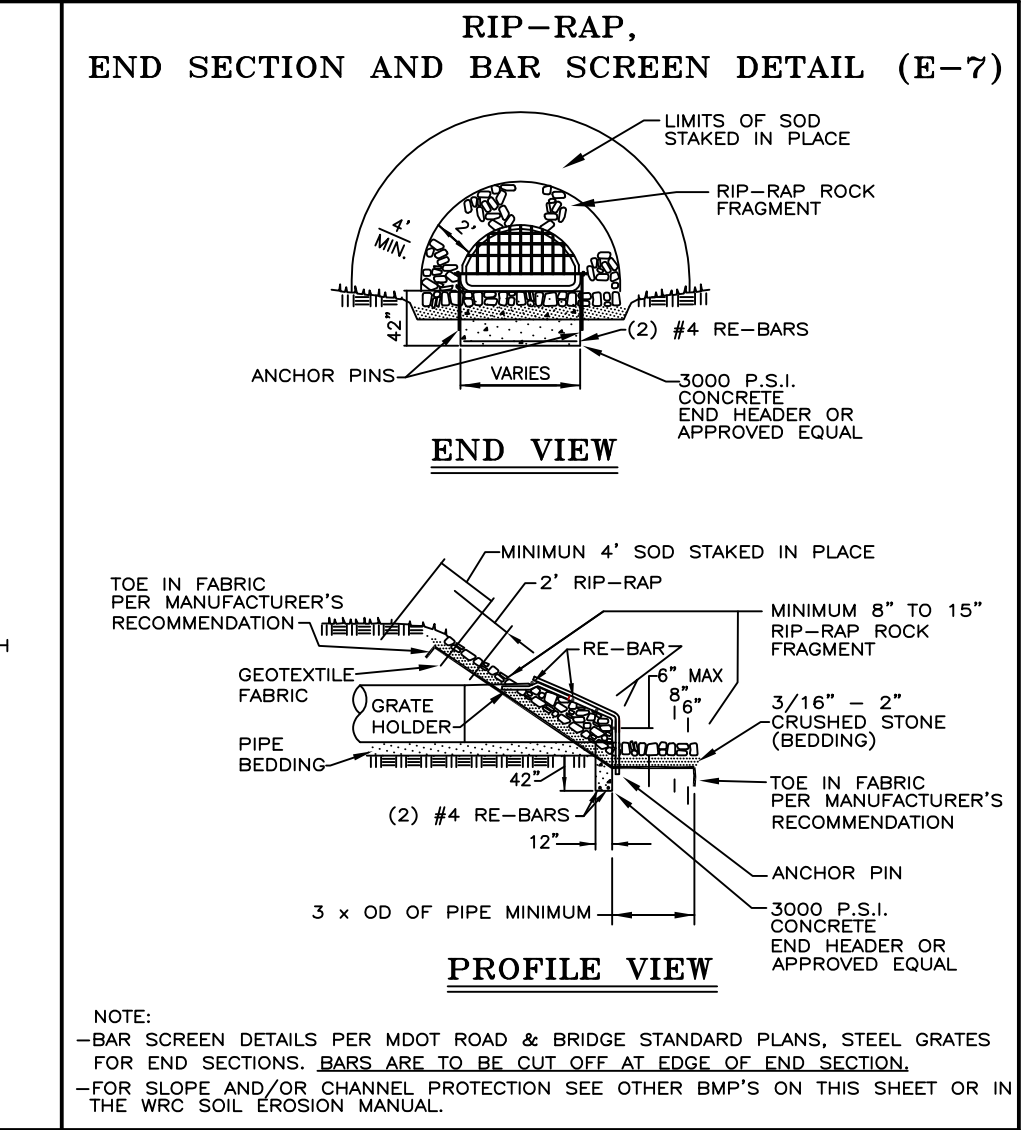
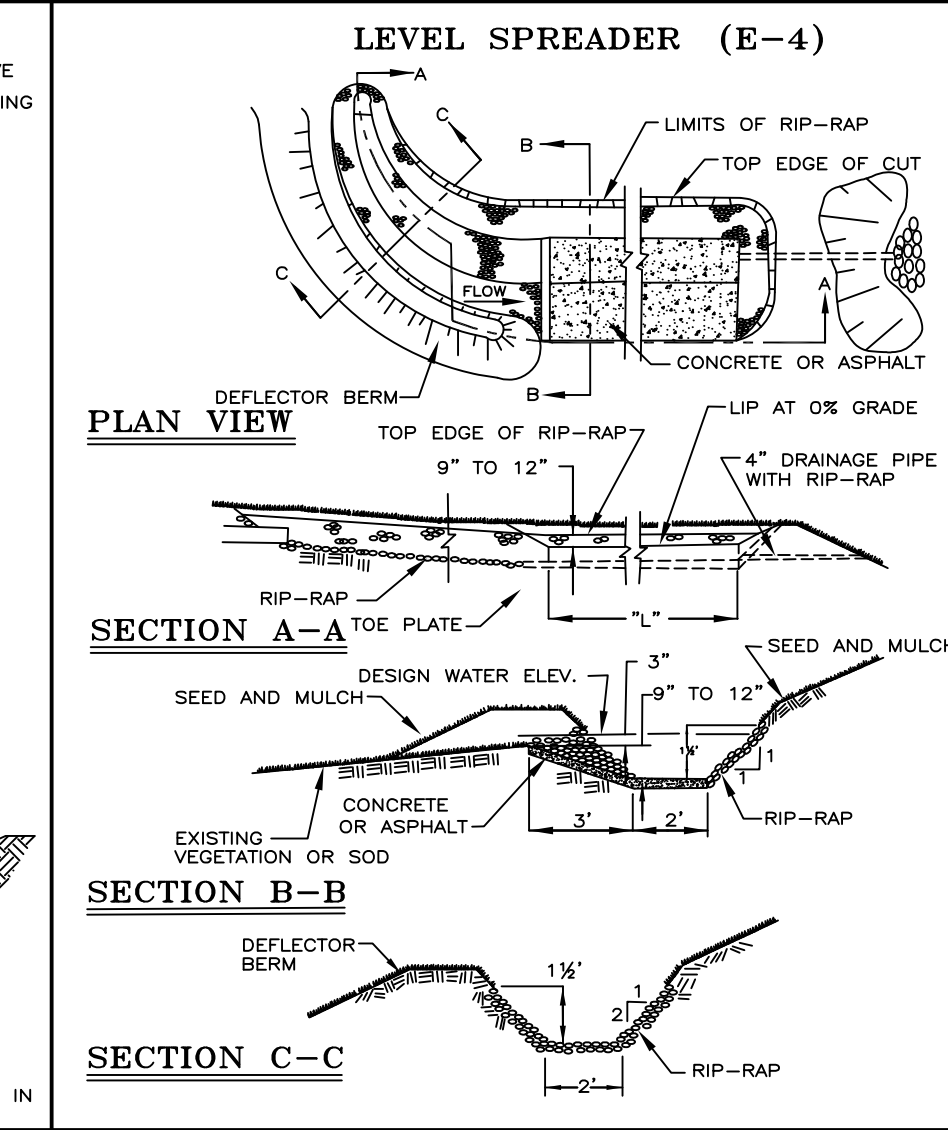
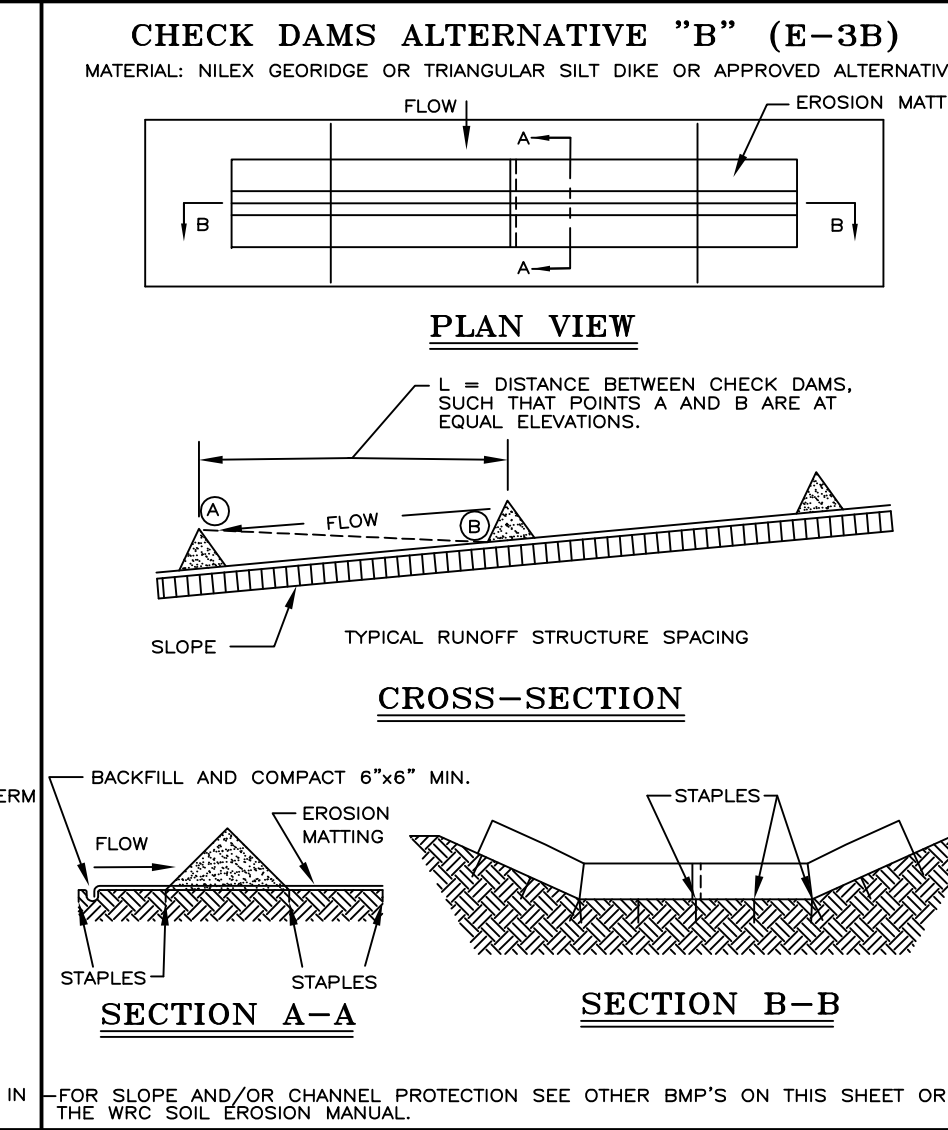
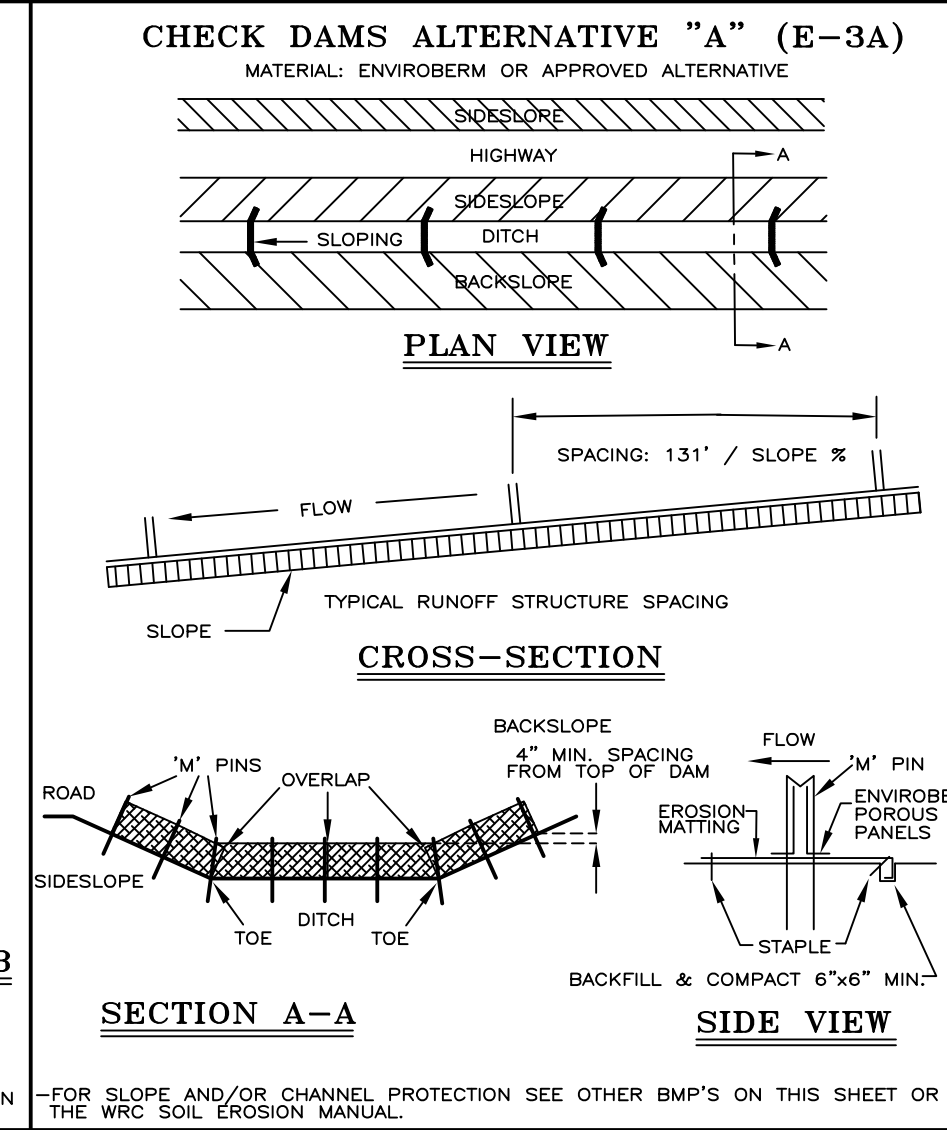
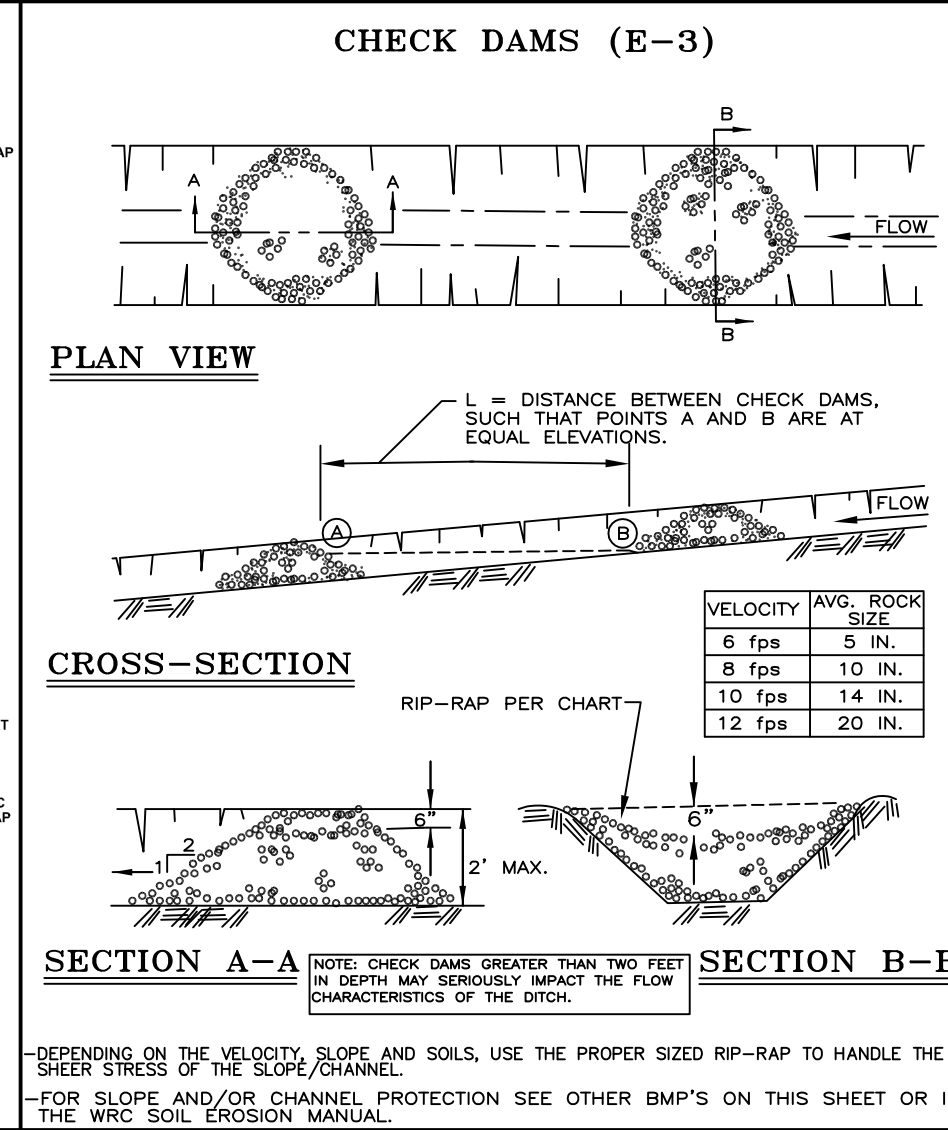
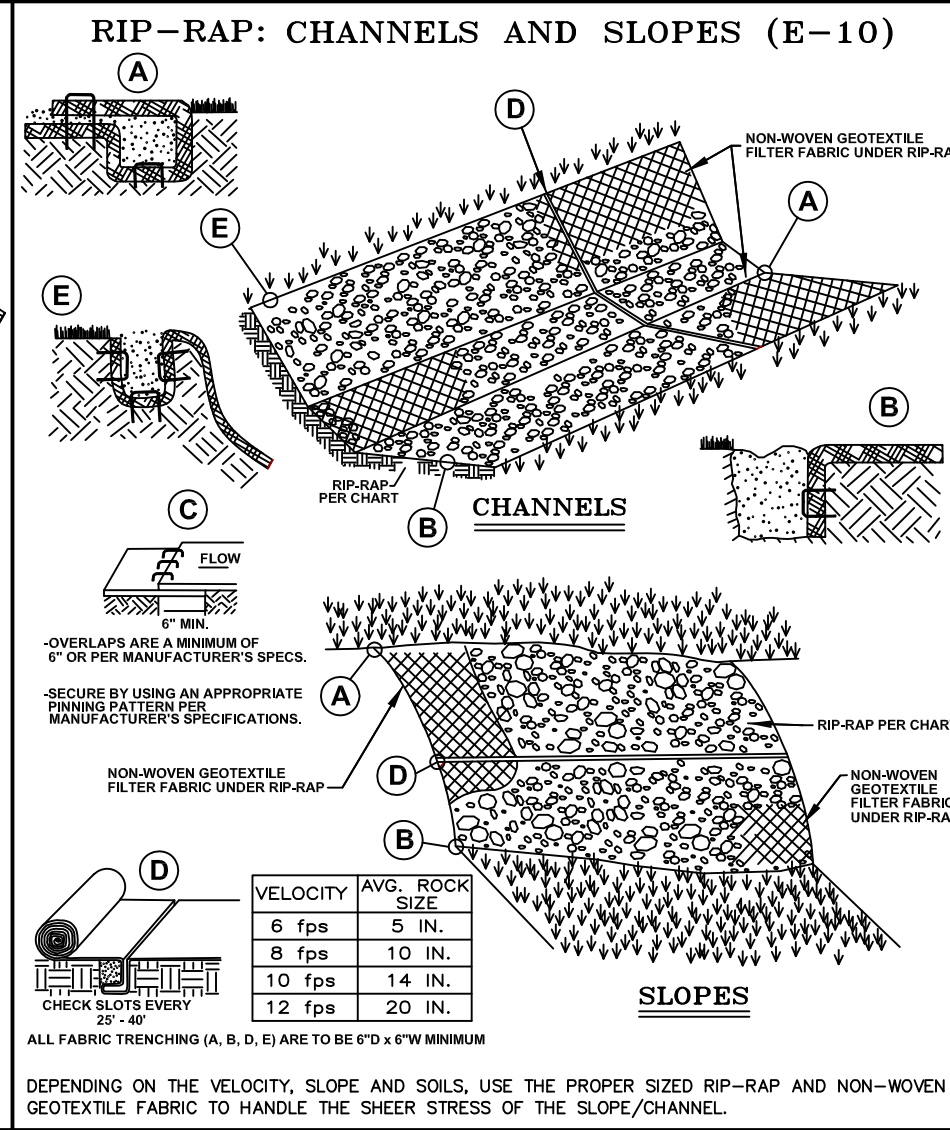
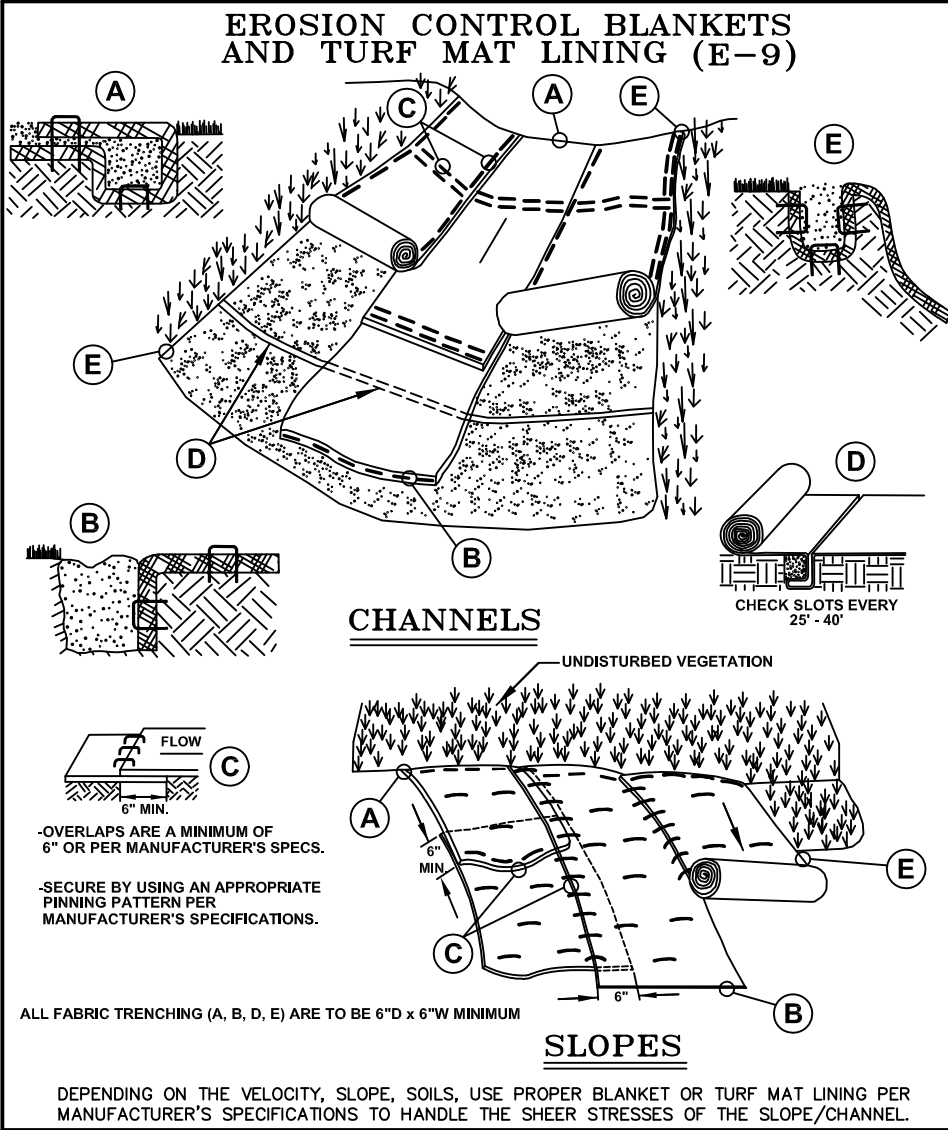
AquaTest Laboratories
9165 Highland Road
White Lake, MI 48396
248-699-9500

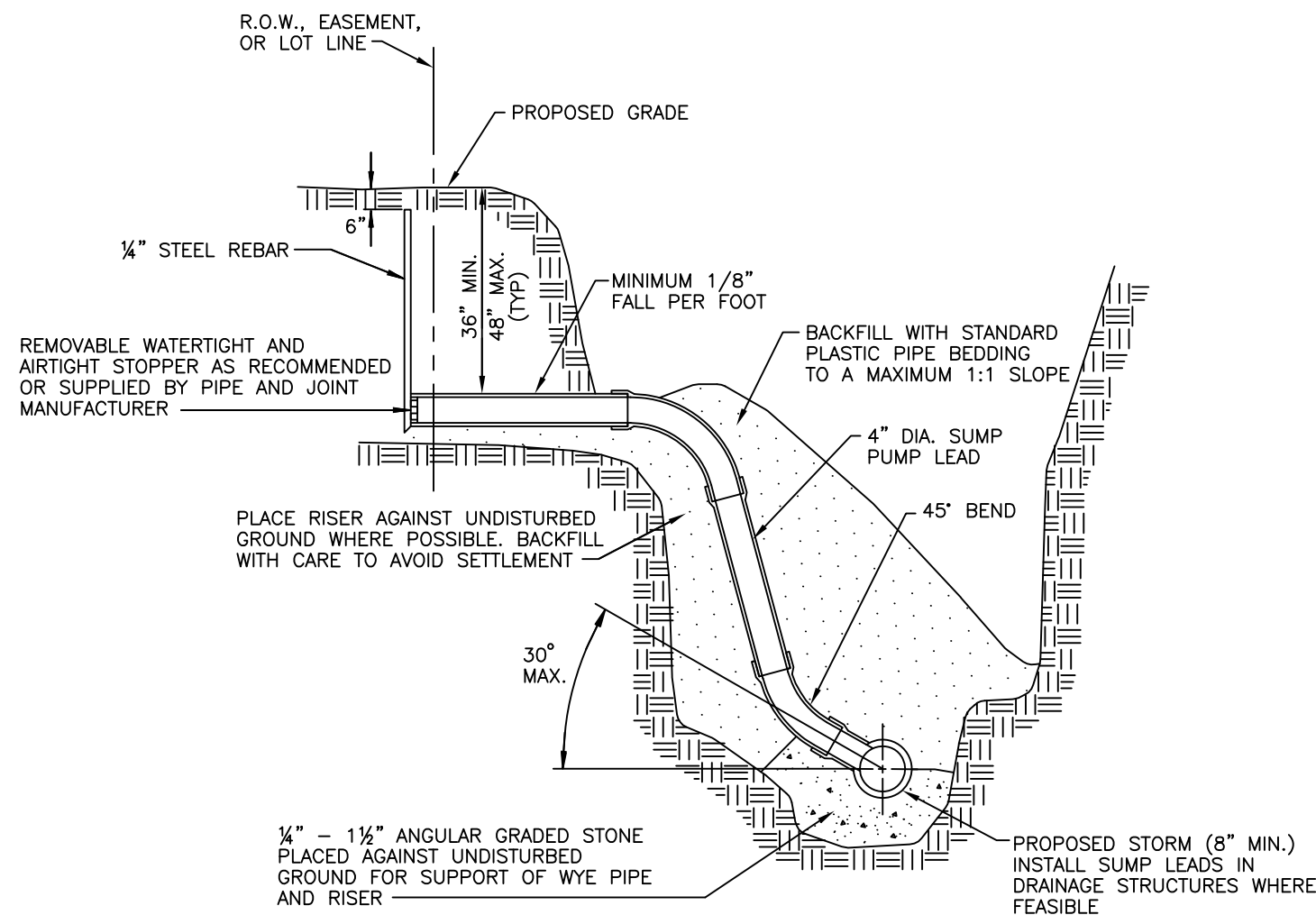
Brighton Analytical, LLC
2105 Pless Drive
Brighton, MI 48114
248-229-7575

- WATER MAIN NOTES:**
- All water mains shall be ductile iron as per the following specification. Ductile iron pipe shall be ANSI 1-421.51 (AWWA-C151) std. wall thickness, cement lined with bituminous sealcoat Class 54 for sizes 6" thru 16" and Class 55 for 20" and 24". Prestressed concrete cylinder pipe (P.C.C.P.) shall be AWWA C-301 specification for sizes larger than 24".
 - Curb stop box type shall be Arch Pattern base with Erie pattern lid.
 - Restrained joints are required in lieu of thrust blocks. Restrained joints for pipe sizes up to 16" shall be Fast Grip Gaskets, Mega Lug, or approved equal. Restrained joints for pipe sizes over 16" shall be American Ductile Iron Flex-Ring Joint Pipe or approved equal ballless system. A pipe lay schedule shall be submitted prior to installation start.
 - Thrust restraint design shall be per the Ductile Iron Pipe Research Association's Manual of Thrust Restraint Design for Ductile Iron Pipe, current edition.

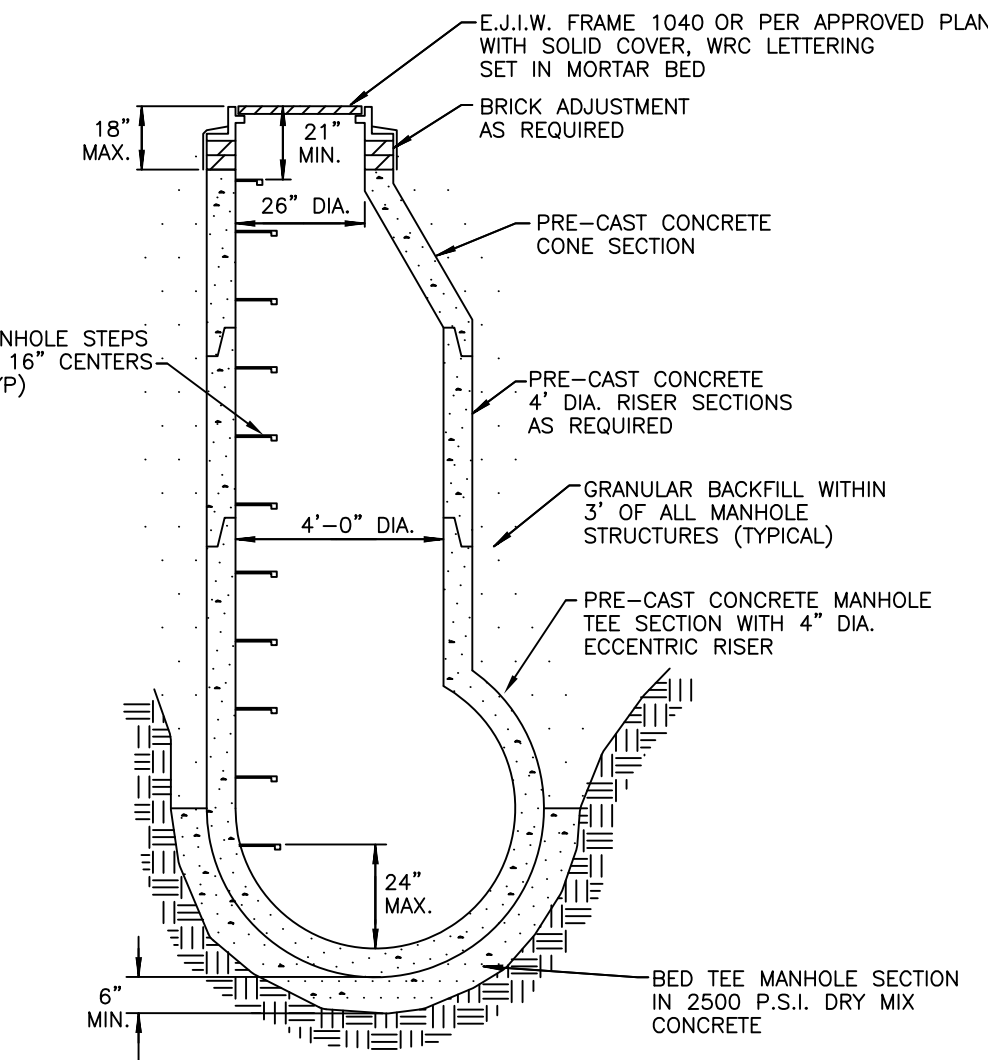
- VALVE & SLEEVE NOTES:**
- Gate Valves shall be resilient, wedge seated gate valves with ductile iron rubber coated wedge, non-rising stem, opening counter-clockwise, bronze stem and stem nut conforming with AWWA C515, E.J. Flow Master or approved equal.
 - All gate valves with operating nuts at a distance greater than 5.0' below ground surface shall be provided with an extension stem. The length of the extension stem shall be such that it will be within 5.0' of the ground surface, when one is used. The extension stem shall be held in place by an extension stem guide securely fastened to the wall of the gate well. The extension stem shall be mechanically attached to the operating nut. Details of extension stem and method of installation shall be approved by the engineer prior to installation.
 - All precast concrete gate well sections shall be manufactured to conform with ASTM C478, (latest edition), standard specification for precast reinforced concrete manhole sections, except wall thickness, shall be as shown on these details. All joints for precast concrete gate well sections shall be "Modified Grooved Tongue" with gasket manufactured to conform with the current edition of ASTM C443.
 - All gate well covers shall be E.J. #1040A with bolted frame and have the words "ORION TWP WATER" in raised letters on the frame cover, or approved equal.
 - Tapping sleeve shall be mechanical joint with E.J. SERIES A Mechanical Joint Tapping Gate Valve. Lead jointsleeves shall not be used.
 - All tongue and groove joints on wells shall be cement tuck-pointed inside and out.

- HYDRANT NOTES:**
- All hydrants shall be E.J. #5-BR-Traffic Model and shall conform to AWWA Spec. C-502 as amended, and shall have a minimum 6" valve opening which closes with the water pressure. Hydrants shall be traffic style with breakable flange and coupling.
 - Hydrants shall have a swivel flange to allow bonnet to be turned 360 degrees without removing the bonnet and barrel flanges shall be integrally cast with the barrel. Inlet shoe shall have a bronze valve, seat which can be removed without digging.
 - Inlet connection shall be 6" mechanical joint, ASA-A21-11. Stem threads shall be sealed with double "O" rings and shall be permanently lubricated with all weather grease.
 - Hose connections: Two (2) 2 1/2" hose nozzles with national standard threads, one (1) 4 1/2" pumper nozzle with a 4" Harrington Integral Hydrant Storz nozzle. The storz nozzle shall have a brass metal face seal and hard anodized aluminum Storz ramps and lugs. The aluminum's finish shall be hard coat anodized to Mil-A-8625f, Type 3 dark gray. The adaptor shall be made of forged or extruded 6061-T6 aluminum. The blind cap shall have hard anodized aluminum storz ramps and lugs made of forged or extruded 6061-T6 aluminum. The center cap shall be equipped with a suction seal. The cap shall be connected to the adaptor or the hydrant with a 0.125" vinyl coated aircraft cable.
 - Hydrants shall be painted red above ground and black below, with a finish coat of Glamortex 501 enamel, color 314 vermilion, or approved equal. The 4" Storz connection shall not be painted.
 - Hydrants shall be buried with six (6) feet of cover.

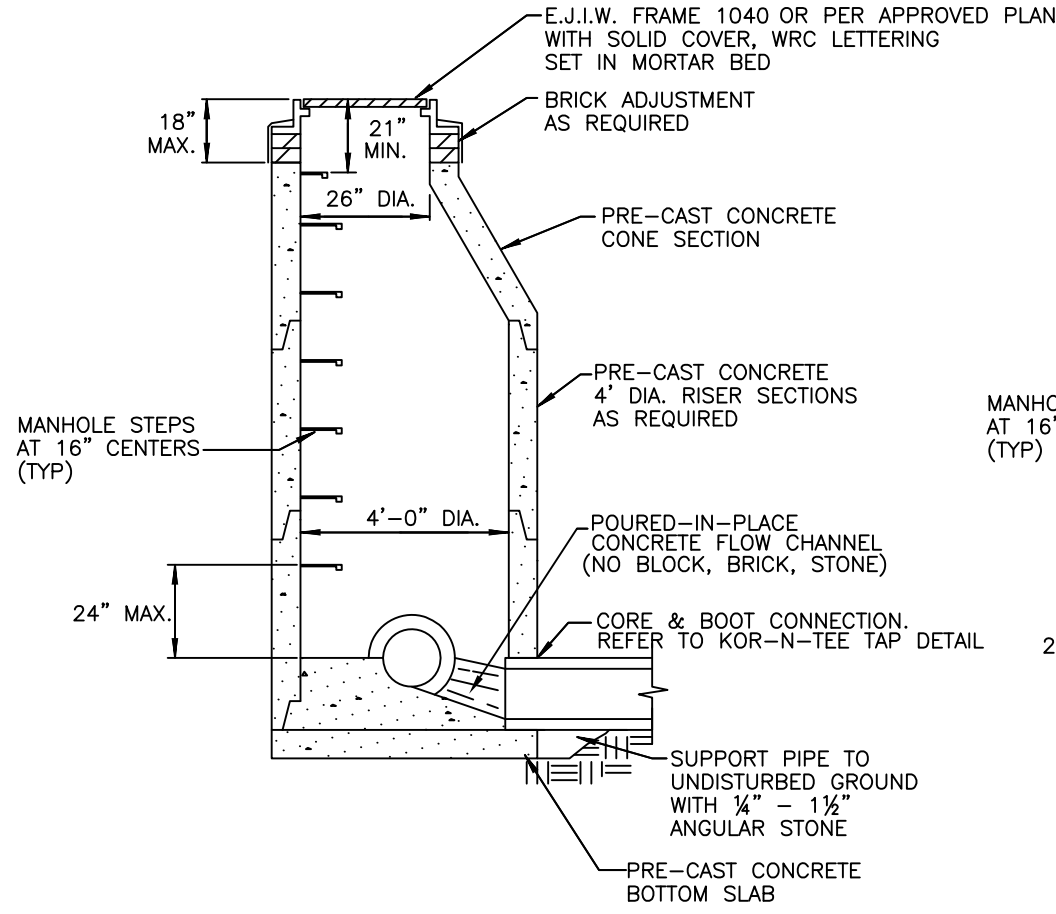




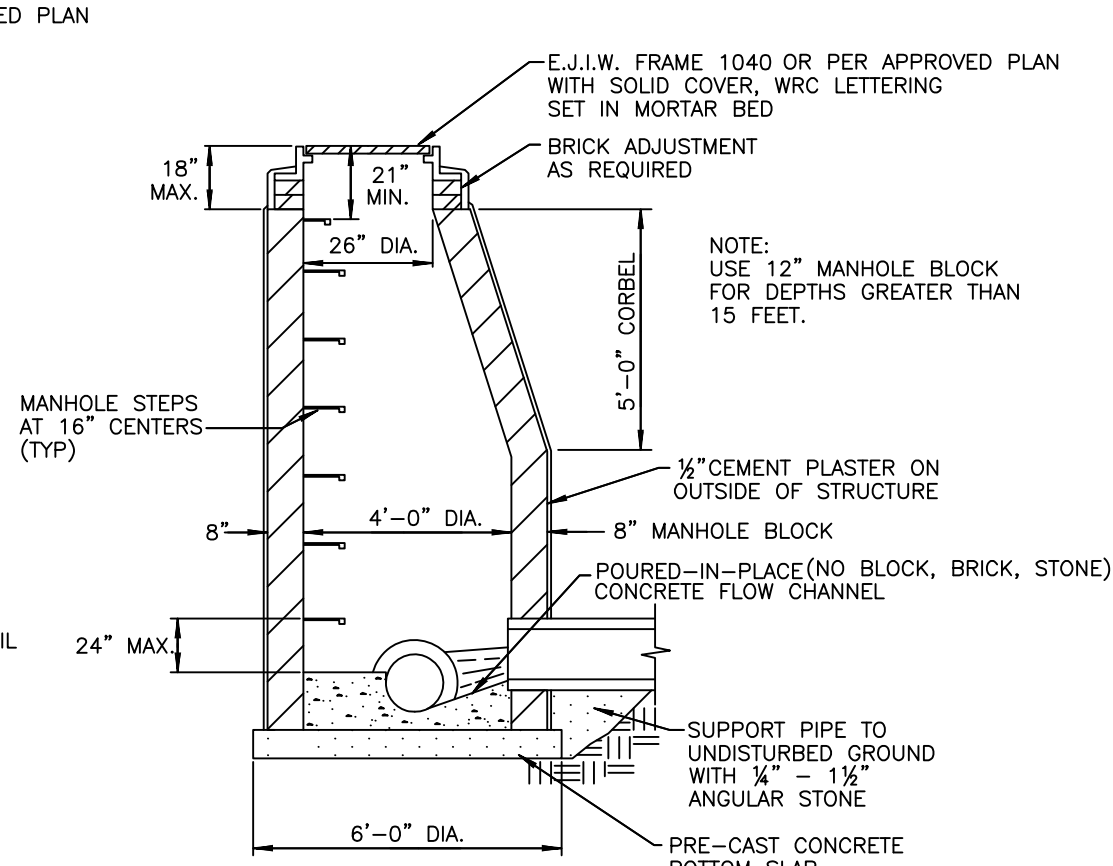
HOUSE LEAD DETAIL FOR 4" DIA. PLASTIC SUMP PUMP LEADS



PRE-CAST TEE MANHOLE DETAIL

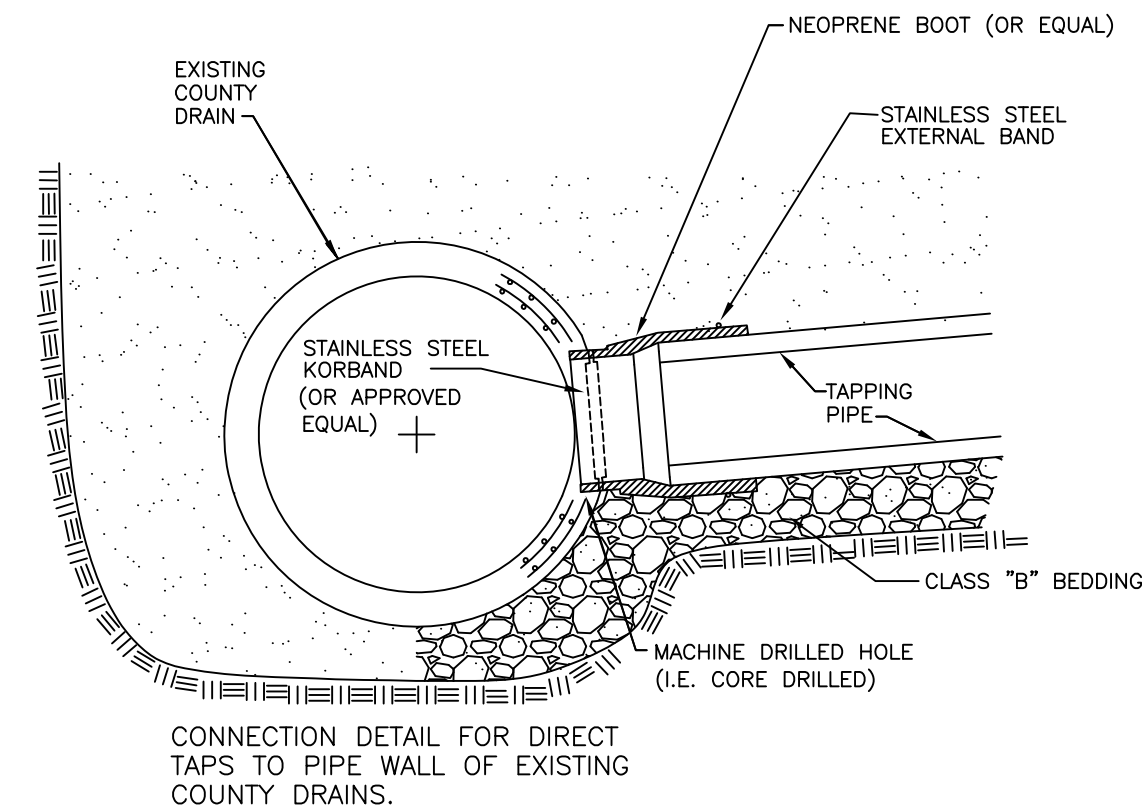


PRE-CAST MANHOLE



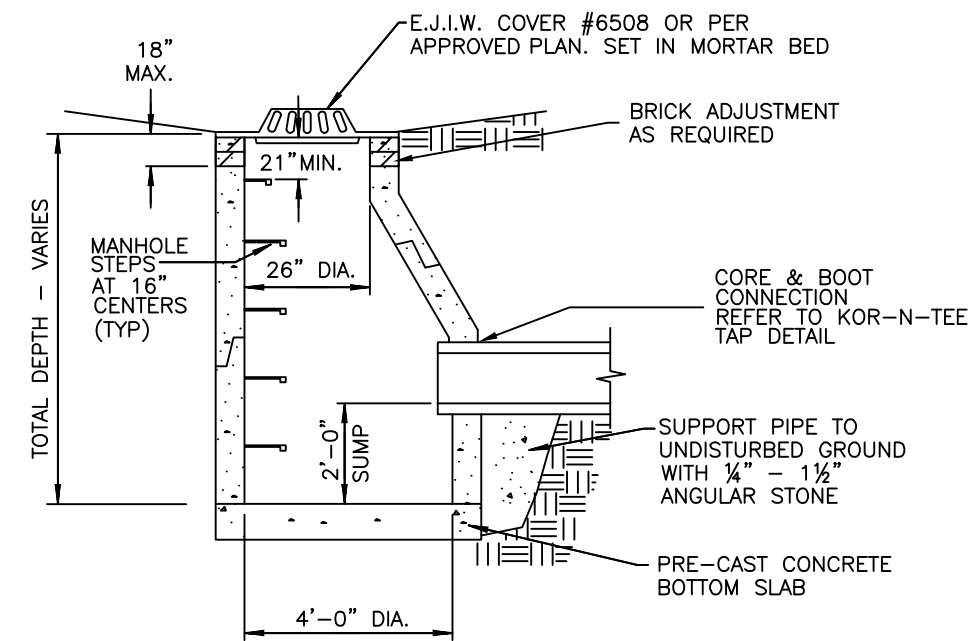
BLOCK MANHOLE (PRIOR APPROVAL ONLY)

STANDARD MANHOLE DETAILS

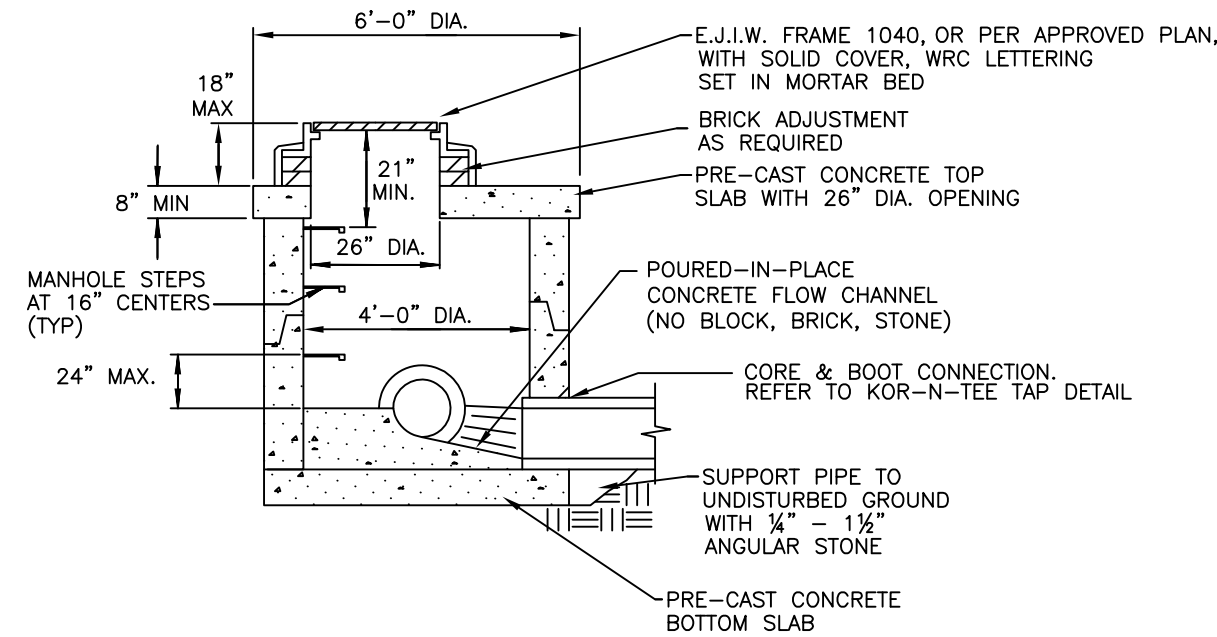


KOR-N-TEE TAP (OR APPROVED EQUAL)

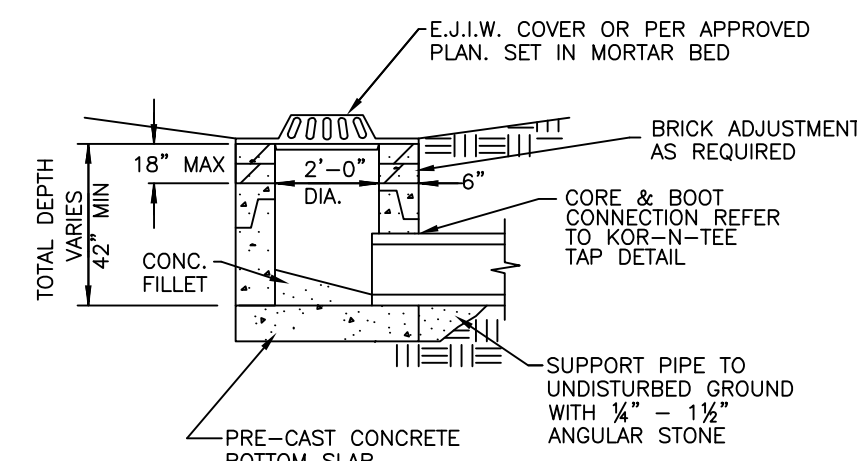
- * For non-concrete to concrete taps.
- * Use link-seal, A-lock or approved equal for concrete to concrete taps.



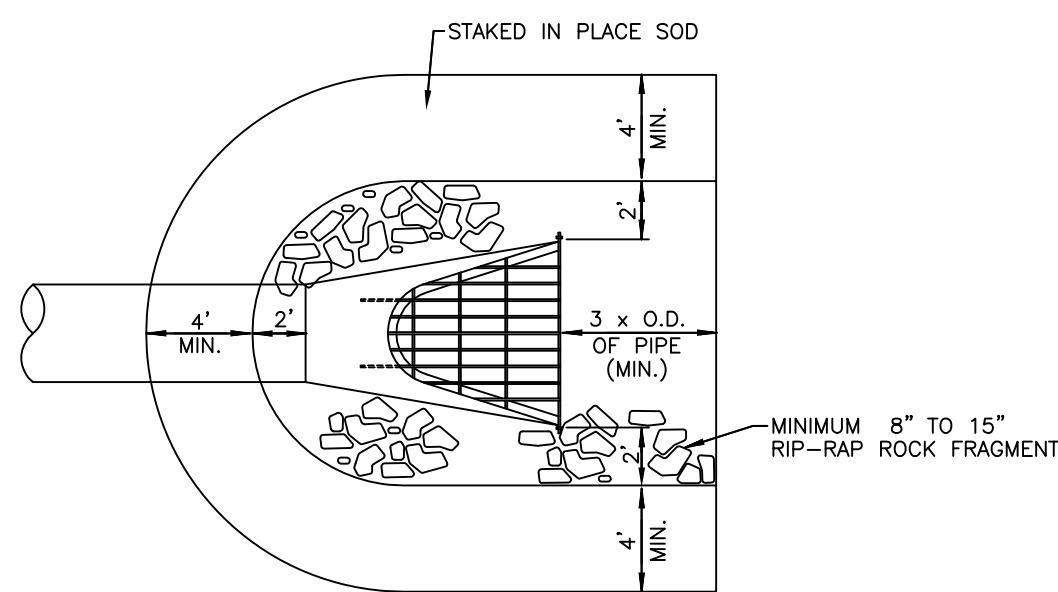
PRE-CAST CATCH BASIN DETAIL



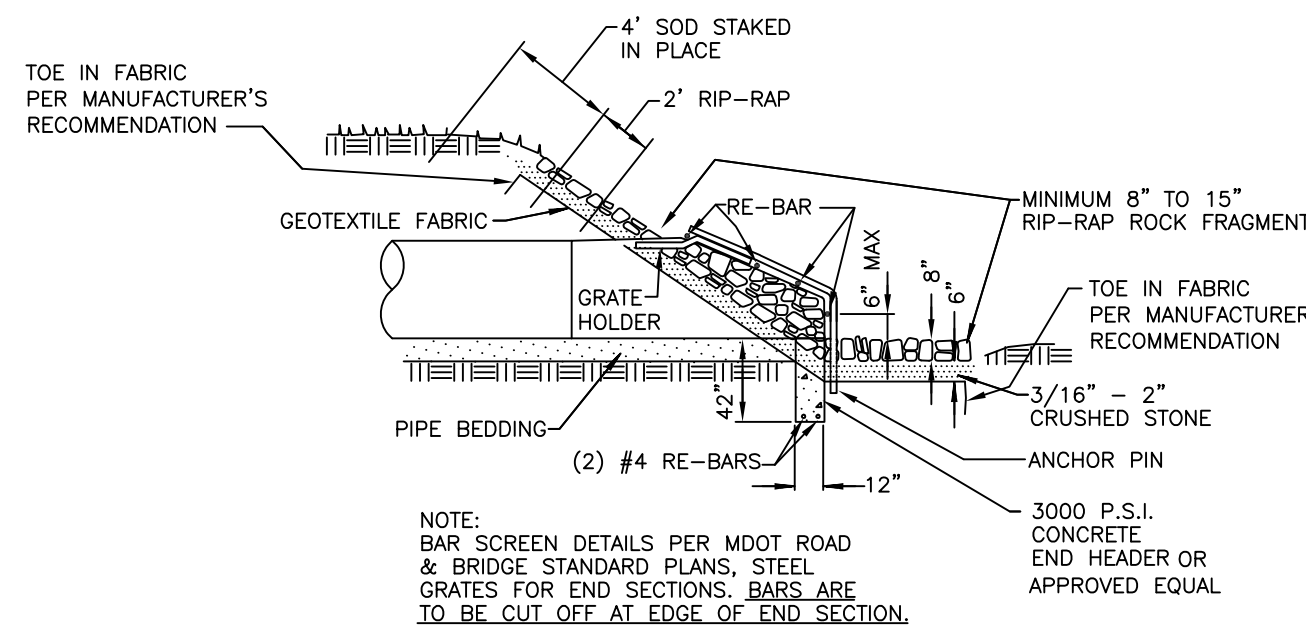
PRE-CAST LOW HEAD MANHOLE DETAIL



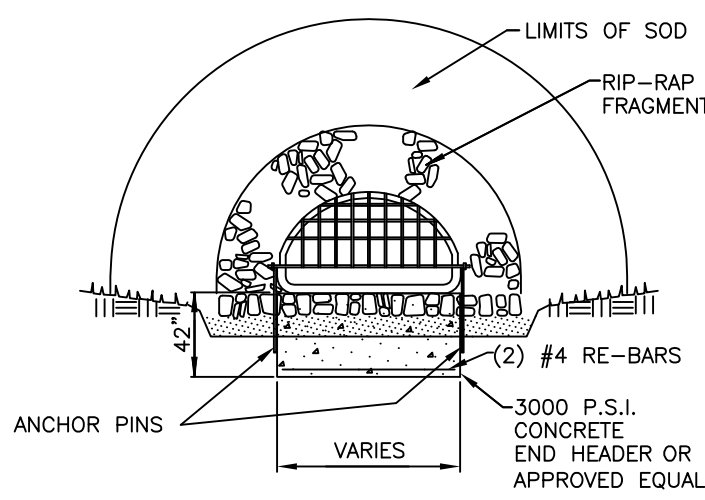
PRE-CAST INLET DETAIL



PLAN VIEW

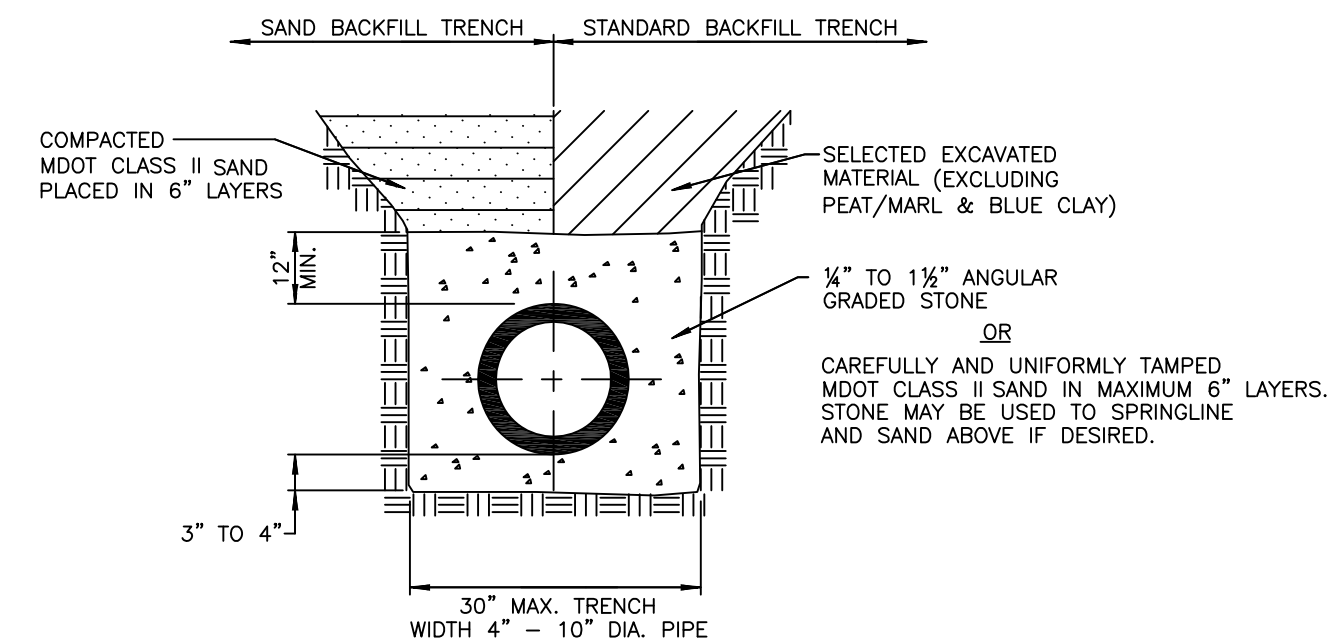


PROFILE VIEW

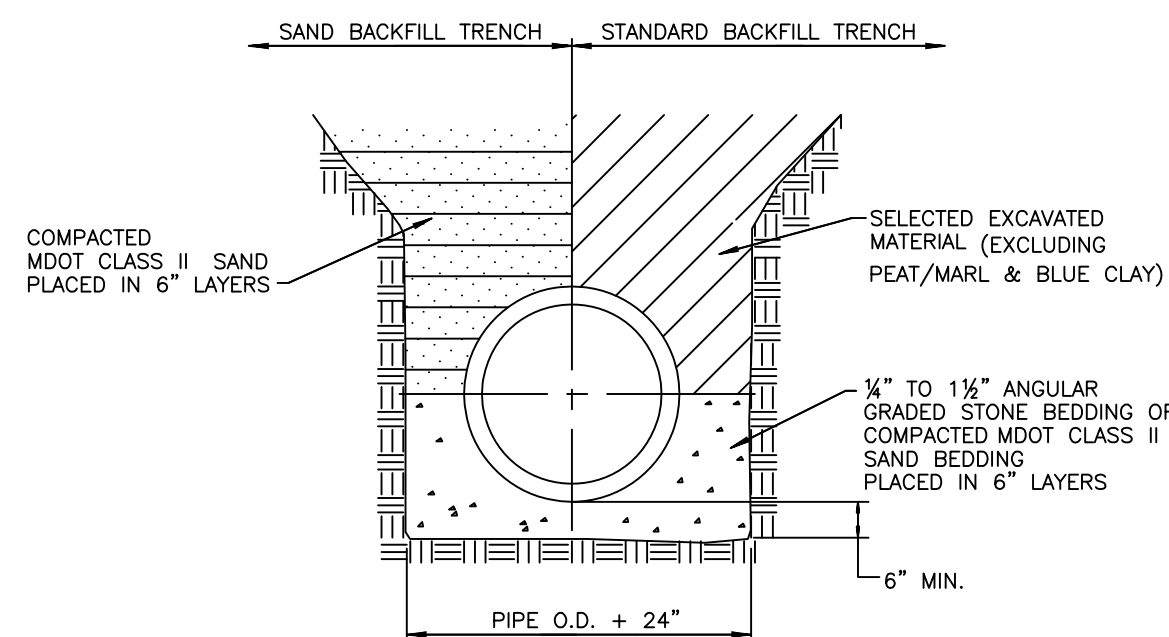


END VIEW

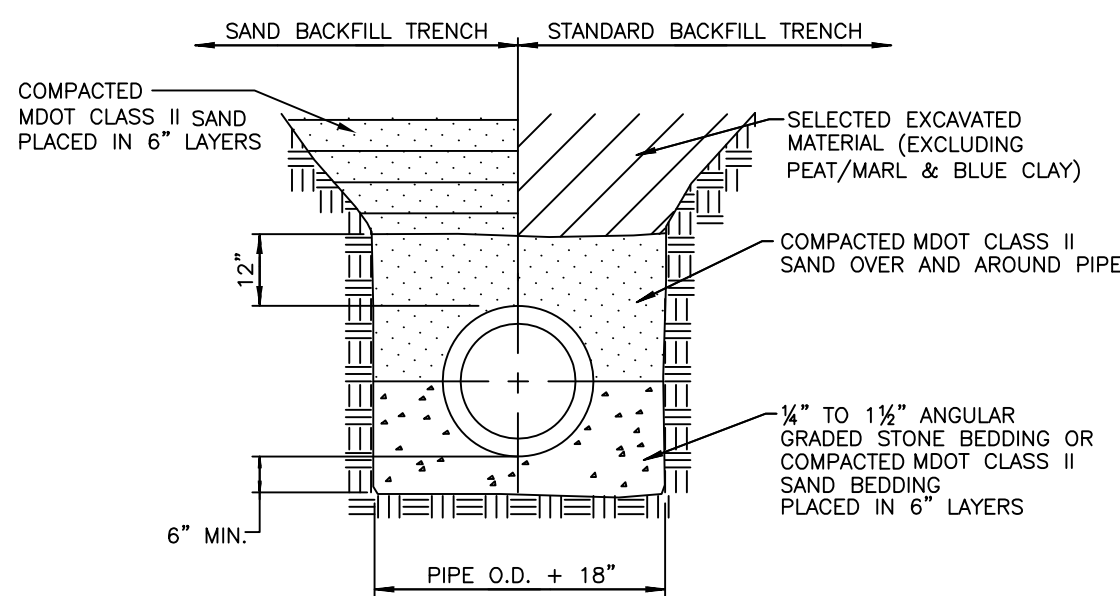
END SECTION AND BAR SCREEN DETAIL



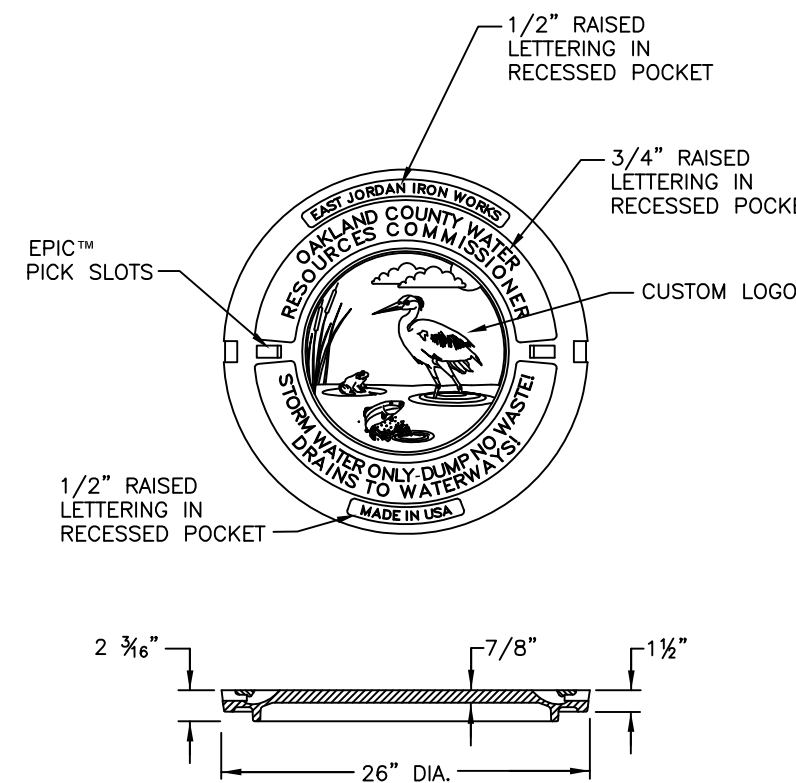
ABS (TRUSS AND SOLID WALL), PVC (TRUSS, SOLID WALL, A2000), ADS N-12 WT PIPE BEDDING DETAIL



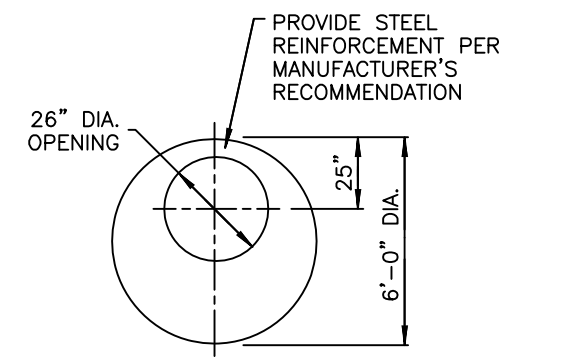
CLASS "B" BEDDING TRENCH DETAIL FOR 27" DIAMETER AND LARGER CONCRETE PIPE



CLASS "B" BEDDING TRENCH DETAIL FOR 24" DIAMETER AND SMALLER CONCRETE PIPE



LETTERED MANHOLE COVER FOR WRC



PRECAST CONCRETE TOP SLAB DETAIL

GENERAL NOTES

- Type and class of pipe shall be as specified on plans.
- Class "B" bedding shall be used throughout, unless otherwise specified on the plan.
- All end sections 18" and larger shall be provided with a bar screen unless otherwise approved.
- Standard rip-rap shall be 8"-15" fragmented rock, heavy rip-rap shall be 16"-24" fragmented rock. (No Broken Concrete)
- MANHOLE REQUIREMENTS:
 - All new catch basins, inlets, and manholes are to be manufactured to ASTM C-478 specifications.
 - All new catch basins, inlets, and manholes shall have WRC approved flexible, watertight seals where pipes pass through walls. Manholes shall be of precast sections with modified groove tongue and rubber gasket type joints. Pre cast manhole cone sections shall be WRC approved modified eccentric cone type.
 - Taps through manhole joints or cone sections are prohibited unless otherwise approved.
 - Manhole steps to be plastic coated steel meeting the requirements in ASTM D 2146, Type II, Grade 49108, MA. Industries P.S.I. Polypropylene, (or approved equal). Steps to be installed during manhole manufacture. Place at 16" centers 45" from centerline of sewer.
 - Cone section with modified groove tongue joints and with stud inserts cast in place. Top to have flush surface.
 - ASTM C-478 riser section with modified groove tongue joints.
 - Res-seal, link-seal, press wedge II, or kor-n-seal boot (with stainless steel korbard) flexible rubber manhole joints. (or approved equal).
 - The inside joints of manholes, catch basins, and pipe sizes over 42" and larger in diameter shall be pointed up with mortar upon completion of backfilling.
- CONCRETE PIPE REQUIREMENTS:
 - Concrete pipe to be per ASTM C76 standards.
 - It will be required to TV all pipe 30 days after installation
 - The contractor shall provide reinforced concrete pipe as specified on the plans.
 - All reinforced concrete pipe shall have modified grooved tongue joints with o-ring type rubber gasket, per A.S.T.M. specifications C443.
 - The inside joints of manholes, catch basins, and pipe sizes over 42" and larger in diameter shall be pointed up with mortar upon completion of backfilling.
- SUMP PUMP LEAD REQUIREMENTS:
 - All sump pump leads connected to a County Drain pipe shall be pre-manufactured.
 - Sump pump leads connected to a manhole shall be cored and booted. Refer to Kor-N-Tee Tap Detail.
 - Sump pump mains and leads shall be ADS (truss and solid wall), PVC (truss, solid wall , A2000), ADS N-12 WT with premium joints.
 - Ends of all 4" sump pump leads shall be temporarily capped and their location staked, witnessed and recorded.
 - All sump pump leads to be taken to the property line, easement line or as indicated on the plan.
 - Sump pump mains must have a cleanout with a minimum inside diameter of 24" and be constructed at changes of alignment, ends of sump pump mains or as indicated on the plan.
- RESTORATION REQUIREMENTS:
 - All disturbed area within the County Drain right-of-way shall be restored as follows:
 - Under roads, sidewalks, driveways and parking areas, backfill material shall be placed loosely into trenches in six (6) inch layers with each layer compacted to not less than 95% of maximum dry density as determined by the ASTM D 1557 Compaction Standard (modified proctor compaction test). All other areas shall have each layer compacted to not less than 90% of maximum dry density.
 - Finish subgrade
 - Place 3" thickness clean topsoil acceptable to the engineer to attain finished grade. Topsoil must not be contaminated and may not be a mixture of natural underlying soils, subbase materials, or other materials. It must consist of natural loam, sandy loam, silty loam or clay loam humus-bearing soil adapted to the sustenance of plant life. Topsoil must be neither excessively acidic nor excessively alkaline. It must be of mineral origin, exclusive of any peat or muck.
 - Apply seed and fertilizer as follows:*

Location	Seeding Requirements	Fertilizer Requirement
Slopes and Ditch, Banks, Etc.	M.D.O.T. "Roadside Mix" Turf Seed Mixture TGM (10% Kentucky Blue, 20% Perennial Rye, 30% Hard Fescue, 40% Creeping Red Fescue) applied at 220 lb/acre	M.D.O.T. Seeding and Sodding Fertilizers, Class A
Other Areas	M.D.O.T. "Roadside Mix" Turf Seed Mixture THM (30% Kentucky Blue, 20% Perennial Rye, 50% Creeping Red Fescue) applied at 220 lb/acre	M.D.O.T. Seeding and Sodding Fertilizers, Class A

- * Sod is required in maintained lawn areas. Refer to WRC General Specifications for additional requirements and information.
- apply straw or marsh hay mulch in an air-dry condition to all seeded areas over the surface to a uniform thickness at 2 tons/acre.
- mulch shall be anchored in place with biodegradable netting, not larger than 1 1/2" by 2" nor smaller than 1/2" by 1/2".
- The contractor shall be responsible to insure the growth of all seeded areas, and shall re-seed as necessary to accomplish this.

- The Storm Drain Notes and Details Sheet shall be a supplement to WRC Standards and Specifications, which are available on the WRC website (www.oakgov.com/water/).

STORM DRAIN NOTES AND DETAILS

REVISION BLOCK			
Data Source / Source Date: N/A			
Rev. No.	Rev. By:	Rev. Date:	Description:
1	12	3/17/08	PROPOSED DETAIL CHANGES: NEW LOGO
2	12	08/12/08	APPROVAL PER STANDARDS COMMITTEE
3	12	03/28/10	REVISED MH COVER DETAIL
4	05	04/27/10	REVISED GENERAL NOTES
ORIG. DATE: 05/05/97			
SCALE: NONE			
DESIGNED BY: WRC			
DRAWN BY: Mapping			
		ONE PUBLIC WORKS DRIVE, BLDG 95 WEST WATERFORD, MICHIGAN 48328-1907	
SHEET NO.:		1 of 1	

CHARTER TOWNSHIP OF ORION PLANNING COMMISSION

***** MINUTES *****

REGULAR MEETING, WEDNESDAY, MAY 6, 2020

The Charter Township of Orion Planning Commission held a regular meeting on Wednesday, May 6, 2020, at 7:00 pm VIA VIDEO CONFERENCE - GoToMeeting Access code 599-669-285
or VIA TELEPHONE 1-(571) 317-3122 Access Code 599-669-285
(Meeting being conducted via video/telephone conference due to the health concern of COVID-19 and the Governor's Executive Order 2020-15)

PLANNING COMMISSION MEMBERS PRESENT:

Justin Dunaskiss, Chairman
Don Gross, Commissioner
Scott Reynolds, Vice Chairman

Don Walker, PC Rep to ZBA
John Steimel, BOT Rep to PC
Judy Ryan, Commissioner

PLANNING COMMISSION MEMBERS ABSENT:

Joe St. Henry, Secretary

1. OPEN MEETING

Chairman Dunaskiss opened the meeting at 7:03 pm

2. ROLL CALL

As noted

CONSULTANTS PRESENT:

Rodney Arroyo, (Township Planner) of Giffels Webster
Mark Landis, (Township Engineer) of OHM Advisors
Tammy Girling, Township Planning & Zoning Director
Jeff Williams, Township Fire Marshal

OTHERS PRESENT:

Andy Milia John Thompson
Kate (last name not provided) David Steuer
Debra Walton

3. MINUTES

A. 4-15-20, Planning Commission Regular Meeting Minutes

Moved by Commissioner Walker, seconded by Commissioner Gross, to **approve** the minutes as presented.

4. AGENDA REVIEW AND APPROVAL

Moved by Commissioner Gross, seconded by Trustee Steimel, to **approve** the agenda as presented.

Chairman Dunaskiss recessed the regular meeting and opened the Public Hearing for PC-2019-51, Township Initiated Text Amendment, to Zoning Ordinance #78, Articles 2, 33, & 34 at 7:05 pm.

Chairman Dunaskiss closed the Public Hearing for PC-2019-51 at 7:20 pm and reconvened the regular Planning Commission meeting.

5. BRIEF PUBLIC COMMENT – NON-AGENDA ITEMS ONLY

None heard

6. CONSENT AGENDA

None

7. NEW BUSINESS

A. PC-2019-06, Silverbell Pointe PUD Final Plan, located on 4 vacant parcels south of Silverbell Rd. on the east side of Joslyn Rd. (parcel #09-33-201-001, 09-33-128-001, 09-28-379-001, & 09-28-451-001).

Chairman Dunaskiss asked the petitioner to give an overview of this final PUD project.

Mr. John Thompson with PEA, representing Franklin Ridge Homes, LLC.

Mr. Thompson stated that Silverbell Pointe is located east of Joslyn Rd. and south of Silverbell Rd. The development is defined on the east side of the CN Railroad. The site is approximately 74 acres, and they are proposing to develop a 28-acre single-family community with 46 single-family homes, a community park, and the site is all elevated above Mudd Lake and the surrounding wetlands. The four (4) acres in the north-east corner of Silverbell and Joslyn Rd., they are proposing to donate a four (4) acre parcel as a Township Park. Additionally, they will be providing 20%, half of the recreational open space.

Mr. Thompson gave a brief history. He stated that originally when they submitted the site plan, they had 60 lots. Through several meetings and assistance with both the Planning Department and the Planning Commissioners, they refined that plan down to 50 lots. In June 2019, the Planning Commission forwarded the plan to the Township Board and on June 17, 2019, the Board approved the preliminary PUD subject to removal of four (4) additional lots on Silverbell Rd.

Mr. Thompson said they are there to request a recommendation for final PUD approval, subject to the consultant's review letters, and with the following amendments and clarification: 1) the Township safety path, they provided an eight-foot-wide path across the Joslyn Rd. frontage, which is required by the ordinance. They are requesting not to extend that path outside of the development limits; 2) based on some clarification of the woodland ordinance, they understood that the protected trees are exempt from replacement within the development. Therefore, there are 16 landmark trees that are to be removed within the development for a total of 481 caliper inches. With a four-inch replacement, that is at 120 replacement trees required. They currently are showing 115 replacement trees. They are suggesting adding five (5) additional trees to the plan, so that replacement trees equal removed trees. This will eliminate the need for the tree fund. 3) Jamm Rd. is under the jurisdiction of the Road Commission and is their responsibility for them to maintain. They are offering to provide a one-time repair and thought that long term maintenance of that EBA should remain under the jurisdiction of the Road Commission and simply be requested by the Township if repairs are needed as they would do for any other gravel road that was in disrepair as owned by the county. 4) the ordinance requires that at least 50% of the dwelling units with attached garages include either side entry garages, or recess garages, meaning that the front of each garage is at least five (5) feet behind the frontline of the living portion of the dwelling unit. They showed on the plan all side entry units for the purpose of making sure that they would work. The intent is, as indicated on the plan, that at least 50% of those units shall be side-entry. 5) They don't have a defined homebuilder. When it comes to the material specification for the housing, the housing materials, they wanted to define something that was of high-quality materials, but still left some latitude for the prospective homebuilder that may come in. As they defined it in the Master Deed, they said that exterior building materials will consist of brick, stone, and hardiplank siding, or equivalent siding. Dimensional asphalt shingles will be used. For the roofing, the front and sidewalls of the first

story of the homes and the sidewalls of exposed below-grade walls of homes will be covered with brick or stone. They we're hoping that was a sufficient definition to make sure that they get a high-quality house, but still allows them to bring in the custom builder and meet those needs that they are going to require, as well. 6) They requested to begin the construction within two (2) years of the date of final site plan approval rather than one (1) year. Based on the current conditions that they are currently living in they are afraid that the economics just might not be there.

Mr. Thompson said in conclusion, based on the consultant's review, that the final PUD plans are in substantial compliance with the Townships ordinance and standards. With their proposed clarification they respectfully request their recommendation for final PUD approval subject to OHM and Giffle's letters as amended.

Planner Arroyo read through his review letter date stamped April 24, 2020.

Engineer Landis read through his review letter date stamped April 16, 2020.

Fire Marshall Williams read through his review letter date stamped April 16, 2020.

Chairman Dunaskiss stated that they did receive a letter from the Public Service Director, and he had no further concerns. The Road Commission provided a letter with regard to their qualification requirements.

Chairman Dunaskiss asked the applicant if they had any additional questions or concerns?

Mr. Thompson stated that addressing Planner Arroyo's comments, exhibit "B" the open space area "E" was an oversight on their part, that will be a common element and they will make that revision. He added that regarding the building materials they are willing to work the Township administratively to further refine that, and could take care of that during the Master Deed process, they have language that would tweak that to their satisfaction. They are preparing a wetland permit to submit to both the Township and EGLE.

Mr. Thompson said regarding the Fire Department comments, he said that at the beginning of the project they talked about secondary access points, and two (2) means of egress. What they had resolved during the preliminary stages was that the entrance would be a boulevard entrance and then be referred to as two (2) points of access. He thought that they had resolved, the two (2) points of access over 30 units. At this point, they do not plan on fire suppressing the homes as a requirement of the development.

Vice-Chairman Reynolds asked if the two points of access are addressed by having a boulevard entry? He thought that they had to be separated by a certain distance? Fire Marshal Williams replied that the fire code does have a description of that. When it talks about secondary access and two (2) access points, a boulevard entrance does not meet the requirements of the international fire code. There are specific requirements that say for a secondary access point, the secondary access point needs to be on the opposite end of the site. Obviously, a boulevard entrance does not account for that.

Vice-Chairman Reynolds stated that he didn't have any issues with the safety path being within the development limits and keeping that within those parameters and not extending it up to the next intersection. He was also good with the applicant keeping no contribution to the tree fund as long as the replacements can stay on the site. He was still open to a discussion with Jamm Rd. responsibility for access. He was good with the building material comments and the way they are written that a hardy material along with stone or brick and the way it was described he

thought it was a decent parameter. He was still open to see elevations in the future for administrative approval just to acknowledge that those are, parameters are still being met. He would be open to the two (2) year build window as long as there is a reasonable timeframe from the start of construction to the end of construction.

Trustee Steimel said that he is enameled about giving a two (2) year extension right off the bat. He didn't want to set a precedent like that. If they need to come back for an extension it is not a big deal. He didn't want to get into starting an approval of a project that they start granting extension right away. He thought that extending the safety path beyond, their borders, is not really part of this, and he was fine with that. They are getting that property on Silverbell and felt they were covered there. The building material might be tricky. They might have to come right out and define, like, a small committee that would review once the project came in. How would they administratively review that? Who would that be? Would that be the Building Department? Planning & Zoning Director Girling said that it does pose a bit of a challenge. If a neighborhood is approved and Planning & Zoning is out of the picture, and then it is at Building Department and they are looking at if it is going in slowly in different homes, it is from one department to another department. She has seen in the past where there is something outline in the PUD agreement with the degree of building materials that are required, and then that PUD agreement is on file and the Building Department can reference that. She added that it is a bit of a challenge. In her opinion, not saying that it can't be done, but she thought another way to handle it would be preferred for her.

Commissioner Ryan asked if it would be possible because they don't have a contractor or developer selected yet, that they say they need to bring it back to the Planning Commission once they have a developer and they have proposed plans for their approval at that point?

Planning & Zoning Director stated she would want clarity because being that this is a PUD, the Planning Commission is a recommending body to the Township Board is the approving body. There are minor and major PUD modifications. The minor only goes to the Planning Commission and the major go to the Township Board. The architecture, if it is a part of the approval, can be considered a major alteration. She was not saying it would not work, but it needs to be really explicit the course it needs to take if that is the way they are handling it.

Trustee Steimel said he thought that they had a similar situation in Stonegate East. It was a multiple builders' that went in there and were selling the lots as it went. He wasn't sure how the Building Department handled that? He thought that they did do a review to make sure that whatever style of home was going to be built, that it matched the general criteria. Planning & Zoning Director Girling said she did not recall that. She recalled reading about was Orion Village Crossing, the townhomes in the back had certain criteria, it was a PUD, but they did as a community benefit say that it was superior architecture. They came in and said that they don't want the chimneys, it did have to come back because their architecture was considered superior architecture, it was subjective and the Planning Commission had to make a determination on whether they were going to agree to the alterations to it. She didn't remember on Stonegate, but Stonegate was a consent judgment and five (5) or six (6) modifications.

Commissioner Walker said that he had empathy for the petitioner in that they were there back in June. He voted against what they wanted, and now he is trying to vote for what they want, but wasn't sure if he was convinced yet, because that they don't have a builder yet. This project has been going on for some time and there is not a commitment to the construction of the exterior construction. The Jamm Rd. reluctance to take care of that bothered him, and the Fire Marshal's comments bothered him.

Commissioner Gross said relative to the safety path, if the applicant does not feel that he is able to construct the safety path up to Silverbell, would it not be appropriate to have a donation of the safety path fund be considered in lieu thereof, so, that safety paths can be maintained in the future. Regarding the building materials, he liked what the applicants said about the types of materials that are being proposed and thought it should be incorporated into the PUD agreement into Article 5, section 5.7, where it talks about building materials. Also, if they could resolve a method to how the actual elevations would be reviewed.

Mr. Thompson said to respectfully disagree with the Fire Department's comment. They have done multiple sites in multiple communities that utilized the boulevard entrance as a secondary entrance. They went through these discussions with both the Township Engineer as well as he thought the Fire Department to clarify these issues under the preliminary PUD process. There were discussions about putting a secondary access if it was feasible or not, and this was the final determination that they had all agreed upon that was approved at the preliminary PUD stage. He didn't realize this time was going to come up again as he thought that it was resolved. He added that regarding the building materials, they have the materials identified in the Master Deed. They can include those same descriptions in the PUD agreement. With respect Jamm Rd. that is a public road, it is a gravel road, similar to what would happen if the public called the Township and indicate that the road wasn't being maintained, that would be deferred to the Road Commission to maintain, so this is something that is already their responsibility. They can assist with contacting the Road Commission on the Township's behalf, or as a local resident and request that they maintain it. They in good faith would make sure that it was in proper condition for the time of their site development. They wanted to at least offer up that they would take care of this to make sure it is up to grade and to make sure that the Fire Department would be, at the time of the development. He added that this is like saying that they would like you to fix the potholes on Joslyn Rd. from their site to Silverbell in perpetuity. It is their opinion; it already has a responsible party. They felt that if there were issues with regards to this when it was originally developed when the Road Commission purchased the lot, and it wasn't an agreement with the original subdivision, that that wasn't an issue then and he didn't think it should be an issue now. He thought that they should lean on the Road Commission to do their job within their public right-of-way.

Fire Marshal Williams said that the suppression requirements were noted on every Fire Department review that has been completed on this property.

Chairman Dunaskiss stated that was one of the bigger issues was the boulevards. He asked if there was a way to rework the road? Mr. Thompson said that at this time, he didn't have a response for them. They have done several projects and thought that they have done projects in Orion Township as well, previously, that had the same situation. The requirement to fire suppress is a request of the fire code, not a requirement. He knew that the Fire Department requested on most of the reviews, but it is as long as two (2) means of access are provided. Fire Marshal Williams said he disagreed with that; International Fire Code is their adopted ordinance. The exact code requirement comes out of subsection D 107.1, and that is where the requirement comes from in regards to the 30 dwelling units with one access drive that leads in and out. They have had past projects over the past few years, one being Stadium Ridge Residential, that they did run into the same situation, and they are adding or did approve of adding fire suppression into the homes.

Vice-Chairman Reynolds said that he didn't think that it was a request, it is something that they required of other developments. They have either provided two (2) means of access point if they are over the 30 dwellings and believed that is the mark or they have suppressed their units. He didn't see any question on that topic, it is the adopted ordinance and that is what they have asked from other developments with similar scenarios to provide.

Commissioner Gross said regarding Jamm Rd. he thought that once it is improved the access, that it should not be the responsibility of the condominium association to maintain that. It is completely off-site, and he thought it would be very difficult to have a condominium association be responsible to maintain that road in perpetuity, once it has its improvements. There has been a \$10,000 contribution to having that road improved, he didn't know how much it would cost, but he thought if they could get it improved, so there is access to it, then that should be the end of it without any further responsibility of the association to maintain it.

Fire Marshal Williams said that the Fire Department standpoint, just as long as the commission understands, that an access drive is required. In the case or scenario that a train was to use those tracks, it is an access drive that has been located there for a long period of time. They have taken a few visits out there it is not being maintained from that aspect. It is just something that has to be kept in mind that during the winter months having this snowplowed, the trees that have grown, they need to try to keep a vertical clearance of approximately 14-ft. Those are just some of the things that they need to keep in mind in regards to having that emergency access drive maintained.

Chairman Dunaskiss asked about the two (2) year timeframe as proposed? Planning & Zoning Director Girling asked if the request was for two (2) years to start, or two (2) years to complete? Chairman Dunaskiss replied two (2) years to start.

Chairman Dunaskiss said that it was common for folks to come back for renewals. He didn't want to give the two (2) years initially. Things may change in the next 30 days, and they didn't know what would happen in the next year. He added regarding the road and the one-time contribution that was posed, he felt it was adequate, and understood that they should assist but shouldn't be perpetuity on the line for that road. He thought that the materials, that were proposed, so far, based on what is in writing, that they come up with a way to do it. Without naming the builder, he thought that they could get, with regards to, what they have already stated. They also have a process, to have a third party to validate, so as not to put the department out on a limb. He asked if Planning & Zoning Director Girling could do that? Planning & Zoning Director Girling replied yes; her feelings were, if it is really explicit in the PUD agreement, it gives the material and it has to have whatever percentage of whatever material, minimum square footage of X, this type of design and is as explicit as it can be, then she would think that between the Building Department and herself when a plan comes in that, they can make sure it meets that, but she would ask that it be explicit as possible.

Chairman Dunaskiss said regarding the Fire Marshal comments, they have had other development's similar that have gone through the same requirements and rework the road or suppress and didn't think that there were many ways around it.

Commissioner Gross asked relative the timeframe he believed the Planned Unit Development ordinance does provide for a construction project to commence within one (1) year of the date of the agreement. He didn't think that they had the ability to waive that, although they can provide for extension after one (1) year.

Planning & Zoning Director Girling said that she thought that there was a clause, that was for one (1) year, they could get an additional one (1) year extensions. There was something in there, and that is why as if there was clarification on extending one (1) year to start, or extension on construction because one (1) of the two (2) does say that it can be extended as long as the Planning Commission approves it when they are going through approval. If they have another item to discuss, she would look for that language and get clarification.

Trustee Steimel asked regarding the Jamm Rd., he thought that their comments were that they wanted to make a contribution to the safety path, and then it is up to the Township to make the improvements to that access road, is that what is being proposed? Chairman Dunaskiss stated that he thought they were still going to make the access road from the development and then they have the contribution for a one-time fix. He asked the applicant to clarify.

Mr. David Steuer representing Franklin Homes said that they want to work together with the Commission to come up with a project that is successful in everybody's eyes. He understood that they have one (1) year to commence construction. He heard Trustee Steimel's comments and Planning & Zoning Director Girling's statement that it is not out of the ordinary or unusual for someone to ask for an extension. What is unusual right now is a pandemic. To give a frame of reference, they have two (2) different subdivisions. One was by a publicly traded homebuilder that was supposed to buy from them and close on April 6th and canceled on April 3rd. Pulte Homes has canceled the contract with them on the other community outside of Orion this week. They have had two (2) deals that they have to go back to the drawing board on. So that is why they were thinking, they don't know where it is headed. They don't know if they are going to have a resurgence of the pandemic next winter. They thought two (2) years might give them an opportunity to not take up everybody's time, again in a year, but out of respect for what they have in writing, they certainly can live with a year. They want to sell it within the year and are only talking to quality builders. The last two (2) transactions have worked under both publicly traded homebuilders. They would live up to the 12 months if that would make things right with the community. He added the issue regarding Jamm Rd., he did two (2) things, he spoke with Jennifer at the Oakland County Road Commission yesterday, and confirmed that they do own Jamm Rd., including the section that seems to be a subject right now, and they consider themselves responsible for maintaining that, which includes snow removal, grading in the summer, and brush hogging of any kind of debris or any trees that are growing into the area so that it provides safe passage. What they did offer was a dollar amount to regrade the road, but if it is more comfortable for the Commission, they will commit that when they are developing the site, they will have those same people come in and grade Jamm Rd. and brush hog so that it is passable. They don't have a problem with the county agreeing to maintain that thereafter. He said he forgot how long Jamm Rd was, he thought half of a mile and thought that the area that they are talking about was about 125-ft. long. He said he drove it again today just to see how it looked. He stated that there were some dips in the road, and there were some emergency signs on either side of the subject area of Jamm Rd., but ironically, a pickup truck, somebody that looked like they lived locally in the area, passed me the other way, went through it. So, it looks like the neighbors are using it. If that would make the Commission more comfortable, then they are more than happy to say forget the \$10,000, they are going to make it right, and the Oakland County Road Commission understands and agrees it is their responsibility to maintain thereafter. Anything as simple as a phone call would rectify that in the future. He added that they talked about the safety path, and he thought that if it is acceptable to the commission, that the \$10,000 that they offered for Jamm Rd., they would take care of Jamm Rd. and would contribute the \$10,000 towards the safety path. He thought that the only remaining open issue is the question about fire suppression. He felt bad because they worked very carefully and was concerned about the safety for all. They were under the understanding that both creating the Jamm Rd. access point for a secondary access from the south versus north to the site and the boulevard did comply with what is in writing. He was caught off guard because he would like to research it more, and would suggest that they would have a better understanding before the Board would have a vote; if that is acceptable?

Planning & Zoning Director Girling said what the ordinance says under the PUD section is that they need to start construction within one (1) year of the approval. The process has always been that they get to the point that they are through engineering they have paid the performance guarantees and they pull a permit which can be their soil erosion. That stops the

one-year clock. Then they have a two (2) year clock to finish construction and that is under the site plan section and it says construction must be completed within two (2) years of approval, unless a longer time period has been requested, by the applicant, at the time of the plans approval. It is not unusual for someone to come in and ask for an extension and the ordinance does allow that. The asking at the time of approval is on the length of the construction period itself.

Trustee Steimel said that he liked the comments about Jamm Rd., he thought that made more sense to him that they should just do a little bit of maintenance work, while they already have equipment out there. Otherwise, part of the cost is getting their equipment into the area, and that is an added cost. He wasn't sure if the \$10,000 covered it, and didn't think that OHM has really looked to say they could do that required work for \$10,000. He preferred that they do the roadwork and make the slight maintenance improvements on Jamm Rd., rather than a donation.

Fire Marshal Williams said that what they can do if that is the direction that the Commission wants to go on, obviously, if they find any situations or anything that hinders their access down that emergency access drive, they can always work hand in hand with Oakland County to get it addressed.

Commissioner Gross asked Fire Marshal Williams what kind of a cost are they talking about for fire suppression in a single-family house? Fire Marshal Williams replied that he wished he could give an exact number for that. He did know, from a state aspect, also from a federal aspect, there were incentives and tax incentives to adding suppression to homes. Commissioner Gross noted that it would be a benefit relative to their insurance. Fire Marshal Williams said that across the state, if not the entire country, everything is moving toward, more life safety features, both in the commercial aspect and the residential aspect. He added that the fire code addresses this situation because one of the biggest things to pay attention to is if something did happen in front of the boulevard entrance, like a car accident, something in regards that would block their access. The whole mindset behind the fire suppression system is that it basically has the ability to either extinguish or to delay the fire growth until the Fire Department can get access to that dwelling unit and be able to extinguish the fire.

Chairman Dunaskiss thought that the fire suppression system would cost approximately \$2/foot on a new build.

Vice-Chairman Reynolds understood that it was an added cost to the project, but it is a requirement that they regulate and require it for other developments, and it is their adopted regulation. He knew that they had asked for improvements on Jamm Rd., but he was never under the impression that they are allowing suppression not to occur because of an access improvement that was going to occur.

Chairman Dunaskiss stated that it seemed overall consensus that there is not a whole lot of leeway from this Commission. They could overcome the suppression if they reworked the roads? Fire Marshal Williams replied, yes.

Fire Marshal Williams said that in this past review and in the prior reviews, they have two (2) separate issues. Basically, the Jamm Rd. emergency access drive is to address the situation if the train tracks were to become an issue. That gives them access to the site. Then the boulevard entrance or the one way in one way out of the site is the second issue that they are running in to. If the applicant was able to provide some type of emergency access drive, that came out to another area of the subdivision or another road, that would basically take off the requirement and it would no longer need to have the fire suppression inside homes.

Mr. Thompson said that they have a question of interpretation. He would like to further offer that if they had a recommendation subject to the legal interpretation of the fire code. He was in agreement with everything that the Fire Marshall has indicated, with respect to, the fire suppression, if they only have one means, again, their difference in opinion is that the boulevard serves as the two means of egress. Maybe, they could deal with that between now and the Board meeting, and see if they can come to a resolution.

Chairman Dunaskiss said they could denial to the Board based on that they come up with the solution.

Mr. Andy Milia development consultant for Mr. Steuer, thought that if this is the only remaining issue, that they would look forward to a recommendation with this particular issue to be studied by the Township Attorney and the applicant's attorney before it goes to the Board. So rather than deny it, they would look for a recommendation with this being properly interpreted. If it was interpreted that it had to be done, then that would be what the Board would be voting on. If it was interpreted, that it was not a requirement, then the Board could vote one it that way.

Planning & Zoning Director Girling, yes; she felt that the Planning Commission could make a recommendation, and this would be criteria but would have to be worded properly so that the motion going to the Board, they would completely understand what the issue is. What they do depending on the outcome. Is there a recommendation to approve? Would it be to approve with the exception of this? She thought that there is a way to formulate the recommendation that could incorporate this but it has to be clear for the Township Board to understand.

Fire Marshal Williams noted that if that is the direction that the Commission wants to go, he was fine with that. He stated that he can work with the Township Attorney, and provide all the documentation to him, that specifically explains where the code requirements come from and the subsections and the codebook that they fall under.

Planning & Zoning Director Girling asked if the Planner had any thoughts on that? Planner Arroyo stated that it was perfectly reasonable if that is an issue that an applicant is asking that there be some type of clarification that they could make a recommendation subject to that issue being explored in more detail with the Township Attorney prior to the Township Board taking final action. Once the Township Board has it, they will have that recommendation. They are basically trying to make sure everyone is clear what the actual requirements are, and thought that was a reasonable thing to do.

Planning & Zoning Director Girling requested that whichever way that the motion goes, that there were a number of things that the applicant agreed to in relation to comments from the consultants that are not depicted or noted on the plans. She requested that it be part of the motion so that it does get incorporated as within the plans.

Moved by Commissioner Gross, seconded by Trustee Steimel, that the Planning Commission forwards a recommendation to the Township Board to **approve** PC-2019-06, Silverbell Pointe PUD Final Plan and agreement, located on 4 vacant parcels south of Silverbell Rd. on the east side of Joslyn Rd. (Sidwell #s 09-33-201-001, 09-33-128-001, 09-28-379-001, 09-28-451-001) for plans date stamped received March 24, 2020: this recommendations to approve is based on the following finds of facts: 1) that the plan is in compliance with the Planned Unit Development concept, like congregating housing units on a building area of approximately 25 acres out of a 74 acres site; preserving the wetlands woodland, and open space to the maximum extent possible; the applicant has reduced the density from an initial application of 50 units to 46 units; the 74 acres approximately 49 acres which includes a four (4) acre park donation, are in a preservation mode; 2) the Planned Unit Development is compatible with adjacent residential

properties, it does not have access through any of those adjoining subdivision; 3) the edition of 46 additional residence should not have a negative impact on Joslyn Rd., or the preservation of 49 acres of the site, plus an additional 5.79 acres or 20% of the site is identified as open space provided for the protection of the natural environment; 5) that the plan is in compliance with all applicable township and county requirements; 6) the Planned Unit Development plan is in compliance with the Township Master Plan; this favorable recommendation is subject to the review and approval of the Planned Unit Development agreements by the Township attorney and to include, a resolution on the fire suppression system and or building entrance, boulevard entrance be resolved prior to the plan being reviewed by the Township Board. Article V, Section 5.7 of the Planned Unit Development agreement include the addition of building materials, which were identified and recommended by the applicant and the petitioner this evening; that a review of the elevations be incorporated to include the Planning Director, and Building Official when plans are submitted for individual buildings; there shall be a submission and approval of a wetland permit.

Discussion on the motion:

Trustee Steimel asked if they wanted to add that they are going to remove that note about making a donation to the Township for Jamm Rd. and instead, the maintenance to be done under Jamm Rd. access and it would be done as part of the project? Also, the developer said that they didn't need to make a contribution to the Tree Fund for the few remaining trees, they were just going to adjust their landscape plan.

Amended by Commissioner Gross, re-supported by Trustee Steimel that the initial review of Jamm Rd. would be done during the construction of the project and improvements made by the developer. Also, that \$10,000 contribution would be to the safety path fund of the Township, and that the landscape is adjusting accordingly.

Planning & Zoning Director Girling stated that the Planner would have to re-review that landscape plan. Planner Arroyo said correct; subject to verification of those new numbers.

Planning & Zoning Director Girling asked if the Planning Commission comfortable with the understanding of the materials and maybe this involves the Planner. Is there an ingredient that could be put in like minimum square footage, something that they can verify when the plan comes in for an individual house on the architecture? Commissioner Gross stated that the applicant in his initial presentation provided some more details in terms of the types of materials, and amount of brick, etc. that would be required, and that has not been incorporated into the current plan PUD agreement. He thought that if they provided that additional information that would be helpful.

Planner Arroyo stated that they had heard some additional details tonight, so if the applicant can make sure those are clarified and provided ahead of time before the Township Board meeting and all that can be in writing. Then they will know what they are dealing with and it should be fine and should clarify some of the questions that have been asked.

Planning & Zoning Director Girling asked on the motion, it stated that the fire suppression boulevard would be resolved prior to being sent to the Board. So, do they want that completely resolved before they send it to the Board? Commissioner Gross replied that was the intent of the motion.¹¹²

Mr. Milia said that he thought that Trustee Steimel raised a good point when he clarified the Jamm Rd. He wanted to clarify it a little further that the applicant or the developer will make those improvements at the time of the subdivision is built. The subsequent maintenance would be the responsibility of the Road Commission. Trustee Steimel noted that it was already in the amended motion.

Vice-Chairman Reynolds noted that there were two (2) items that he didn't hear. One item was the clarification that at least 50% should be side garages. The second was to modify to include area "E" as a common space. He wanted to make sure that they addressed all the reviewer's comments. There were some other discussion points that the Fire Marshal had in his letter. Was there a blanket statement to include OHM's comments and Giffels comments being addressed? The applicant said that they didn't have issues addressing. Commissioner Gross believed that all of those, or most of those, had been incorporated in the motion, or in the plans of the 50% of the garage, he thought that was part of the ordinance. Planner Arroyo said that the plans were inconsistent. Yes; that is an ordinance requirement.

Roll call vote was as follows: Walker, yes; Reynolds, yes; Steimel, yes; Gross, yes; Ryan, yes; Dunaskiss, yes. **Motion carried 6-0 (St. Henry absent)**

B. PC-2019-51, Township Initiated Text Amendment, to Zoning Ordinance #78, Articles 2, 33 & 34.

Chairman Dunaskiss asked if the Planner had any additional comments?

Planner Arroyo replied no. He felt that they had the overview and had quite a bit of discussion. He thought they should open it up for discussion.

Commissioner Walker said he thought it was a concise, well-done amendment. He was wondering what the driving force was behind it? Planner Arroyo replied that it really came out of the general discussions about multiple-family developments. They have these two (2) districts that are both prime for consideration for multiple-family within a mixed-use context. He thought that opening the door for other multiple-family housing types, and clarifying some of the language in the district. It is better positions, developers, to want to use these districts to actually incorporate more of this type of housing into mixed-use projects. He thought that it was some clarification and updates that needed to be made to make it more attractive so that it could actually meet the Township's goals and also be something that they might get some interests from the development community in using.

Chairman Dunaskiss thought that with the state of affairs in the world, that the multi-family is going to be a hot product for a while and in this corridor as well. Especially with the boulevard and things coming in.

Vice-Chairman Reynolds stated that he didn't have any major comments, and was in favor of all the text amendments brought forth. He thought it will open themselves up to a few more project types, that are actually something that would be desirable in the Township, especially in these corridors. He thought that they have had some good discussion and all their discussion points have been incorporated in these amendments.

Moved by Commissioner Gross, seconded by Commissioner Walker, that the Planning Commission forwards the recommendation to the Township Board to **approves and adopt** PC-2019-51, Township Initiated Text Amendment to Zoning Ordinance No. 78, Articles 2, 33, and 34, due to the fact that this has had an extensive discussion at a previous meeting with the

Planning Commission and it amends the ordinance to correct deficiencies, clarify the ordinance and provide more flexibility in achieving the goals of the Township Master Plan.

Discussion on the motion:

Trustee Steimel stated that they are at a point with the Planning Commission to send it to the Board. But with everything that is going on he didn't think there was any reason to push it onto the agenda right away. Planning & Zoning Director Girling said that she had conversations about not sending it immediately because the cost has increased with advertising. The comments that she has been hearing is they don't know if their old method of advertising is going to come back. She thought that putting the multi-family text amendment on hold, but felt that this text amendment they would finish.

Planning & Zoning Director Girling understood how labor-intensive these are for staff to complete. Looking at the sections, one is just a definition, really there are just two sections. She said the motion would still remain as it is. She noted that she would inquire about the speed to which it is placed on an agenda. She could work around elections, and workload accordingly.

Roll call vote was as follows: Reynolds, yes; Gross, yes; Ryan, yes; Walker, yes; Steimel, yes; Dunaskiss, yes. **Motion carried 6-0 (St. Henry Absent)**

C. Communication from the Planning & Zoning Director Regarding Administrative Review PC-2020-10, Orion Township Tower Equipment Upgrade, Admin Review Site Plan

Planning & Zoning Director Girling stated that the Supervisor received an email, which is included in your packet from a citizen, and he cannot just change the ordinance. The Supervisor referred her to me, to refer to them. The ordinance does allow for anyone to propose a text amendment with an application and a fee of \$1,050. She did note that the citizen was in attendance on the call and as a courtesy, they would have a general discussion on what she is proposing. They can't stop somebody from applying, but she thought it should be beneficial for her to hear discussion on this end before she decides to proceed with the text amendments.

Planning & Zoning Director Girling noted that the Board had the email that goes into the request of a change to the ordinance. She also gave the Board the pages of how the ordinance reads right now. A lot of it goes into definitions. Looking at the different sections of the ordinance, the definitions play heavily into the ordinance. One of the definitions is private stable, but she wanted to go to livestock, which livestock says horses, cattle, sheep goats, and other useful animals normally kept or raised on a farm. The Township interpretation has been that poultry is something that is used within the farm and goes under the definition of livestock. Under private stable, it says, that it would be within a private stable, however, they would have to have 2.5 acres for the first horse or animal, and one additional acre for each additional animal. The way the Township has handling poultry has been, that, if they have 2.5 acres, they can have one chicken, and it would take an additional acre, to get the second chicken. Within the uses, the properties in question are in R-1, R-2, & R-3, which has as an allowed use, poultry, rabbits, sheep, and goats. Those are in a category of livestock by the definitions, kept as an accessory use, on a non-commercial basis for the use on the premise that it is a special land use, but it does then have a footnote talking about the required acreage. There is the ability because she does not meet the acreage, is to apply for a variance on the acreage number. Right now, she was just looking for their feelings on this text being needed to be modified. She also gave the Board the SF, SR, SE, section, it gets into private stables, which circles back to livestock and the 2.5 acres. But explicitly listed, under accessory is not the poultry and the others that are

listed in R-1, R-2, & R-3. She didn't want to direct her to submit an application at that price if the conversation was that they felt that this ordinance is the way it should be. It is still the option of the citizen to incur that cost and go through the process, but as a courtesy, she thought a discussion, was a good starting point.

Trustee Steimel thought that the current way that the way was set up and the criteria, he thought that they went through, in the last two (2) years regarding The Right to Farm Act and thought that they did make some changes. That is how they came up with the criteria that they see now. Based on this, the request is more of a timely thing, a text amendment is going to take some time and is not really going to help the situation. He didn't know if they could be granted something temporary, just for right now. He thought that the text amendment was timely and thought that they would like a timely answer not something that is going to take a year before they get through the whole process.

Vice-Chairman Reynolds said that this was something that the Village was discussing. He said when he was on that Board, they moved forward and proposed it as a kind of test pilot. They had a certain number of applicants, that were considering it and helped clarify having yard chickens. He knew some other ordinances locally, Oxford was doing the same thing, on a yearly basis to try it out. He slightly indifferent with it, but thought it was something they need to be refined on if they are going to allow it. He wasn't in favor of it after he processed all the information, but that was a different commission and a different jurisdiction too.

Commissioner Ryan said that she thought that making an emergency decision on something like this for what would be a short-term thing would be the wrong thing to do. If there is enough public interest in it, she could see looking at it, but for right now to do something quickly, if it was even possible, it would be too much.

Commission Walker stated that at the Zoning Board of Appeals, they discussed this issue a year or two ago. He thought that they had talked about it, and said, the problem with it is that if they do it for one, you have to do it for everybody. The noise of the chickens to the neighbors would be somewhat disconcerting. He understood the position of the citizen's family, but he agreed with the Commissioners, to do it on an emergency basis is not the right idea. If we felt that the citizens of the Township wanted this, they could certainly start a process, to investigate it and look to modify the ordinance. He thought that a quick reaction is not a good idea.

Commissioner Ryan added that it is something that they are talking about living things. If they do it then how do they undo it? Do they say they could do it for two months, and then they have to kill the chickens and go back to normal? It would be hard to back once they started it.

Commissioner Gross thought there would be a lot of consideration on something like this. The access and setbacks from residential properties. How many different animals would be allowed? Are they being processed on the property? All of those considerations had to be taken into account. He didn't think a quick reaction would be appropriate.

Chairman Dunaskiss noted that for a quick fix, he didn't think it was fair. Maybe something that they keep on the list, and continue to look at.

Vice-Chairman Reynolds thought that they should keep it on the list and discuss it with potential future text amendments, but nothing at this time.

Trustee Steimel said that they could still make a request for a text amendment, they could come in and apply. It is not cheap, and they need to understand that it is a timely process. They probably go back and pull out a lot of their notes when they discuss this and thought it was a

year or a year and a half ago. He did not mind looking at it but did not think it was a high property for them to do right now.

Planning & Zoning Director Girling noted that the citizen has sat through the meeting, and did want to make sure if they were going to allow public comment on that if she had any questions or comments.

Commissioner Walker said that he has friends of his that keeps rabbits on someone else's property. Perhaps that is an option for them.

Planning & Zoning Director Girling said that she had a chat bubble. It was from Kate, saying thank you for taking the time to discuss this and keeping an open mind about potential future changes.

8. UNFINISHED BUSINESS

None

9. PUBLIC COMMENTS

None

10. COMMUNICATIONS

A. Communication from the Planning & Zoning Director Regarding Administrative Review PC-2020-04, Breckenridge Flag Pole, Adm. Review Site Plan.

B. Communication from the Planning & Zoning Director Regarding Administrative Review PC-2020-09, Kroger Order Pick-up Lane, Adm. Review Site Plan

C. Communication from the Planning & Zoning Director Regarding Administrative Review PC-2020-10, Orion Township Tower Equipment Upgrade, Adm. Review Site Plan

11. PLANNERS REPORTS

A. Trends in e-commerce and at-home deliveries

Planner Arroyo gave a brief overview of how communities were dealing with the Master Plan and zoning amendments during the pandemic.

12. COMMITTEE REPORTS

None

13. FUTURE PUBLIC HEARINGS

None

14. CHAIRMAN'S COMMENTS

None

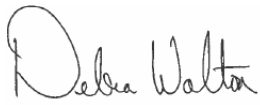
15. COMMISSIONERS' COMMENTS

Trustee Steimel requested on the Planners letters if they could have a conclusion at the of the review letters.

16. ADJOURNMENT

Moved by Trustee Steimel, seconded by Vice-Chairman Reynolds to adjourn the meeting at 9:18 pm. **Motion carried.**

Respectfully submitted,

A handwritten signature in cursive script that reads "Debra Walton".

Debra Walton
PC/ZBA Recording Secretary
Charter Township of Orion

June 3, 2020
Planning Commission Approval Date