

SYMBOL LEGEND

- REMOVE AND DISPOSE OF EXISTING BITUMINOUS PAVEMENT SECTION
- ESTIMATED SOIL BORING LOCATION

KEY NOTES

- ① SAWCUT, REMOVE, AND DISPOSE OF EXISTING CONCRETE CURB AND GUTTER.
- ② SAWCUT, REMOVE, AND DISPOSE OF EXISTING BITUMINOUS PAVEMENT SECTION.
- ③ SALVAGE AND REINSTALL AND/OR REMOVE AND DISPOSE OF TREES AS DIRECTED BY OWNER.
- ④ PROTECT TRANSPLANTED EVERGREEN TREE DURING CONSTRUCTION.
- ⑤ REMOVE AND DISPOSE OF EXISTING FENCE.
- ⑥ REMOVE AND DISPOSE OF EXISTING STORM STRUCTURE.
- ⑦ PROTECT EXISTING UTILITIES DURING CONSTRUCTION.
- ⑧ REMOVE AND DISPOSE OF EXISTING STORM SEWER PIPE.

DEMOLITION NOTES

1. Verify all existing utility locations.
2. It is the responsibility of the Contractor to perform or coordinate all necessary utility demotions and relocations from existing utility locations to all onsite amenities and buildings. These connections include, but are not limited to, water, sanitary sewer, cable tv, telephone, gas, electric, site lighting, etc.
3. Prior to beginning work, contact Gopher State OneCall (651-454-0002) to locate utilities throughout the area under construction. The Contractor shall retain the services of a private utility locator to locate the private utilities.
4. Sawcut along edges of pavements, sidewalks, and curbs to remain.
5. All construction shall be performed in accordance with state and local standard specifications for construction.

Larson Engineering, Inc.
 3524 Labore Road
 White Bear Lake, MN 55110
 651.481.9120 (f) 651.481.9201
 www.larsonengr.com

TRFL, LLC
 333 NORTH MAIN STREET, SUITE 110
 STILLWATER, MN 55082

TIMBER RIDGE APARTMENTS
 4777 19TH STREET SW
 FOREST LAKE, MN 55025

I hereby certify that this plan, specifications or report was prepared by me or under my direct supervision and that I am a duly licensed Professional Engineer under the laws of the state of Minnesota.

Matt Woodruff
 Matt Woodruff, P.E.

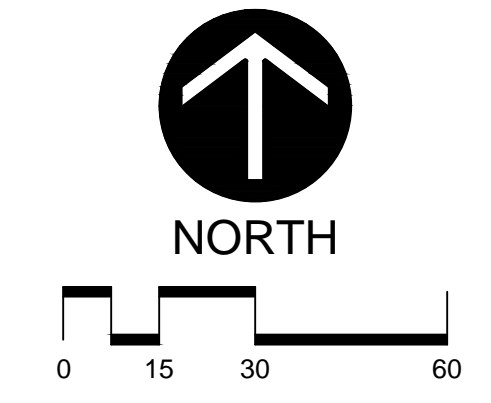
Date: 10.10.17 Reg. No.: 41885

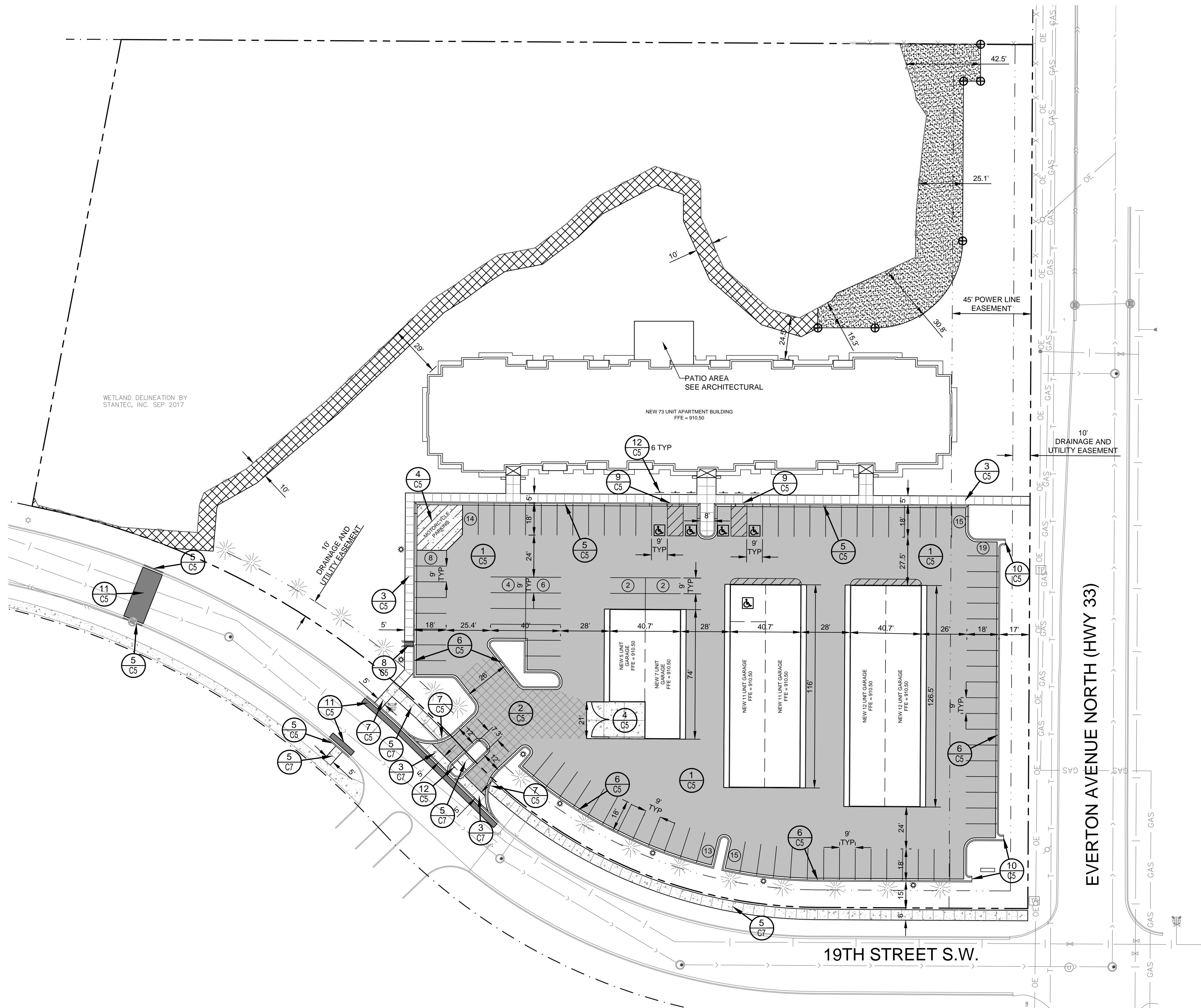
Rev.	Date	Description
▲	12.22.17	City Comments
▲	01.08.18	City Comments
▲	11.17.17	Watershed Submittal
▲	11.30.17	City Submittal
▲	12.12.17	Watershed Comments
▲	12.18.17	City Comments

Project #: 12176130
 Drawn By: NJN
 Checked By: MJW
 Issue Date: 10.10.17
 Sheet Title:

DEMOLITION PLAN

C1





SYMBOL LEGEND

- NEW 3" BITUMINOUS PAVEMENT OVER 8" BASE AGGREGATE SEE DETAIL 1/C5
- NEW 4.5" BITUMINOUS PAVEMENT OVER 10" BASE AGGREGATE SEE DETAIL 2/C5
- NEW 4" BITUMINOUS PAVEMENT OVER 10" BASE AGGREGATE, CLASS 5, OVER 20" SELECT GRANULAR BORROW SEE DETAIL 11/C5 AND NOTES 1 & 2
- NEW 4" CONCRETE PAVEMENT OVER 6" BASE AGGREGATE SEE DETAIL 3/C5
- NEW HEAVY-DUTY CONCRETE PAVEMENT OVER BASE AGGREGATE. SEE DETAIL 4/C5 FOR CONCRETE IN PUBLIC ROW SEE DETAILS 3/C7 & 5/C7
- SEE STRUCTURAL
- LIGHT POLE, SEE ARCHITECTURAL

WATERSHED WETLAND BUFFER NOTES

- PROPOSED WETLAND BUFFER AREA ESTABLISH WITH TOPSOIL AND MNDOT NATIVE SEED MIXTURE # 33-261
- DELINEATED WETLAND (SEPTEMBER 2017)
- WETLAND BUFFER MONUMENT

REQUIRED BUFFER AREA WITHIN LOT 2 (25' WIDTH) = 5,267 SF

PROPOSED BUFFER AREA = 5,479 SF

CITY WETLAND BUFFER NOTES

- PROPOSED 10' WETLAND BUFFER AREA ESTABLISH WITH TOPSOIL AND MNDOT NATIVE SEED MIXTURE # 33-261
- DELINEATED WETLAND (SEPTEMBER 2017)

GENERAL NOTES

1. ROAD SHALL BE PATCHED WITHIN NO MORE THAN 7 CALENDAR DAYS FROM THE REMOVAL OF THE BITUMINOUS PAVEMENT.
2. TRAFFIC CONTROL SIGNS WITH ADVANCED WARNING OF THE CLOSURE SHALL BE INSTALLED 5 DAYS PRIOR TO THE PLANNED CLOSURE.

Larson Engineering, Inc.
 3524 Labore Road
 White Bear Lake, MN 55110
 651.481.9120 (f) 651.481.9201
 www.larsonengr.com

© 2017 Larson Engineering, Inc. All rights reserved.

Client: **TRFL, LLC**
 333 NORTH MAIN STREET, SUITE 110
 STILLWATER, MN 55082

Project Title: **TIMBER RIDGE APARTMENTS**
 4777 19TH STREET SW
 FOREST LAKE, MN 55025

I hereby certify that this plan, specifications or report was prepared by me or under my direct supervision and that I am a duly licensed Professional Engineer under the laws of the state of Minnesota.

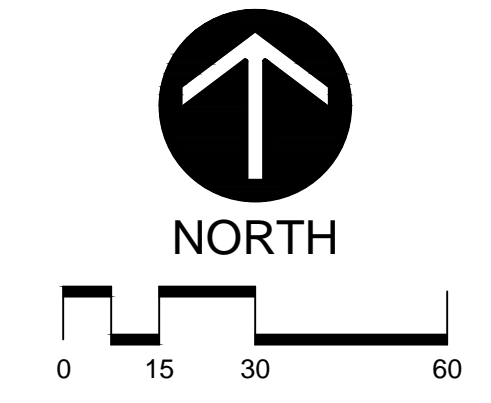
Matt Woodruff
 Matt Woodruff, P.E.
 Date: 10.10.17 Reg. No.: 41885

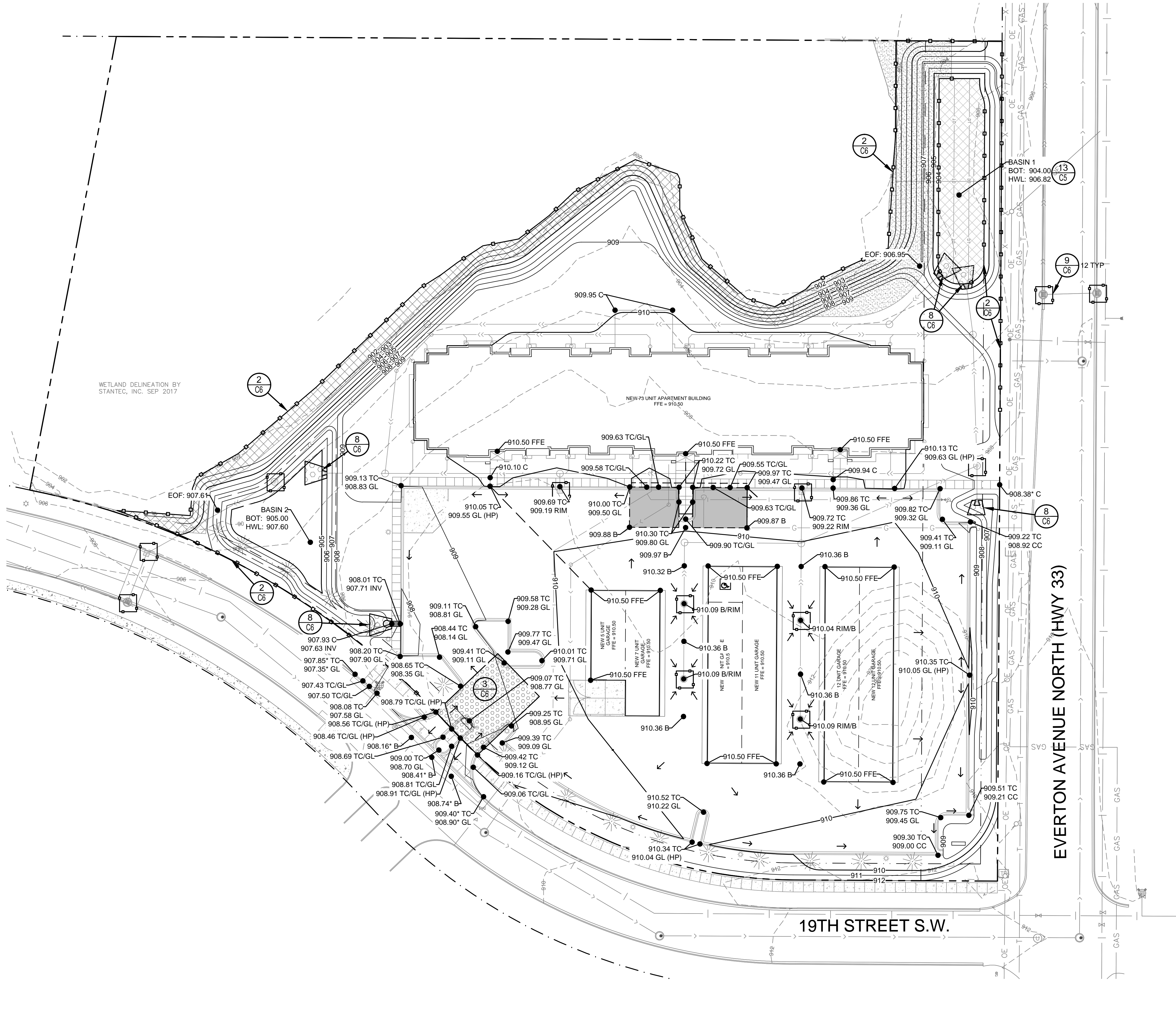
Rev.	Date	Description
▲	12.22.17	City Comments
▲	01.08.18	City Comments
▲	11.17.17	Watershed Submittal
▲	11.30.17	City Submittal
▲	12.12.17	Watershed Comments
▲	12.18.17	City Comments

Project #: 12176130
 Drawn By: NJN
 Checked By: MJW
 Issue Date: 10.10.17

Sheet Title: **PAVING AND DIMENSION PLAN**

C2





WETLAND DELINEATION BY
STANTEC, INC. SEP 2017

NEW 73 UNIT APARTMENT BUILDING
FFE = 910.50

BASIN 2
BOT: 905.00
HWL: 907.60

BASIN 1
BOT: 904.00
HWL: 906.82

EVERTON AVENUE NORTH (HWY 33)

19TH STREET S.W.

LEGEND

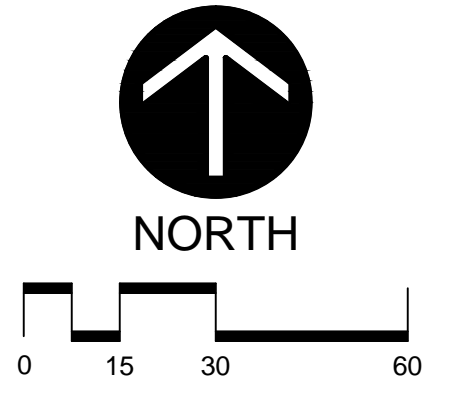
- 950 --- EXISTING CONTOURS
- 950 — PROPOSED CONTOURS - MAJOR INTERVAL
- 949 --- PROPOSED CONTOURS - MINOR INTERVAL
- - - GRADE BREAK LINE
- 2.0% GRADE SLOPE
- 950.00 TC
949.50 GL
- SPOT ABBREVIATIONS:
TC - TOP OF CURB
GL - GUTTER LINE
B - BITUMINOUS
C - CONCRETE
FFE - FINISH FLOOR ELEVATION
CC - CURB CUT
HP - HIGH POINT
(*) - EXISTING TO BE VERIFIED
- SILT FENCE
- RIP-RAP / ROCK CONST. ENTRANCE
- INLET PROTECTION
- CONCRETE WASHOUT STATION
LOCATE DURING CONSTRUCTION
- ACCESSIBLE PARKING STALLS & ACCESS AISLES
(SHALL NOT EXCEED 2% IN ANY DIRECTION)
- ACCESSIBLE ROUTE
- FILTRATION BASIN, SEE DETAIL 13/C5

GRADING NOTES

- Tree protection consisting of orange plastic snow fence shall be in place prior to beginning any grading at the site.
- All elevations with an asterisk (*) shall be field verified. If elevations vary significantly, notify the Engineer for further instructions.
- Grades shown in paved areas represent finish elevation.
- Restore all disturbed areas with 4" of good quality topsoil and sod. Stormwater basins shall be seeded with MnDOT native seed mixture #33-261.
- All construction shall be performed in accordance with state and local standard specifications for construction.
- Pavement grades within ADA parking stalls and access aisles shall not exceed 2.0% in any direction.

EROSION CONTROL NOTES

- Responsible party for maintaining erosion & sediment control measures:
Lumber One, Avon Inc.
101 2nd Street NW
Avon, MN 56310
Steve Salzi
(320) 980-4852
- See Sheet C6 for Erosion Control Notes.



Larson Engineering, Inc.
3524 Labore Road
White Bear Lake, MN 55110
651.481.9120 (F) 651.481.9201
www.larsonengr.com

Client:
TRFL, LLC
333 NORTH MAIN STREET, SUITE 110
STILLWATER, MN 55082

Project Title:
TIMBER RIDGE APARTMENTS
4777 19TH STREET SW
FOREST LAKE, MN 55025

I hereby certify that this plan, specifications or report was prepared by me or under my direct supervision and that I am a duly licensed Professional Engineer under the laws of the state of Minnesota.

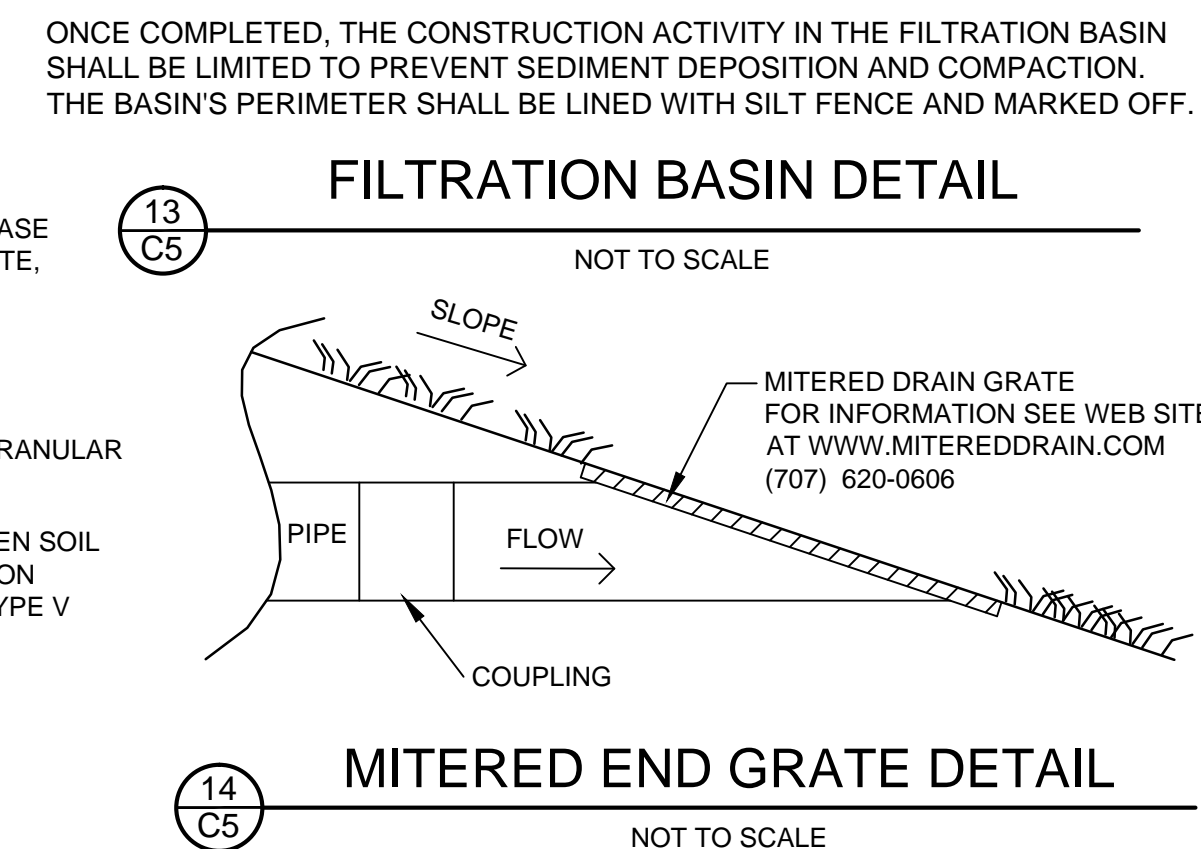
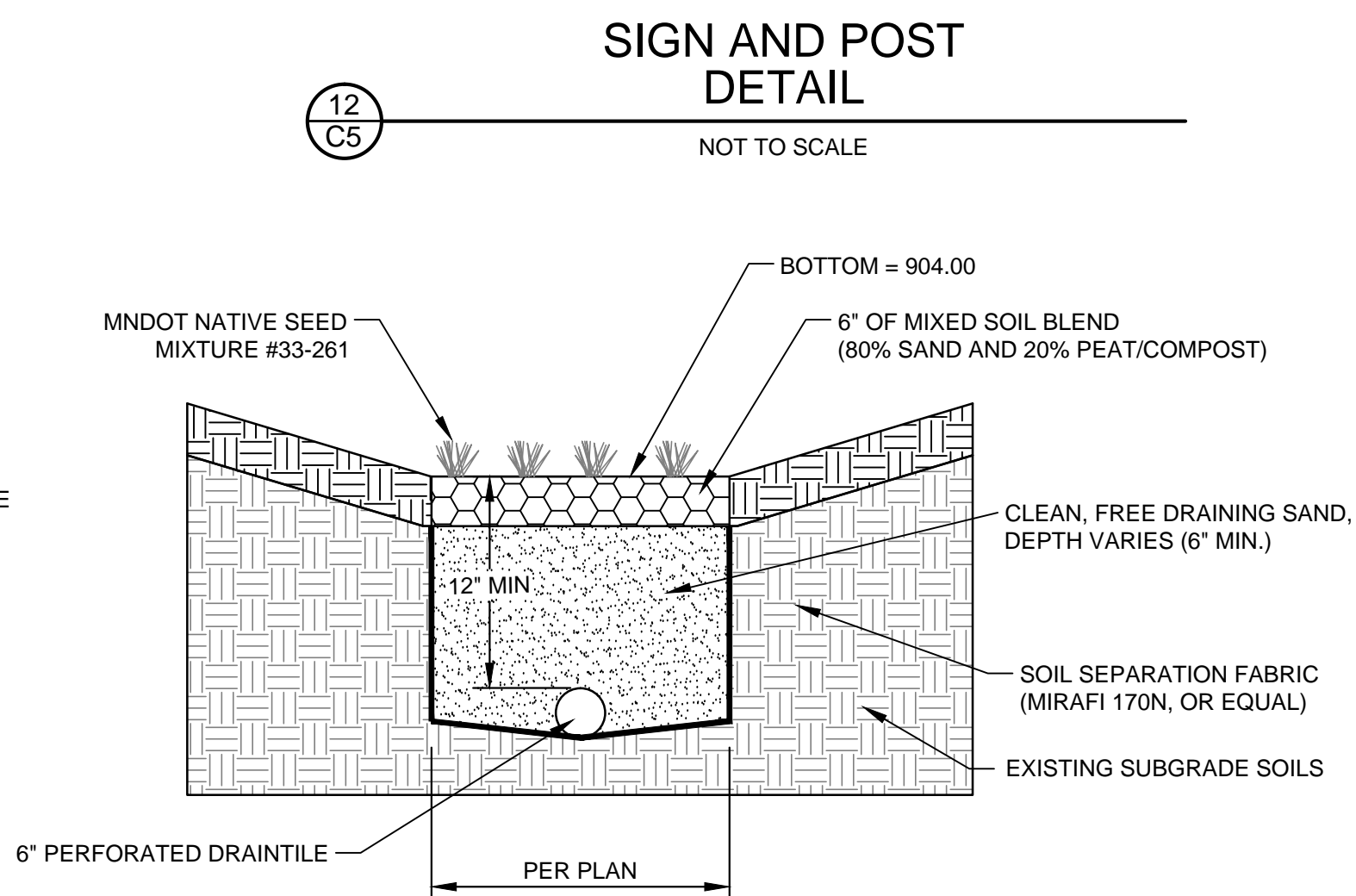
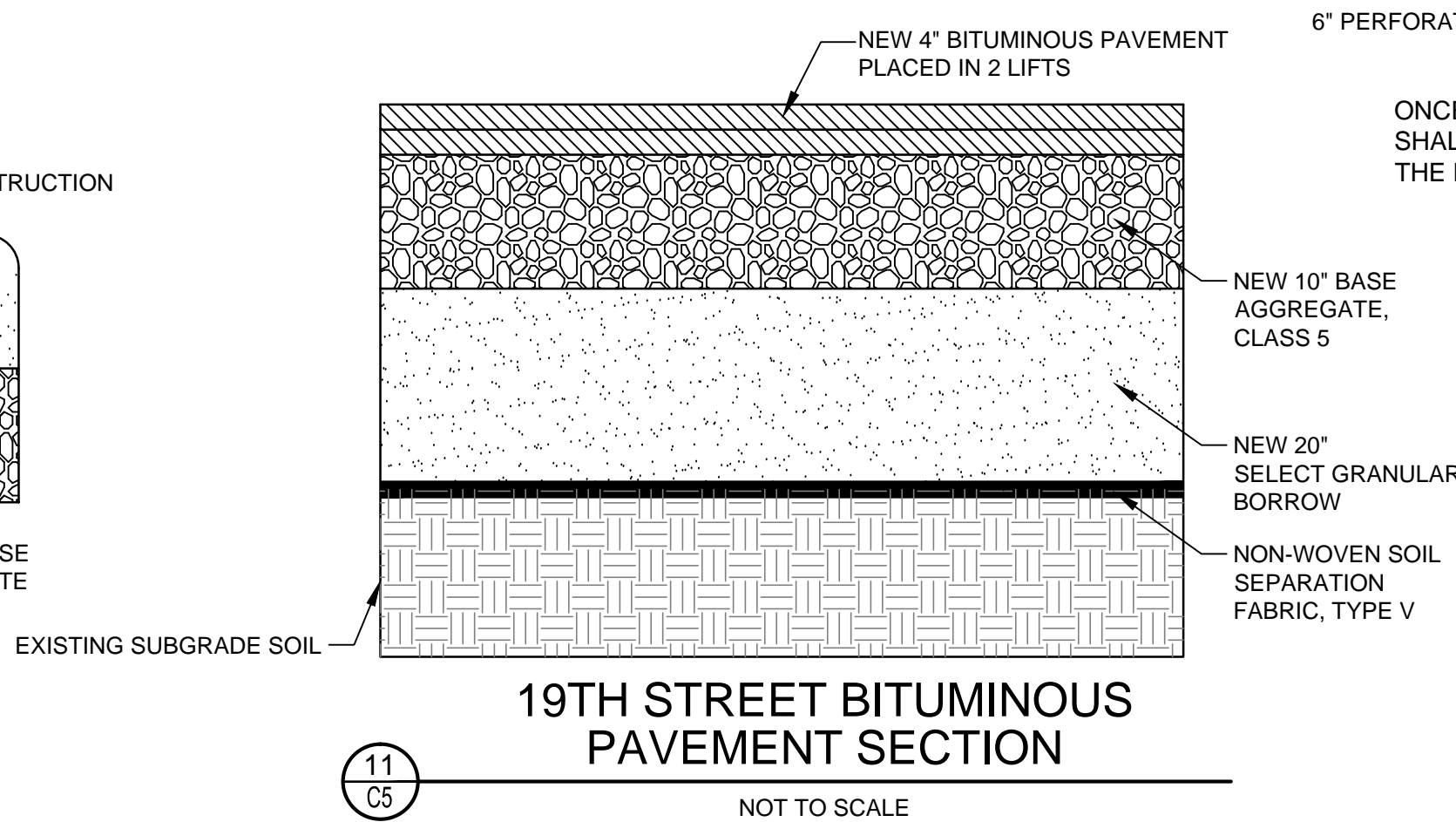
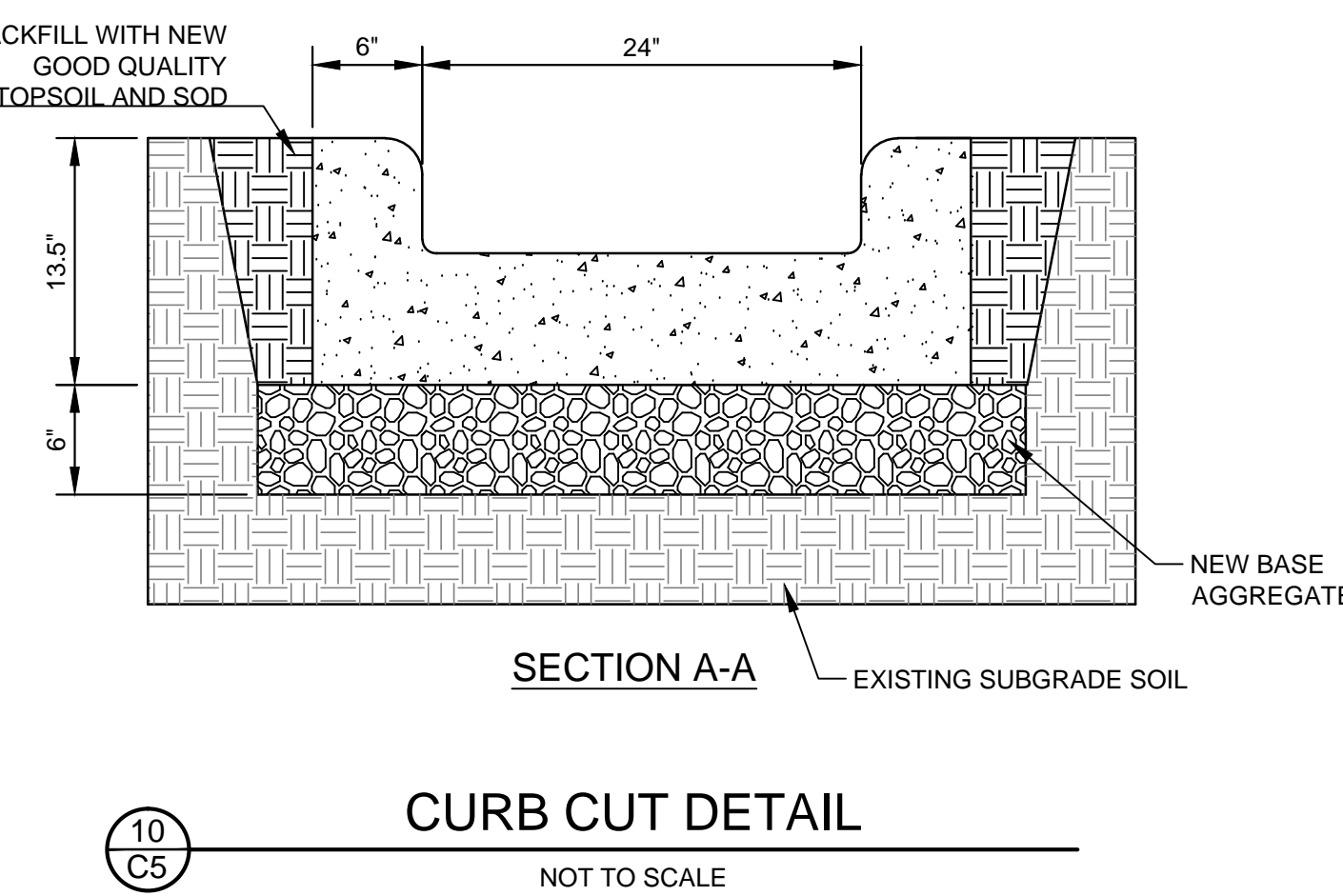
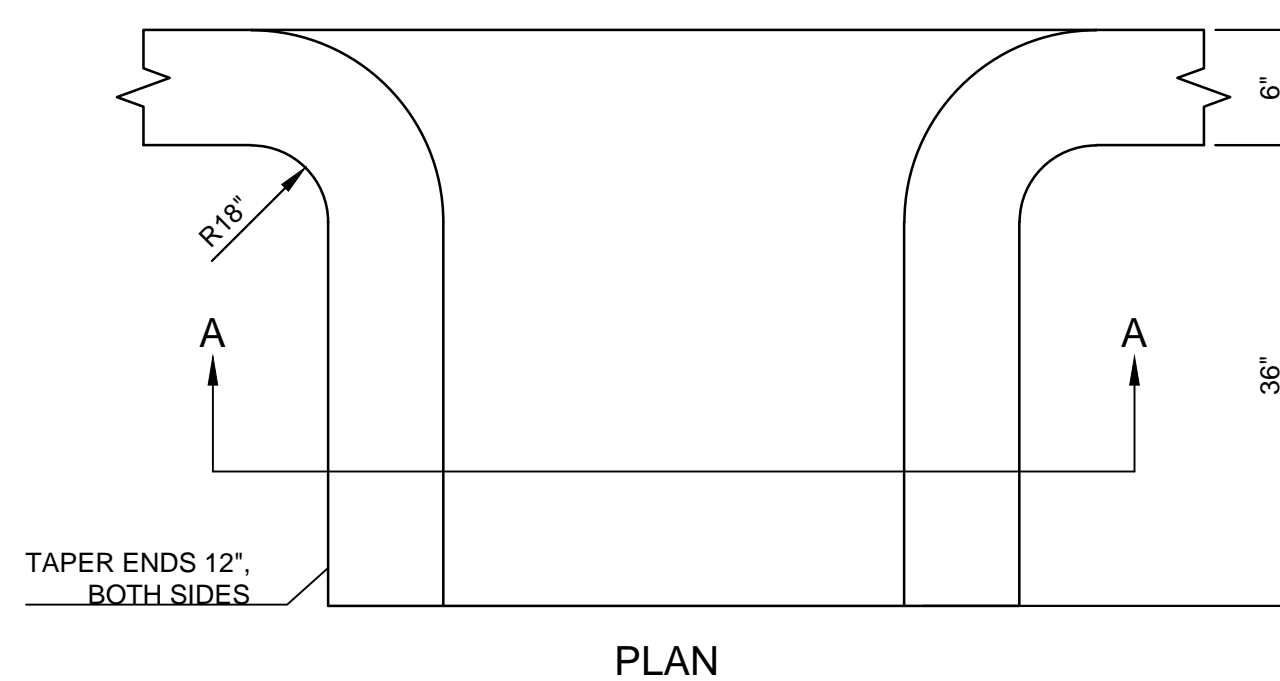
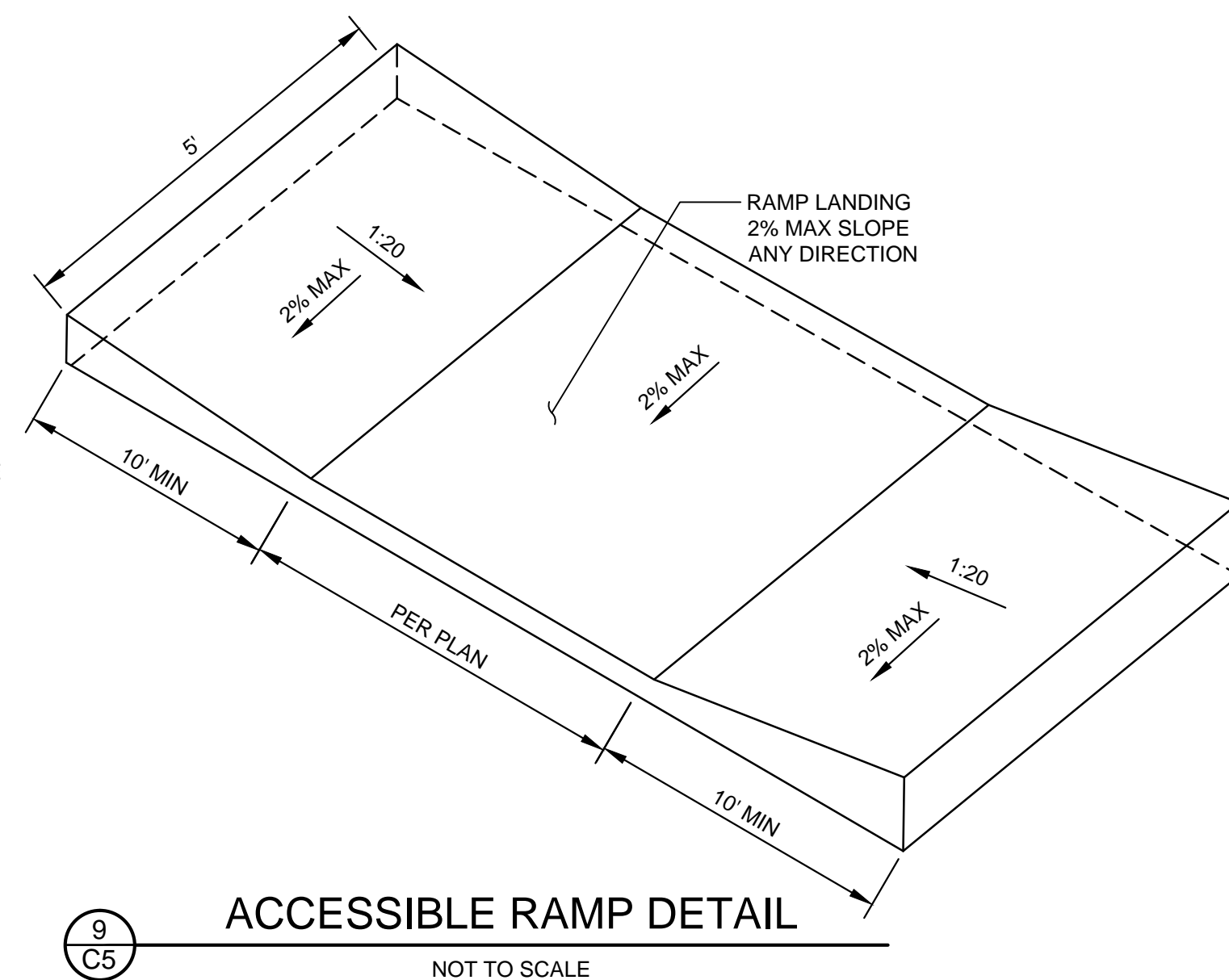
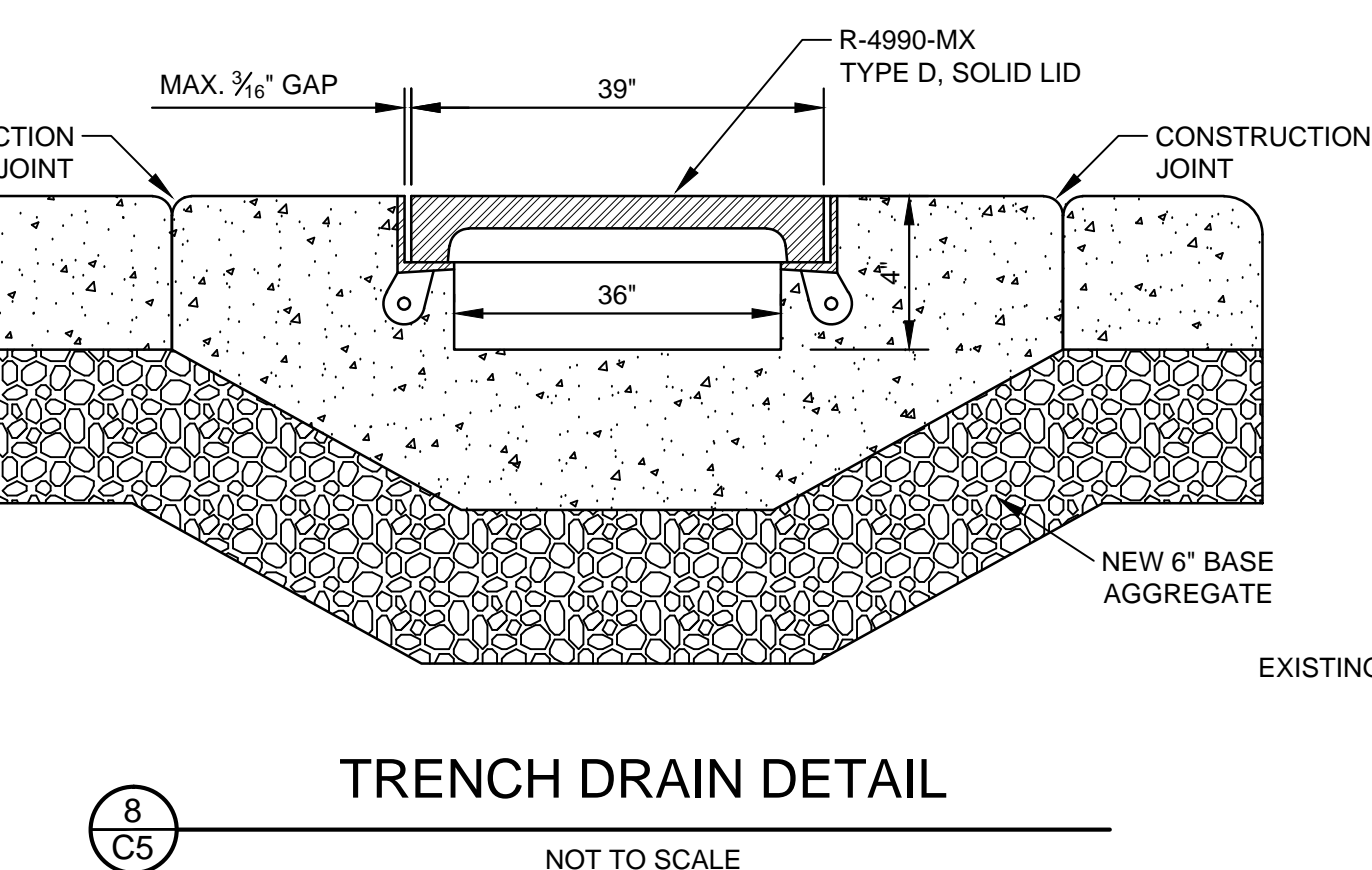
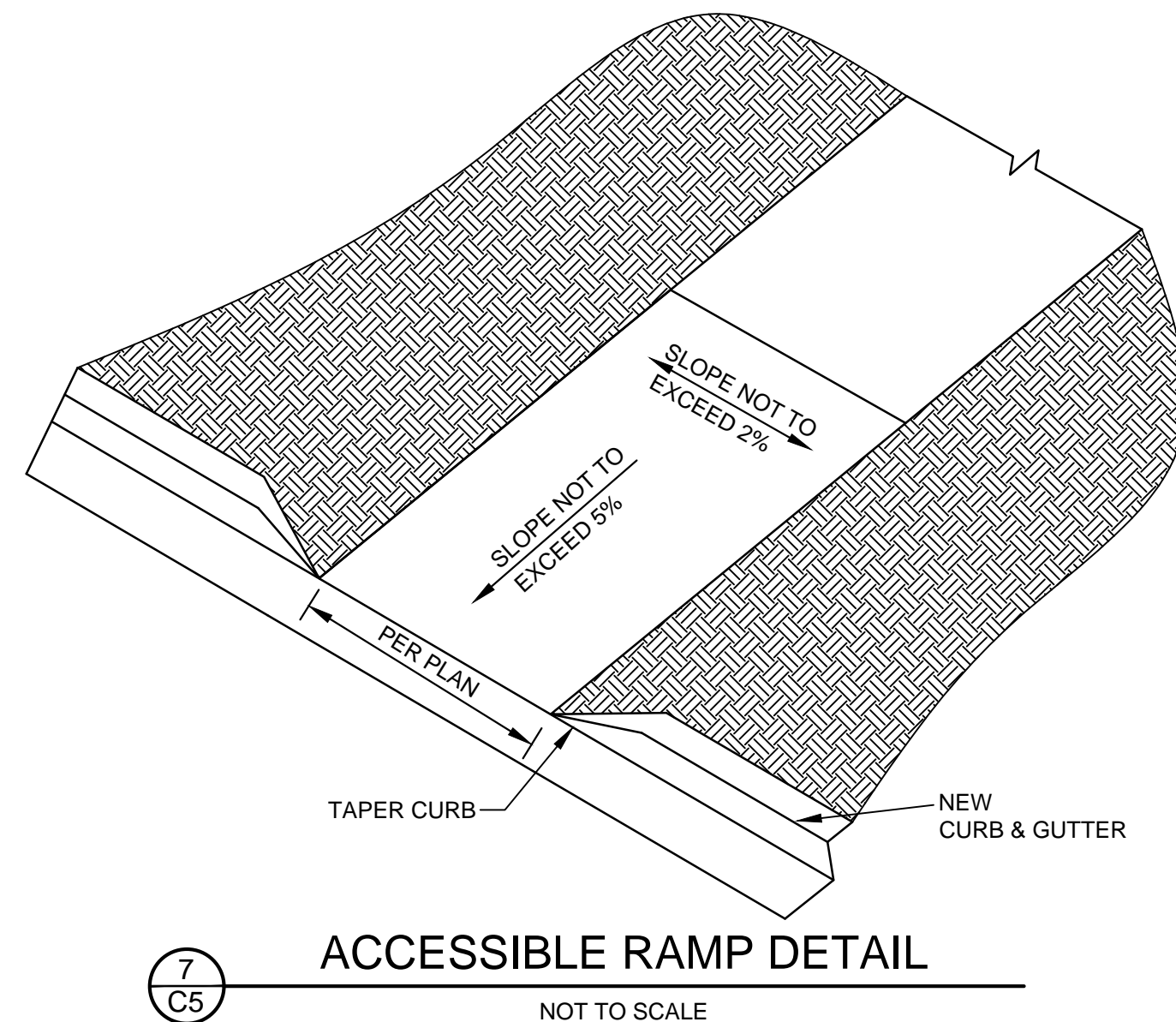
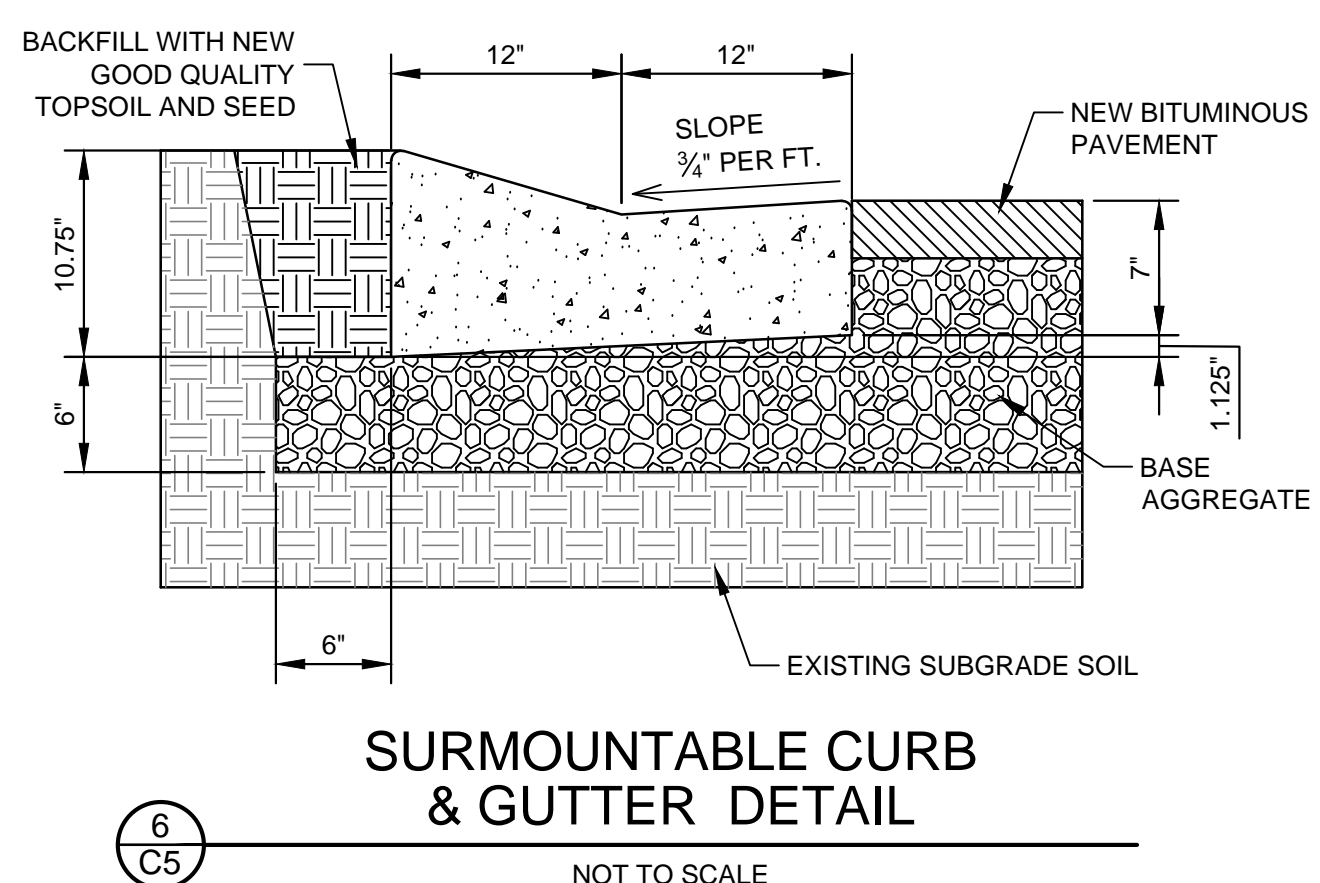
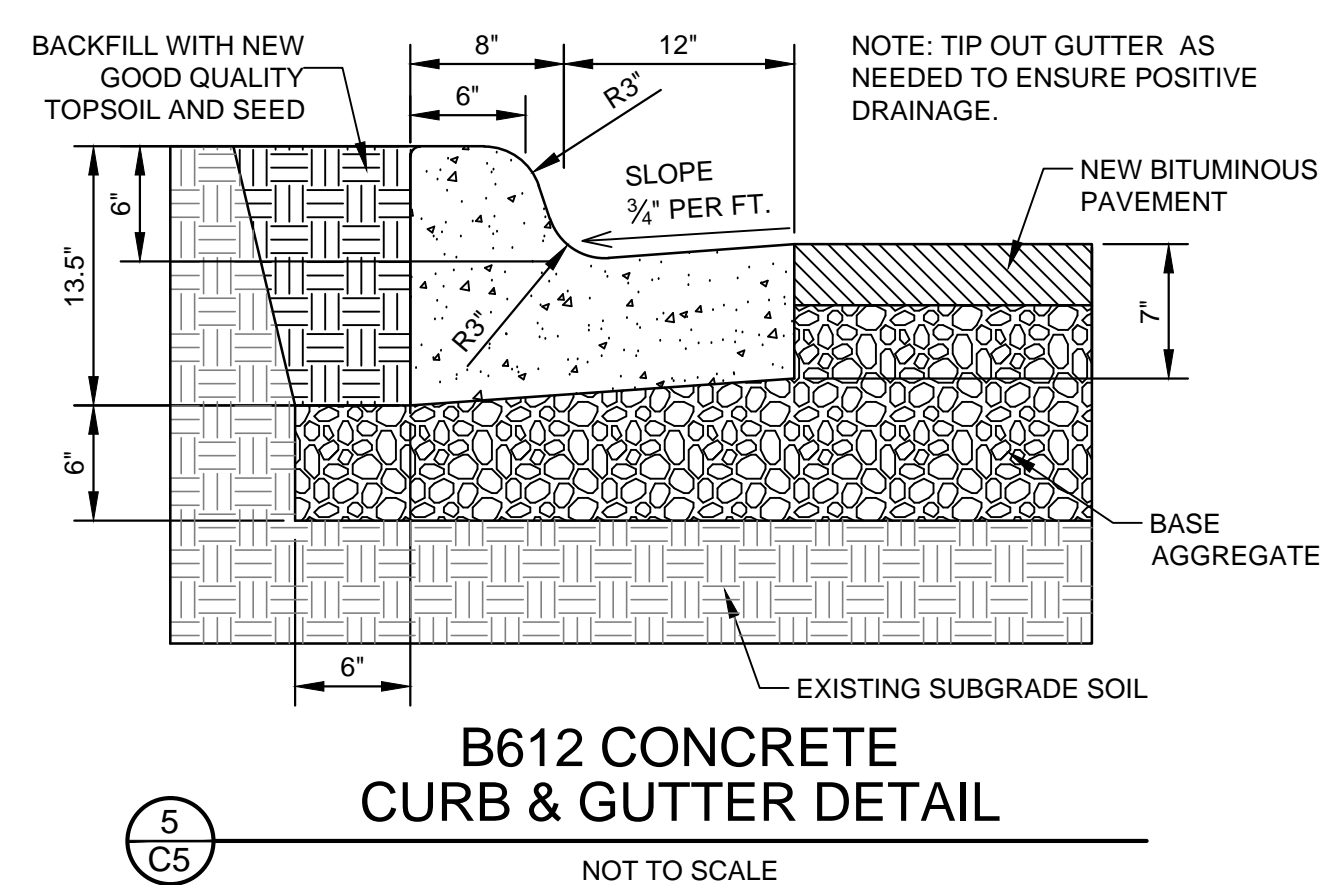
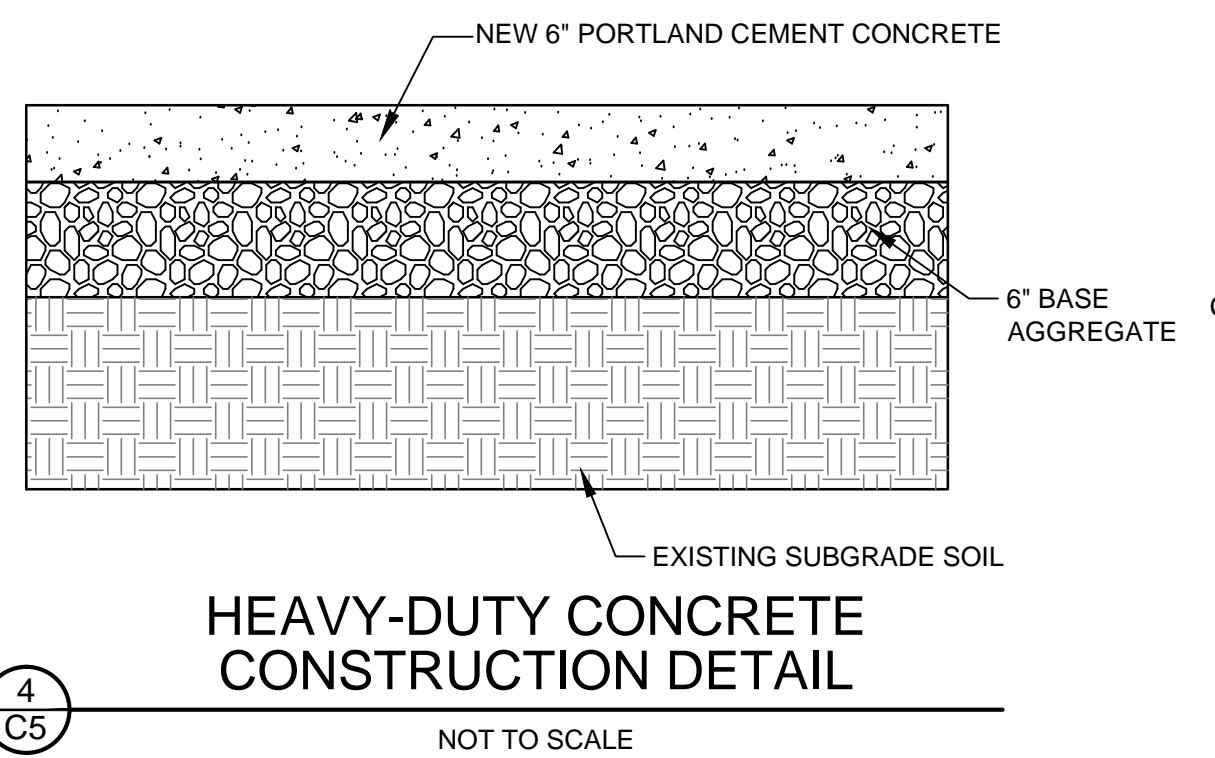
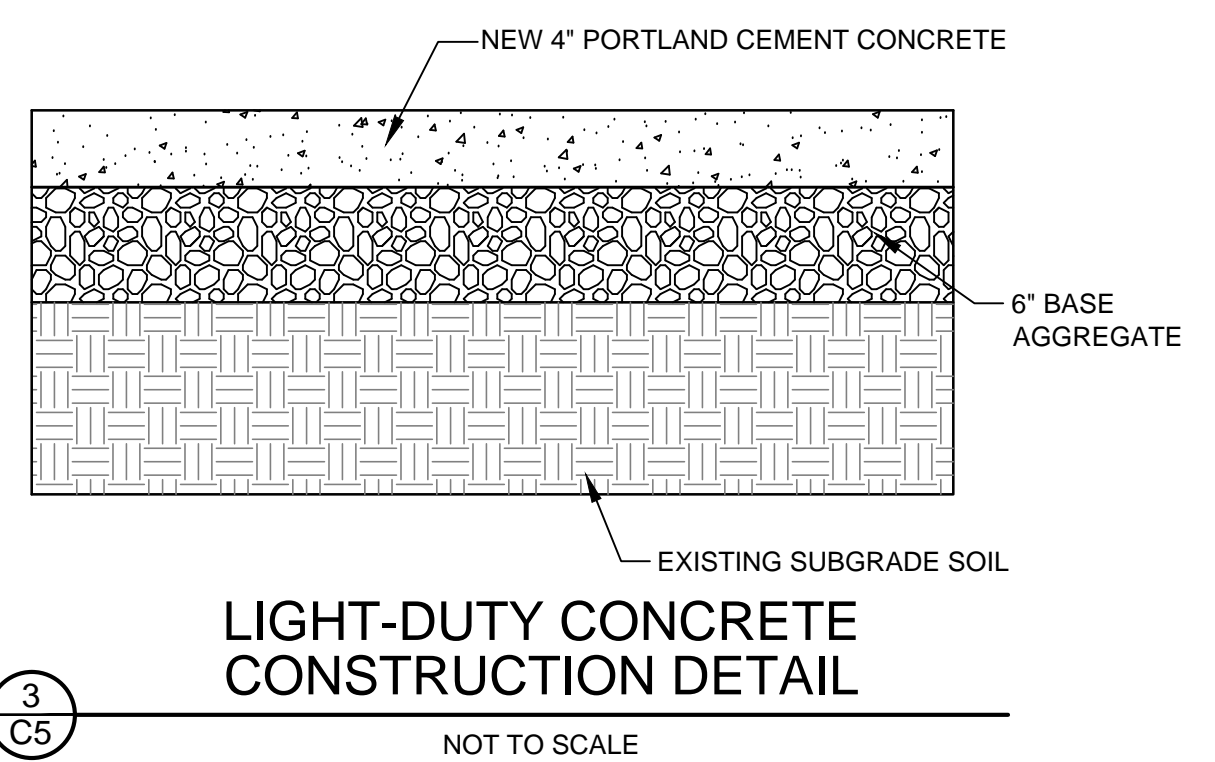
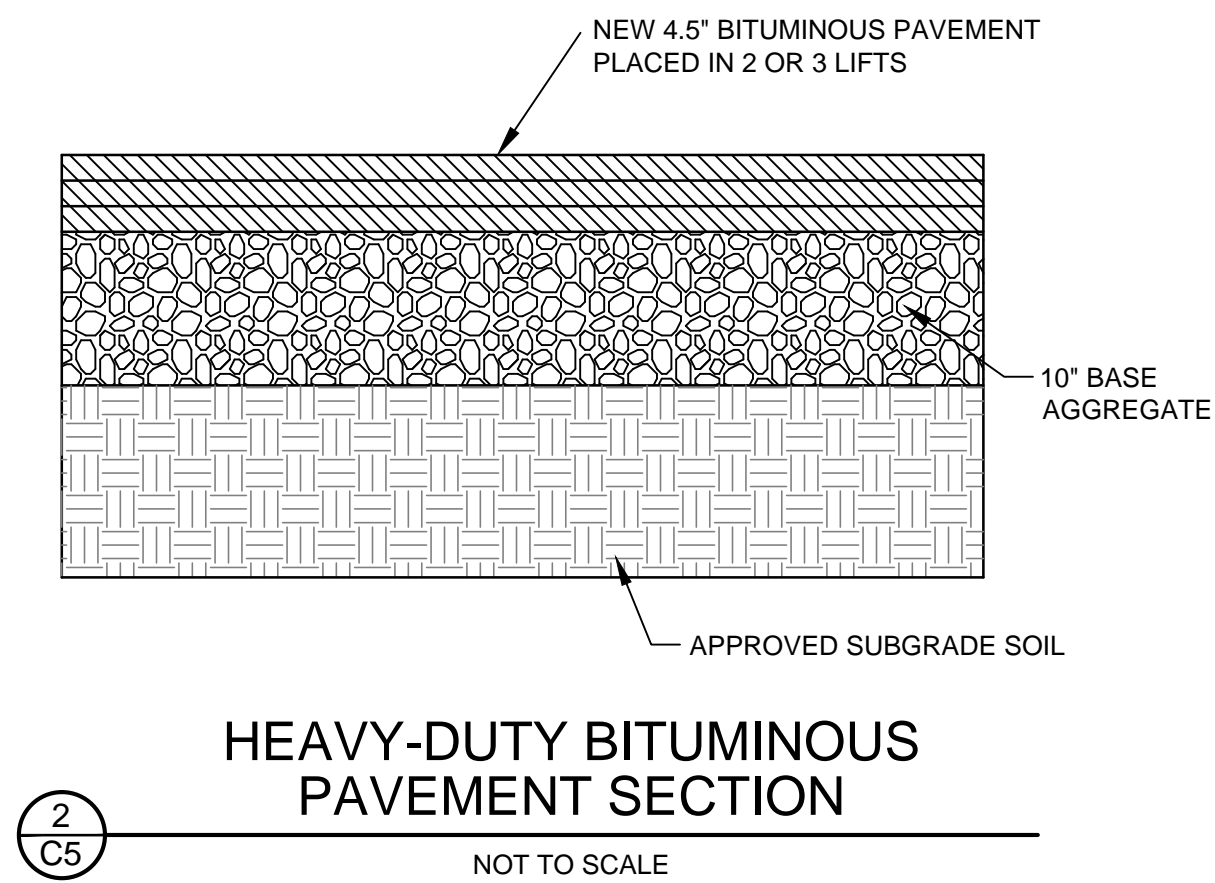
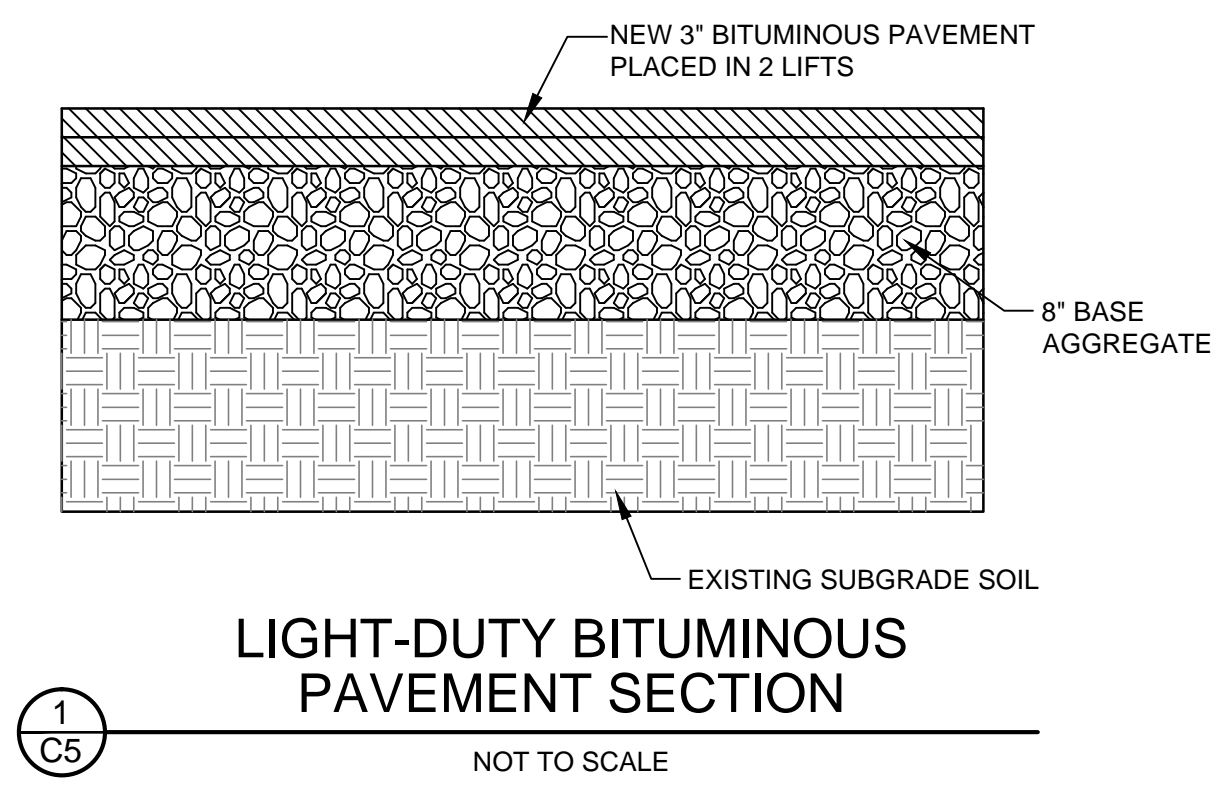
Matt Woodruff
Matt Woodruff, P.E.
Date: 10.10.17 Reg. No.: 41885

Rev.	Date	Description
1	12.22.17	City Comments
2	01.08.18	City Comments
3	11.17.17	Watershed Submittal
4	11.30.17	City Submittal
5	12.12.17	Watershed Comments
6	12.18.17	City Comments

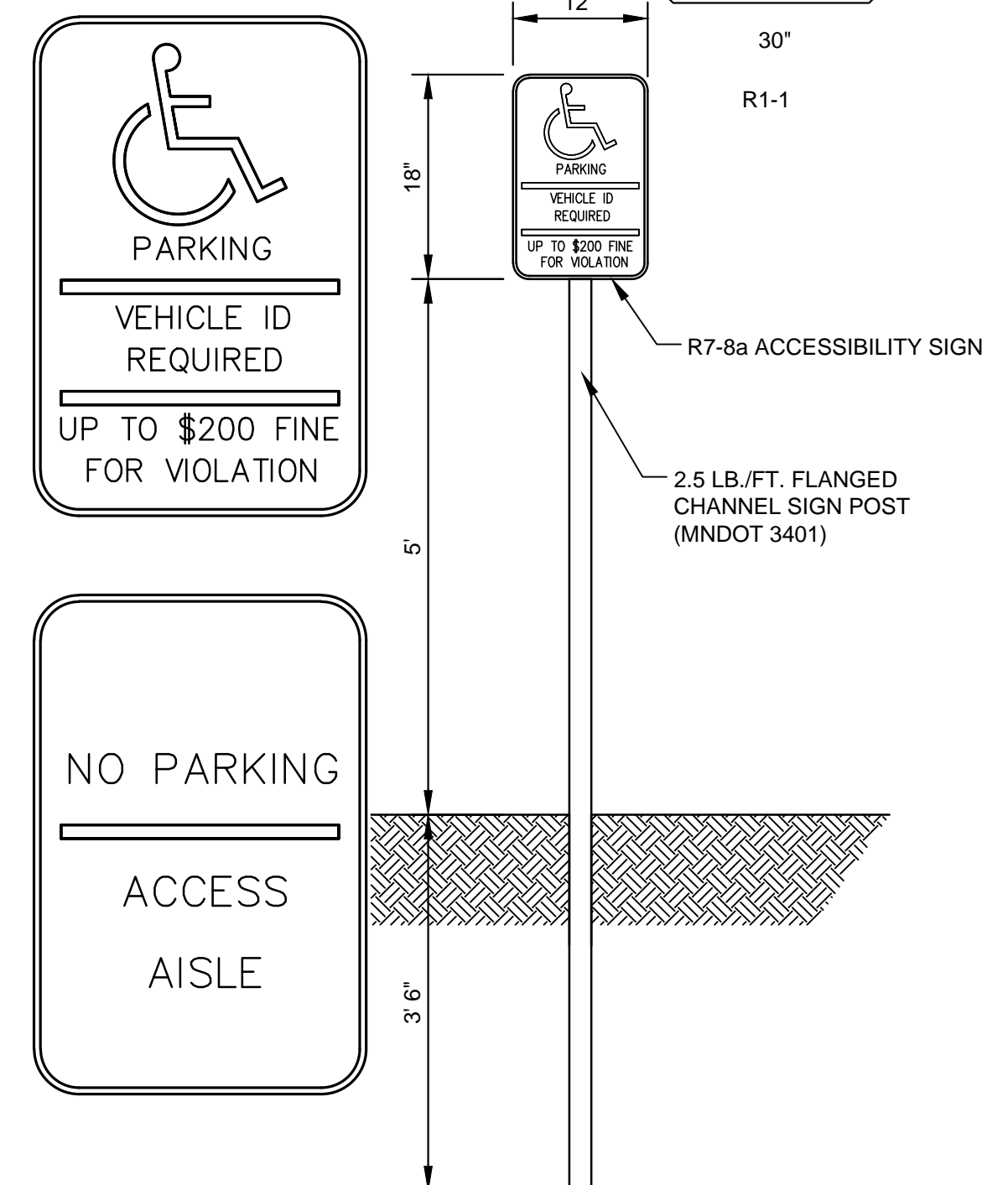
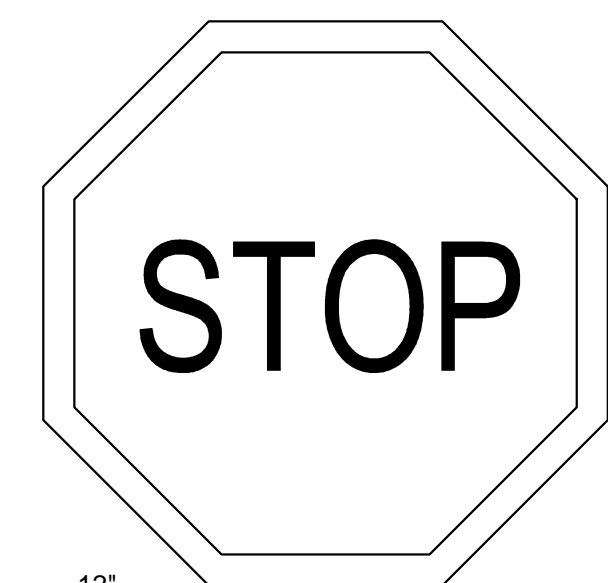
Project #: 12176130
Drawn By: NJN
Checked By: MJW
Issue Date: 10.10.17
Sheet Title:

GRADING AND EROSION CONTROL PLAN

C3



ONCE COMPLETED, THE CONSTRUCTION ACTIVITY IN THE FILTRATION BASIN SHALL BE LIMITED TO PREVENT SEDIMENT DEPOSITION AND COMPACTION. THE BASIN'S PERIMETER SHALL BE LINED WITH SILT FENCE AND MARKED OFF.



Larson Engineering, Inc.
 3524 Labors Road
 White Bear Lake, MN 55110
 651.481.9120 (F) 651.481.9201
 www.larsonengr.com

Client: **TRFL, LLC**
 333 NORTH MAIN STREET, SUITE 110
 STILLWATER, MN 55082

Project Title: **TIMBER RIDGE APARTMENTS**
 4777 19TH STREET SW
 FOREST LAKE, MN 55025

I hereby certify that this plan, specifications or report was prepared by me or under my direct supervision and that I am a duly licensed Professional Engineer under the laws of the state of Minnesota.

Matt Woodruff
 Matt Woodruff, P.E.

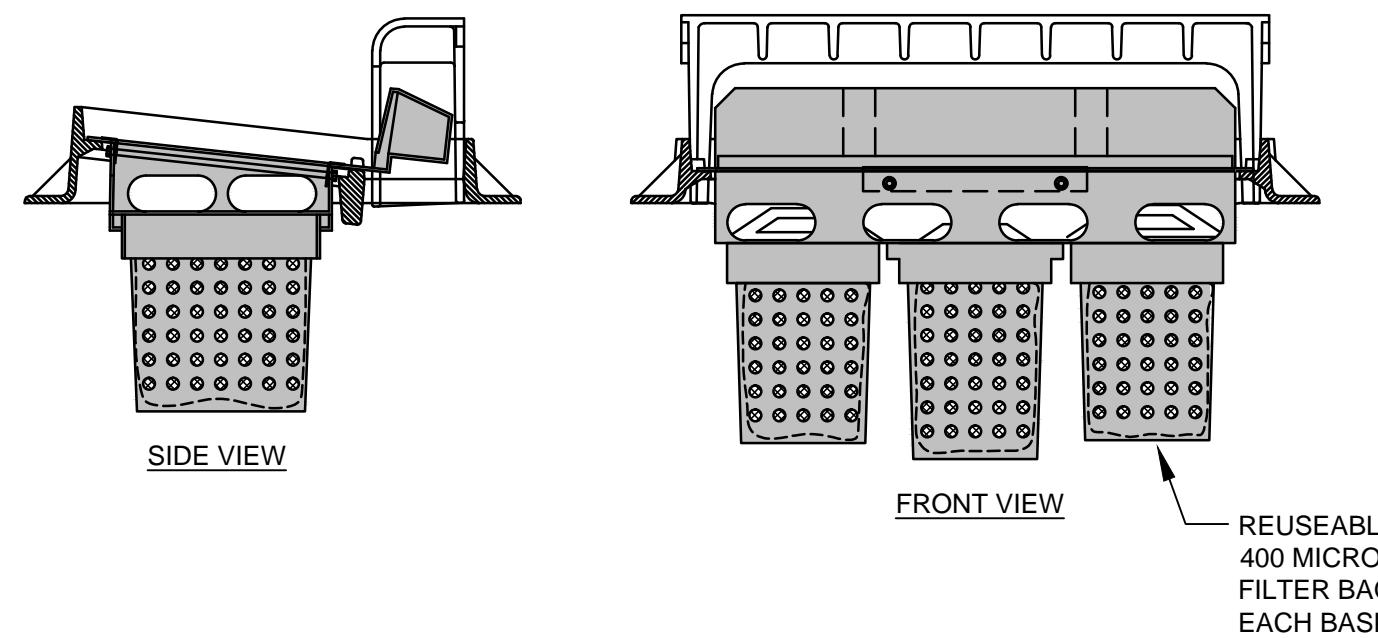
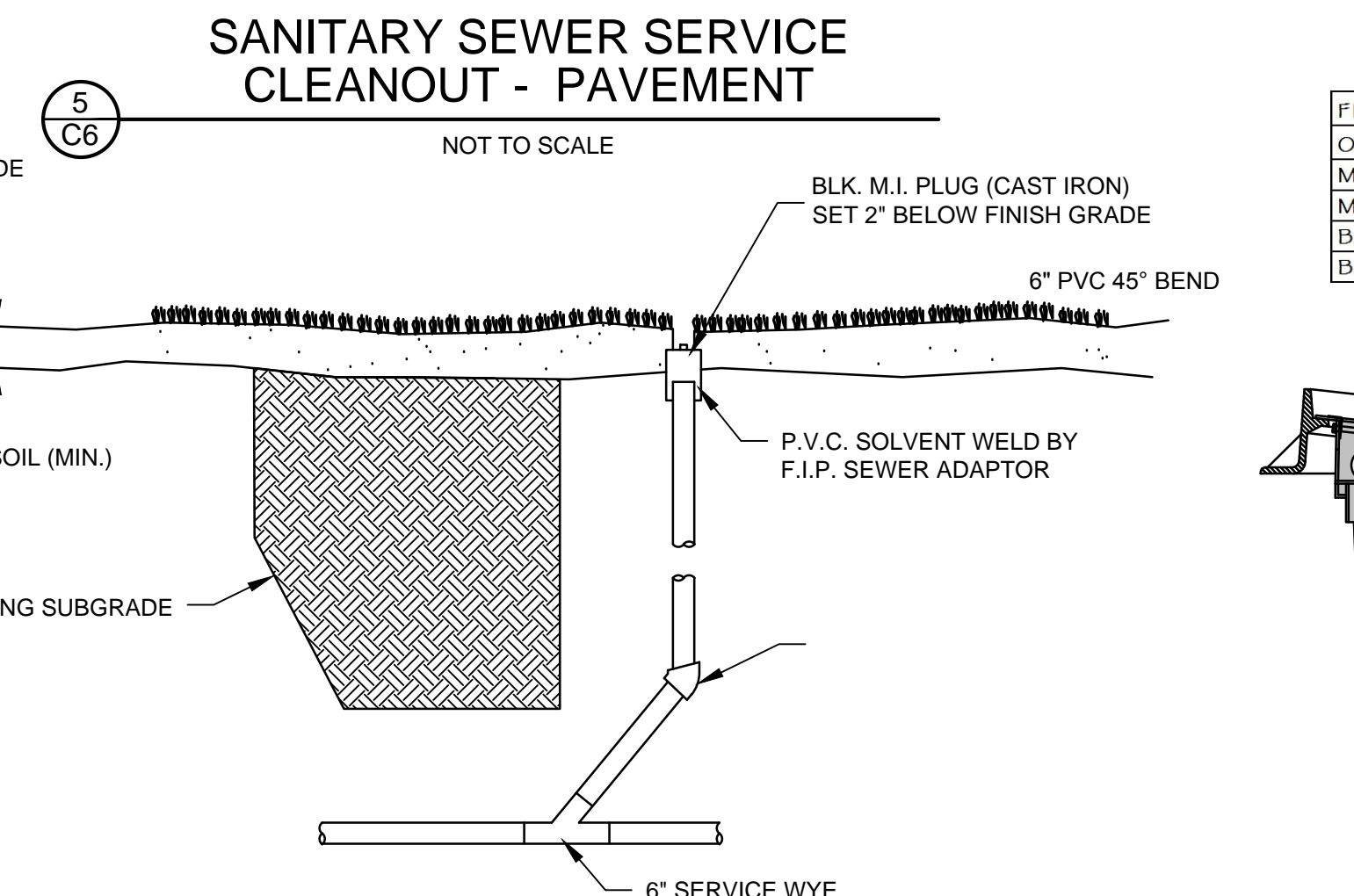
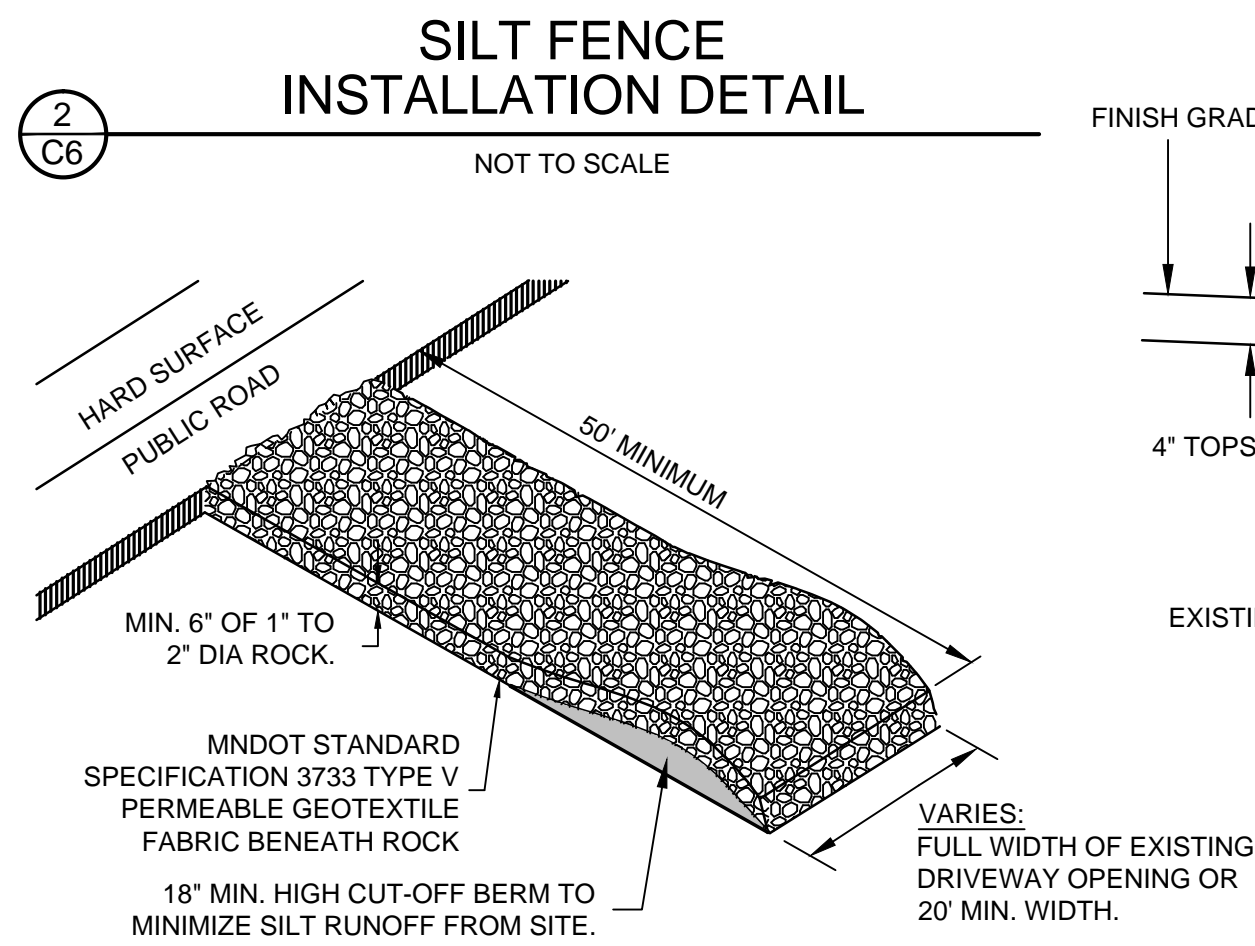
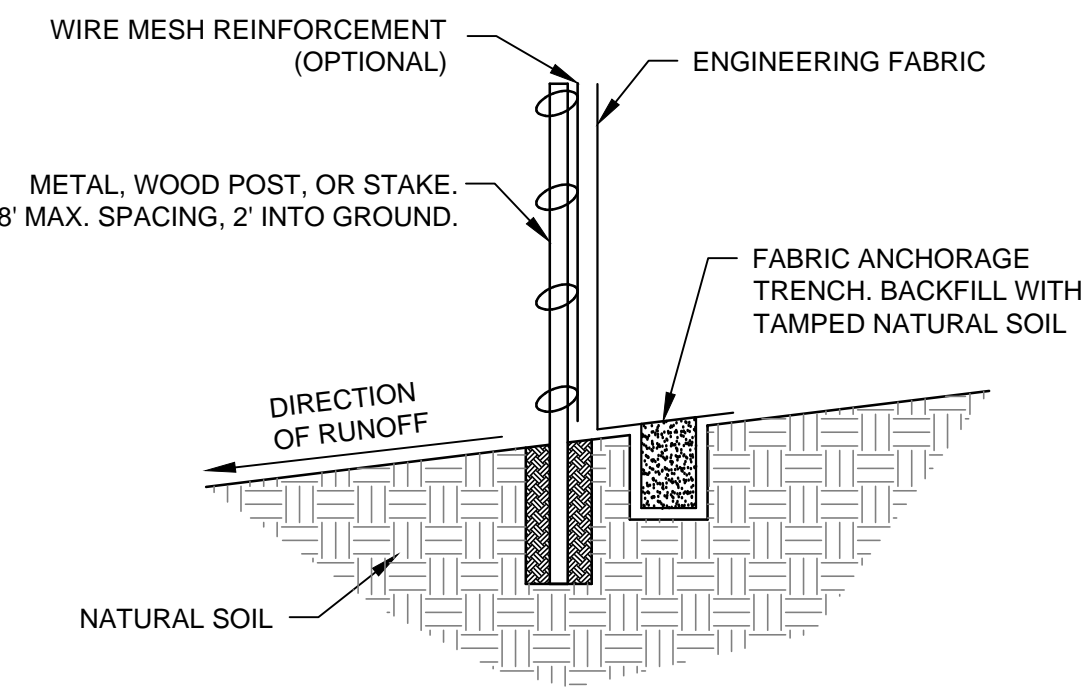
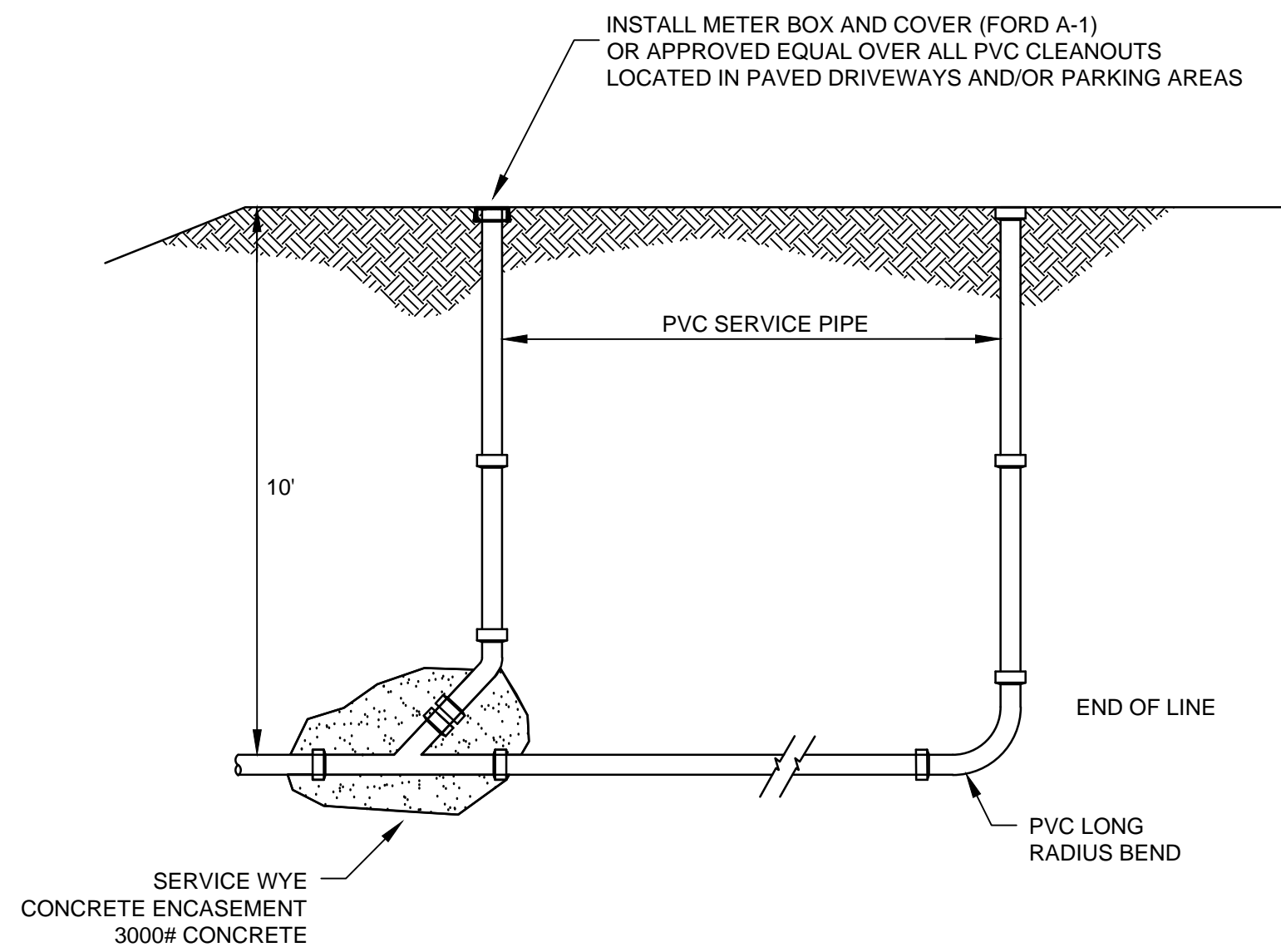
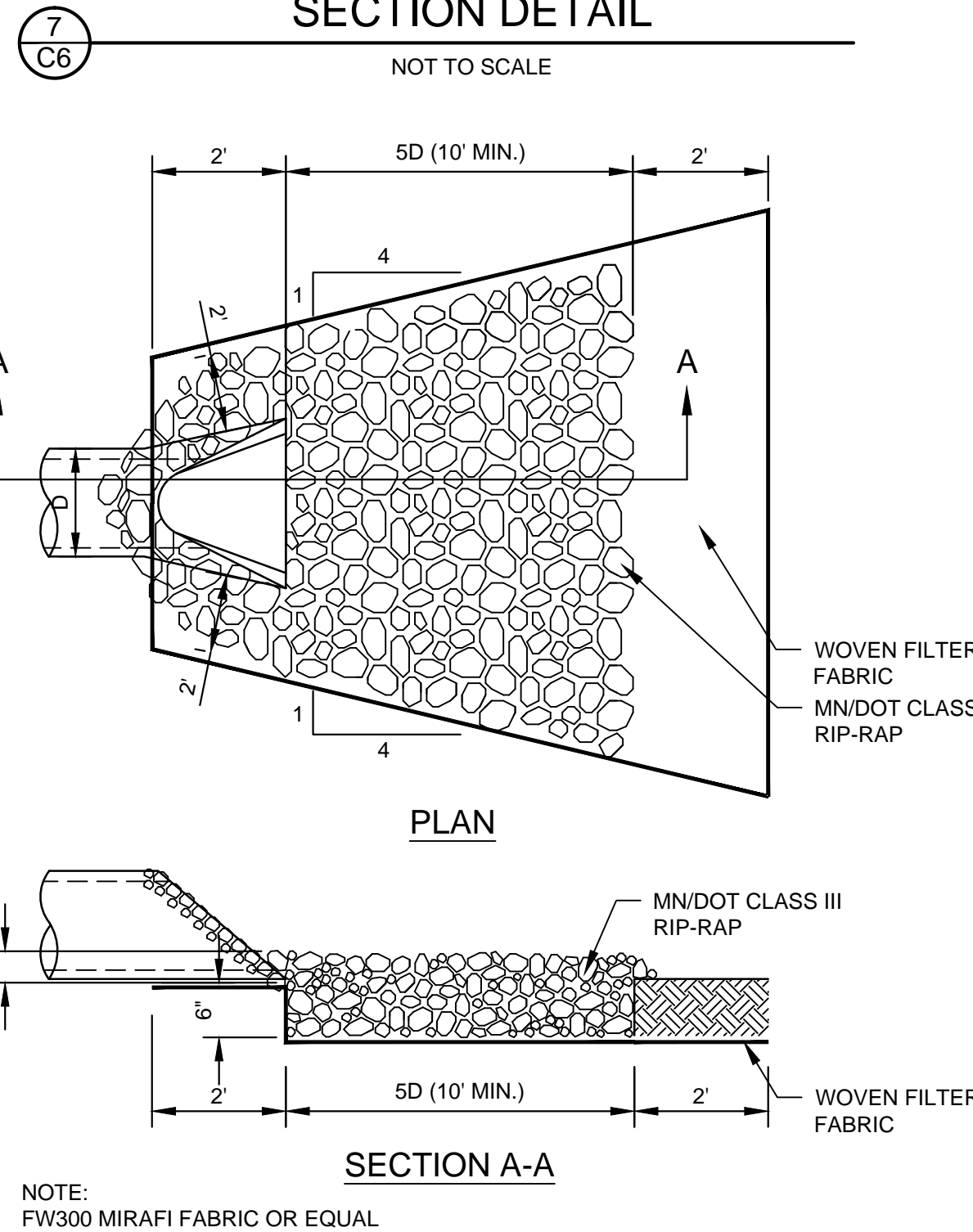
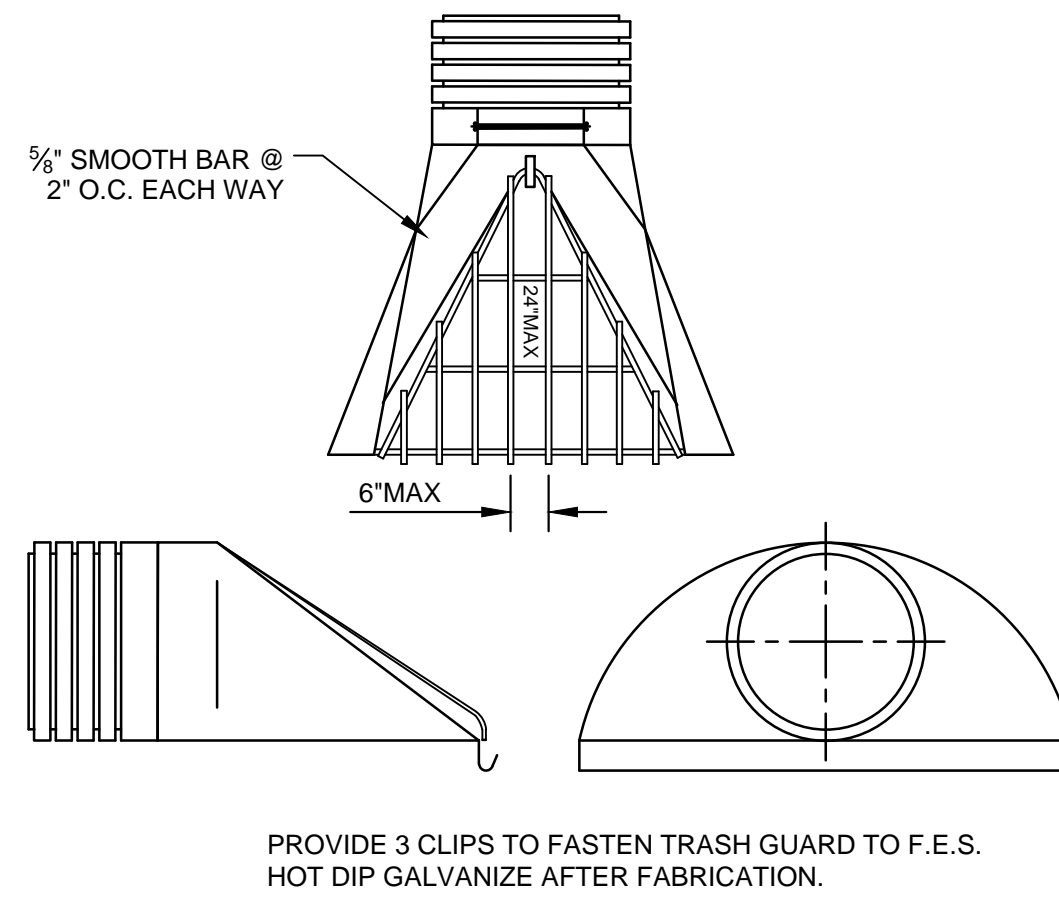
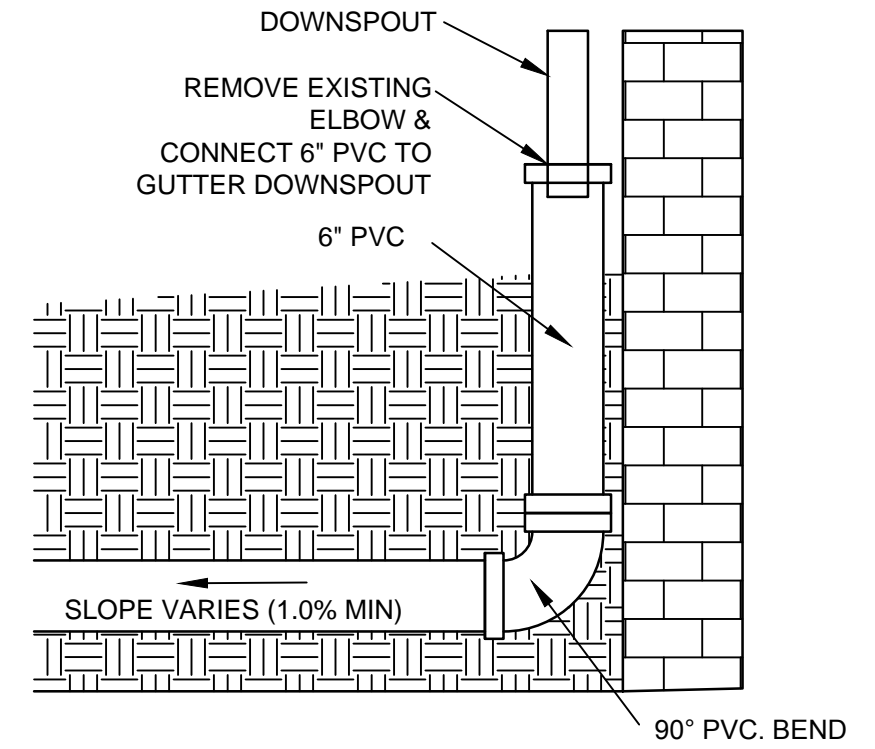
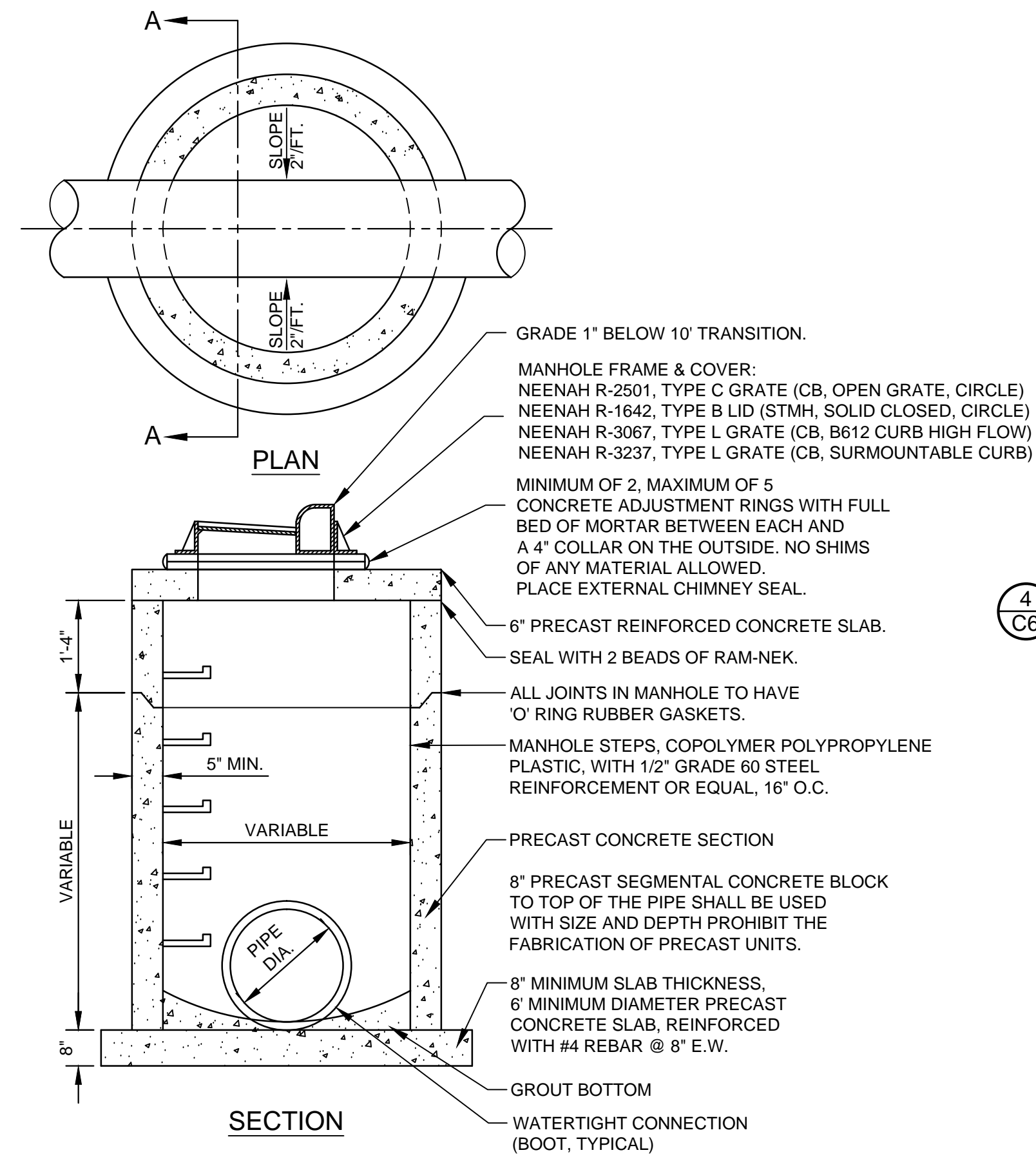
Date: 10.10.17 Reg. No.: 41885

Rev.	Date	Description
12.22.17	12.22.17	City Comments
01.08.18	01.08.18	City Comments
11.17.17	11.17.17	Watershed Submittal
11.30.17	11.30.17	City Submittal
12.12.17	12.12.17	Watershed Comments
12.18.17	12.18.17	City Comments

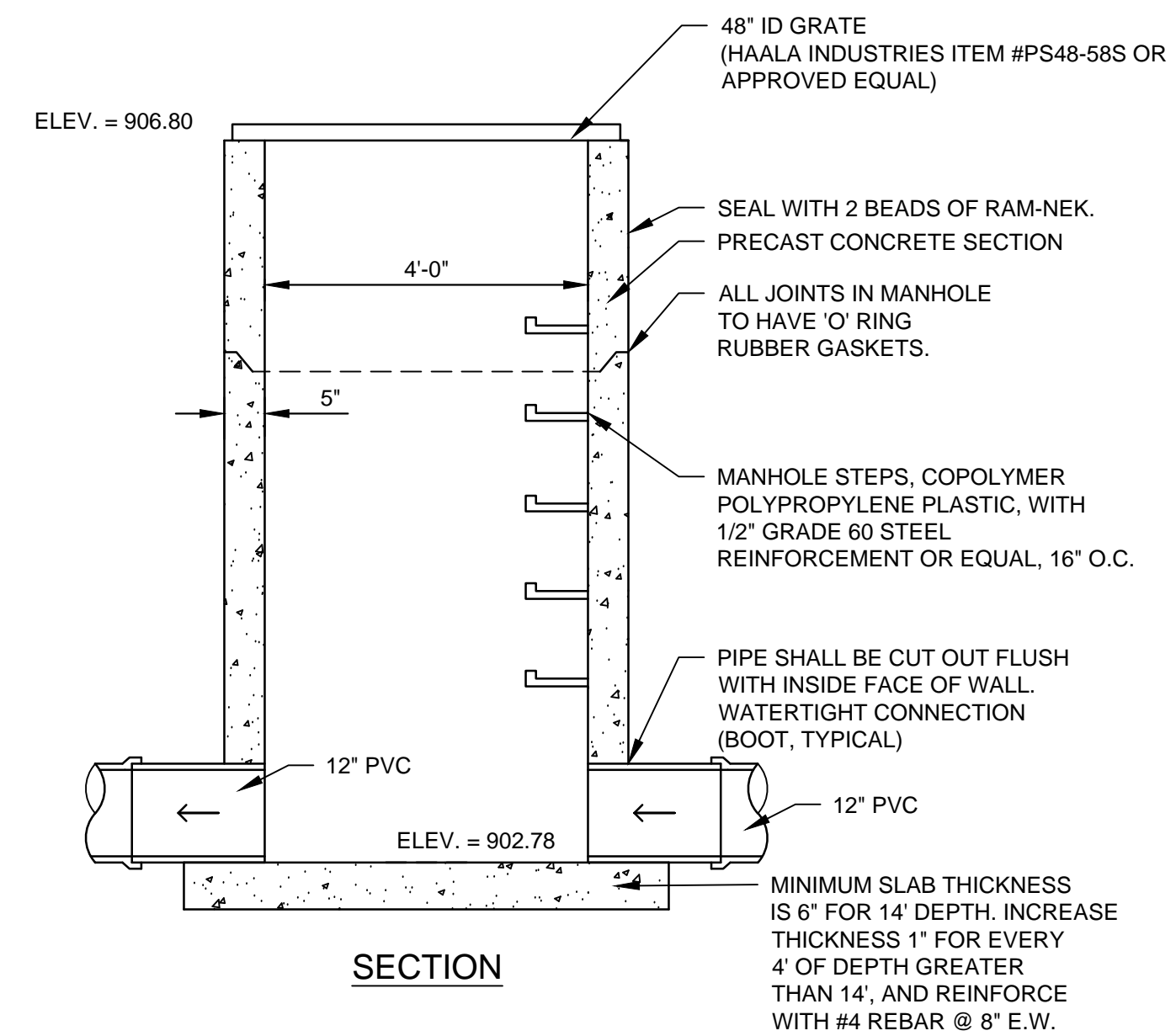
Project #: 12176130
 Drawn By: NJN
 Checked By: MJW
 Issue Date: 10.10.17

DETAILS

C5



- ### EROSION CONTROL NOTES
- Owner and Contractor shall obtain MPCA-NPDES permit. Contractor shall be responsible for all fees pertaining to this permit. The SWPPP shall be kept onsite at all times.
 - Install temporary erosion control measures (inlet protection, silt fence, and rock construction entrances) prior to beginning any excavation or demolition work at the site.
 - Erosion control measures shown on the erosion control plan are the absolute minimum. The contractor shall install temporary earth dikes, sediment traps or basins, additional siltation fencing, and/or disk the soil parallel to the contours as deemed necessary to further control erosion. All changes shall be recorded in the SWPPP.
 - All construction site entrances shall be surfaced with crushed rock across the entire width of the entrance and from the entrance to a point 50' into the construction zone.
 - The toe of the silt fence shall be trenched in a minimum of 6". The trench backfill shall be compacted with a vibratory plate compactor.
 - All grading operations shall be conducted in a manner to minimize the potential for site erosion. Sediment control practices must be established on all down gradient perimeters before any up gradient land disturbing activities begin.
 - All exposed soil areas must be stabilized as soon as possible to limit soil erosion but in no case later than 14 days after the construction activity in that portion of the site has temporarily or permanently ceased. Temporary stockpiles without significant silt, clay or organic components (e.g., clean aggregate stockpiles, demolition concrete stockpiles, sand stockpiles) and the constructed base components of roads, parking lots and similar surfaces are exempt from this requirement.
 - The normal wetted perimeter of any temporary or permanent drainage ditch or swale that drains water from any portion of the construction site, or diverts water around the site, must be stabilized within 200 lineal feet from the property edge, or from the point of discharge into any surface water. Stabilization of the last 200 lineal feet must be completed within 24 hours after connecting to a surface water. Stabilization of the remaining portions of any temporary or permanent ditches or swales must be complete within 14 days after connecting to a surface water and construction in that portion of the ditch has temporarily or permanently ceased.
 - Pipe outlets must be provided with energy dissipation within 24 hours of connection to surface water.
 - All riprap shall be installed with a filter material or soil separation fabric and comply with the Minnesota Department of Transportation Standard Specifications.
 - All storm sewers discharging into wetlands or water bodies shall outlet at or below the normal water level of the respective wetland or water body at an elevation where the downstream slope is 1 percent or flatter. The normal water level shall be the invert elevation of the outlet of the wetland or water body.
 - All storm sewer catch basins not needed for site drainage during construction shall be covered to prevent runoff from entering the storm sewer system. Catch basins necessary for site drainage during construction shall be provided with inlet protection.
 - In areas where concentrated flows occur (such as swales and areas in front of storm catch basins and intakes) the erosion control facilities shall be backed by stabilization structure to protect those facilities from the concentrated flows.
 - Inspect the construction site once every seven days during active construction and within 24 hours after a rainfall event greater than 0.5 inches in 24 hours. All inspections shall be recorded in the SWPPP.
 - All silt fences must be repaired, replaced, or supplemented when they become nonfunctional or the sediment reaches 1/3 of the height of the fence. These repairs must be made within 24 hours of discovery, or as soon as field conditions allow access. All repairs shall be recorded in the SWPPP.
 - If sediment escapes the construction site, off-site accumulations of sediment must be removed in a manner and at a frequency sufficient to minimize off-site impacts.
 - All soils tracked onto pavement shall be removed daily.
 - All infiltration areas must be inspected to ensure that no sediment from ongoing construction activity is reaching the infiltration area and these areas are protected from compaction due to construction equipment driving across the infiltration area.
 - Temporary soil stockpiles must have silt fence or other effective sediment controls, and cannot be placed in surface waters, including stormwater conveyances such as curb and gutter systems, or conduits and ditches unless there is a bypass in place for the stormwater.
 - Collected sediment, asphalt and concrete millings, floating debris, paper, plastic, fabric, construction and demolition debris and other wastes must be disposed of properly and must comply with MPCA disposal requirements.
 - Oil, gasoline, paint and any hazardous substances must be properly stored, including secondary containment, to prevent spills, leaks or other discharge. Restricted access to storage areas must be provided to prevent vandalism. Storage and disposal of hazardous waste must be in compliance with MPCA regulations.
 - External washing of trucks and other construction vehicles must be limited to a defined area of the site. Runoff must be contained and waste properly disposed of. No engine degreasing is allowed onsite.
 - All liquid and solid wastes generated by concrete washout operations must be contained in a leak-proof containment facility or impermeable liner. A compacted clay liner that does not allow washout liquids to enter ground water is considered an impermeable liner. The liquid and solid wastes must not contact the ground, and there must not be runoff from the concrete washout operations or areas. Liquid and solid wastes must be disposed of properly and in compliance with MPCA regulations. A sign must be installed adjacent to each washout facility to inform concrete equipment operators to utilize the proper facilities.
 - Upon completion of the project and stabilization of all graded areas, all temporary erosion control facilities (silt fences, hay bales, etc.) shall be removed from the site.
 - All permanent sedimentation basins must be restored to their design condition immediately following stabilization of the site.
 - Contractor shall submit Notice of Termination for MPCA-NPDES permit within 30 days after Final Stabilization.



Larson Engineering, Inc.
 3524 Labors Road
 White Bear Lake, MN 55110
 651.481.9120 (f) 651.481.9201
 www.larsonengr.com

© 2017 Larson Engineering, Inc. All rights reserved.

TRFL, LLC
 333 NORTH MAIN STREET, SUITE 110
 STILLWATER, MN 55082

TIMBER RIDGE APARTMENTS
 4777 19TH STREET SW
 FOREST LAKE, MN 55025

Project Title:

I hereby certify that this plan, specifications or report was prepared by me or under my direct supervision and that I am a duly licensed Professional Engineer under the laws of the state of Minnesota.

Matt Woodruff
 Matt Woodruff, P.E.
 Date: 10.10.17 Reg. No.: 41885

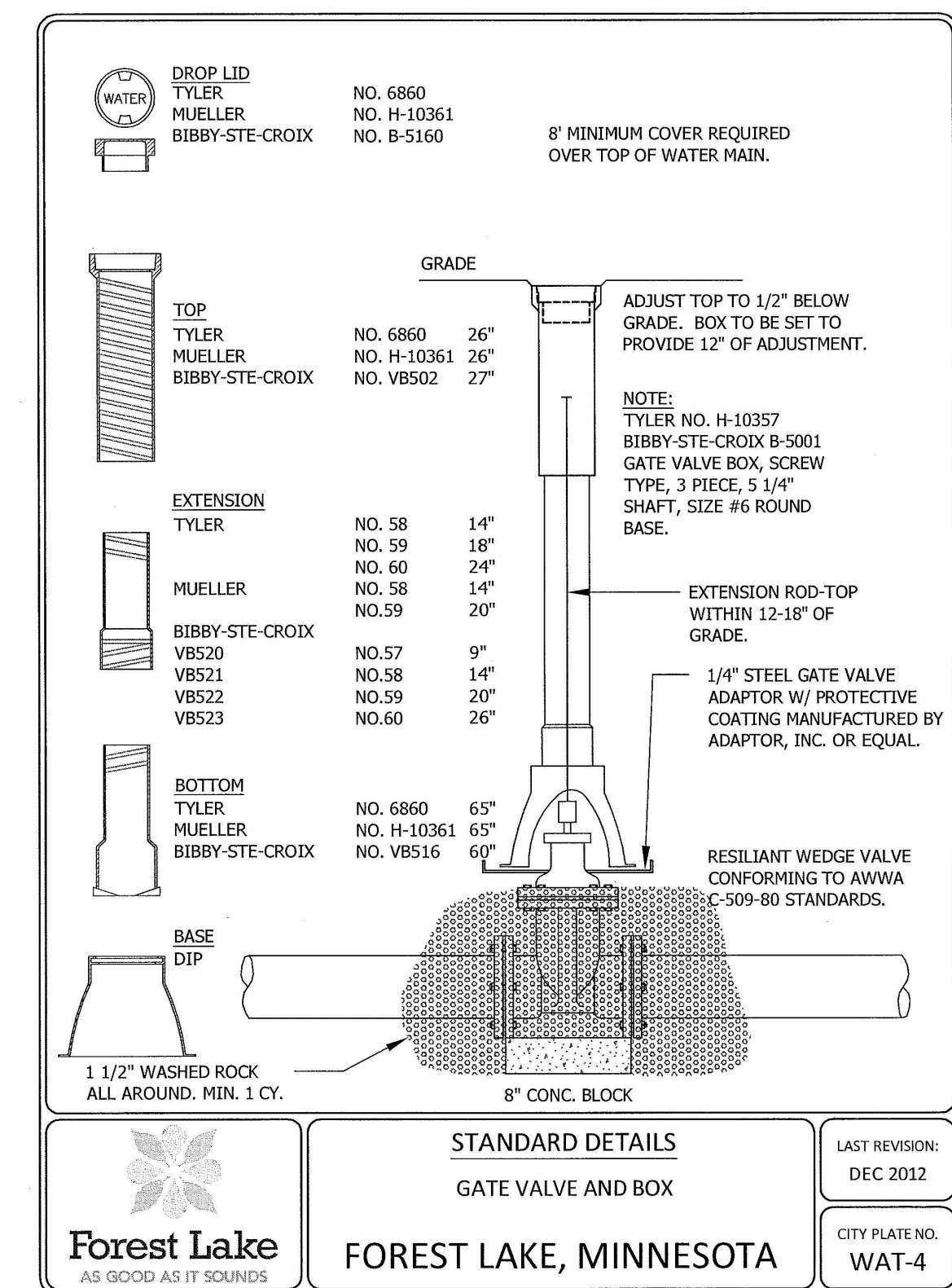
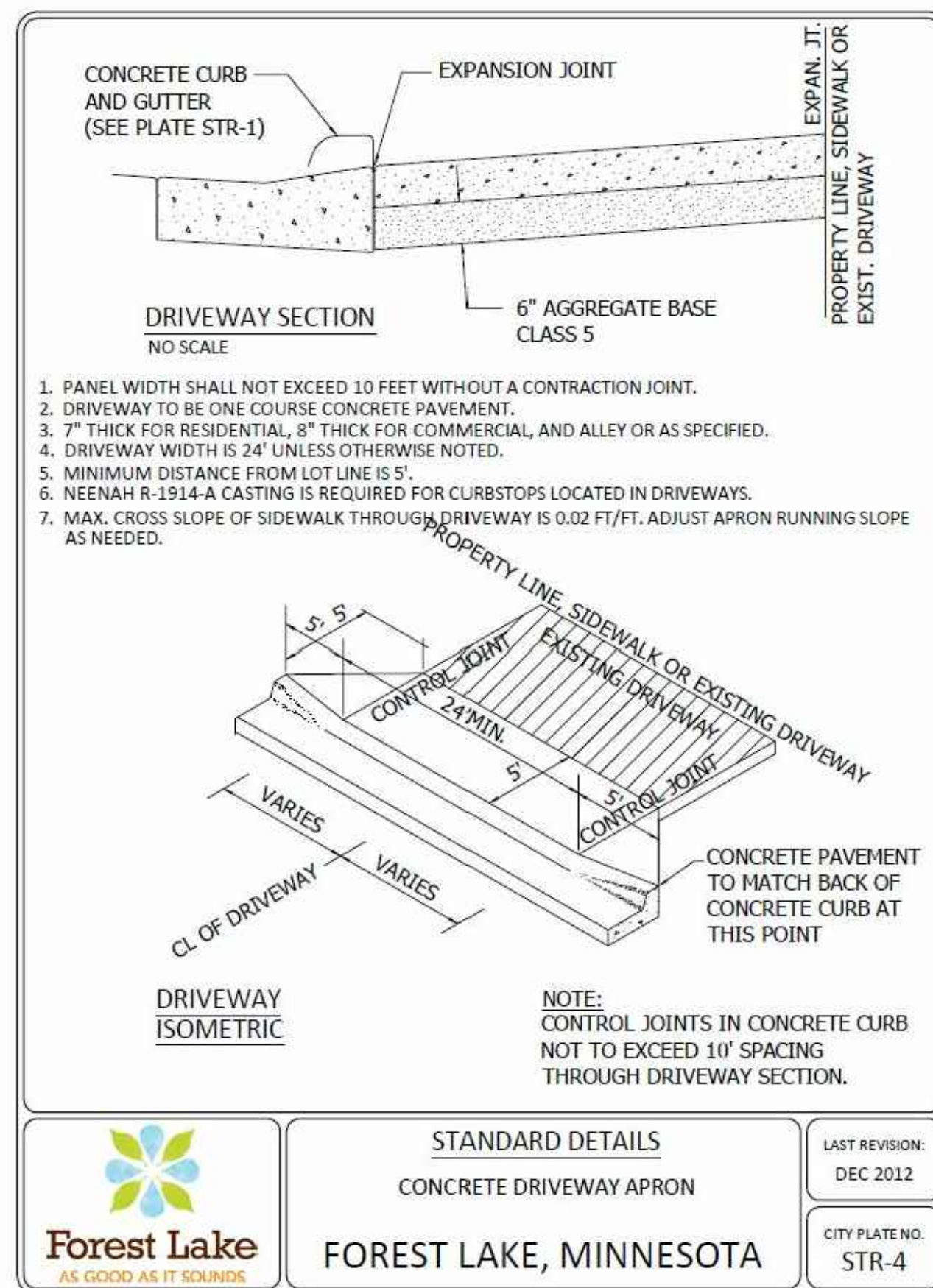
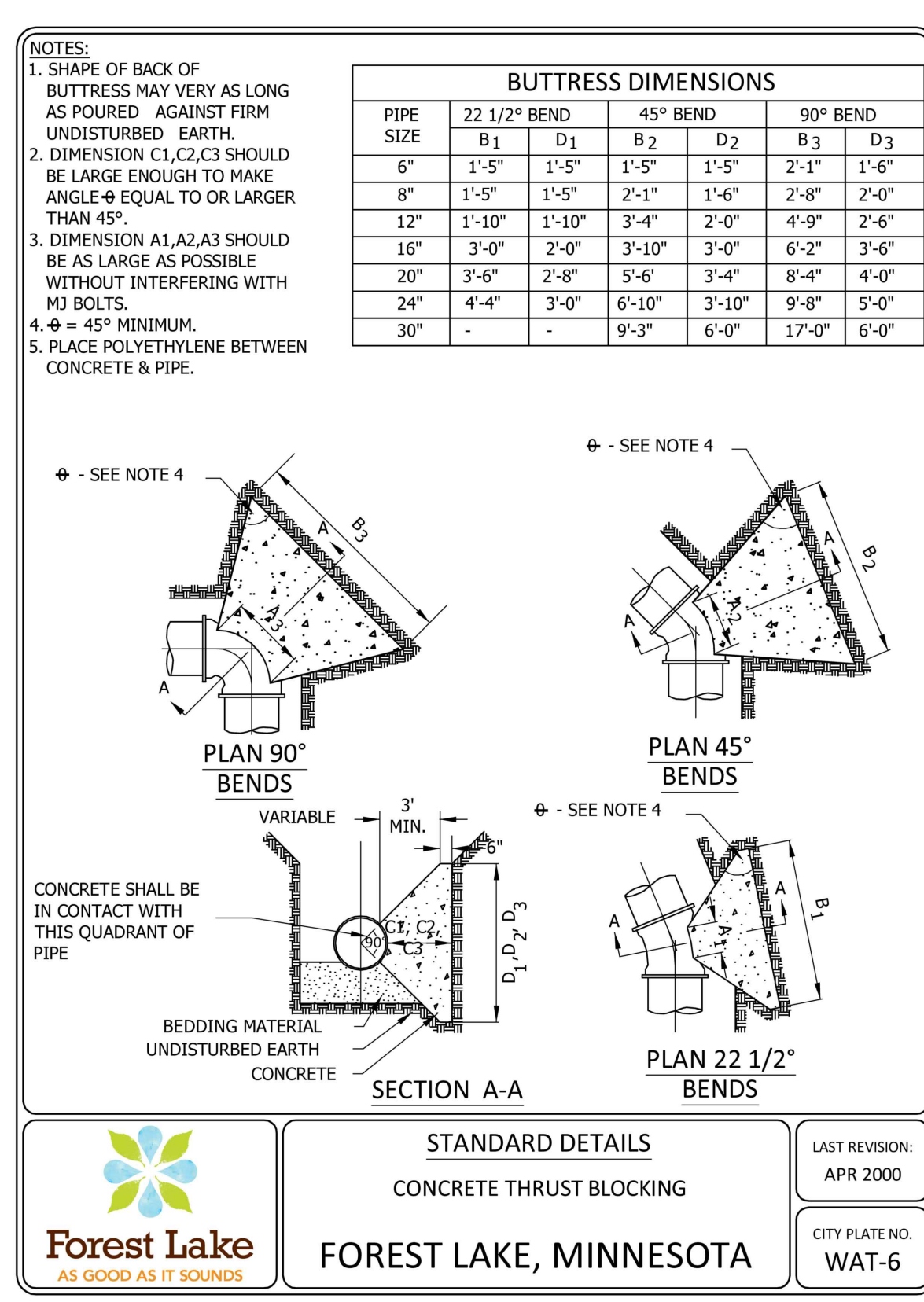
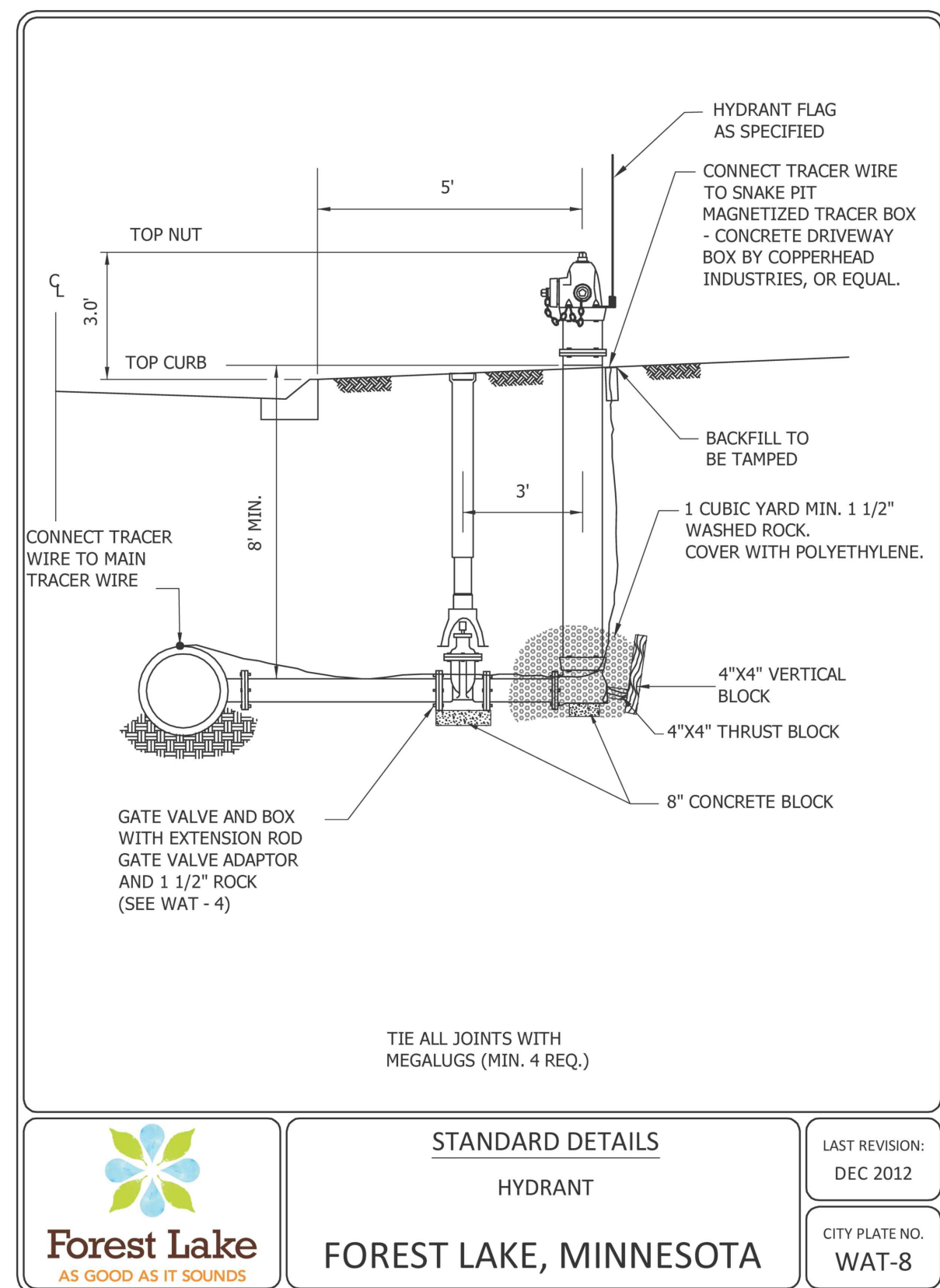
Rev.	Date	Description
1	12.22.17	City Comments
2	01.08.18	City Comments
3	11.17.17	Watershed Submittal
4	11.30.17	City Submittal
5	12.12.17	Watershed Comments
6	12.18.17	City Comments

Project #: 12176130
 Drawn By: NJN
 Checked By: MJW
 Issue Date: 10.10.17

Sheet Title:

DETAILS AND NOTES

C6

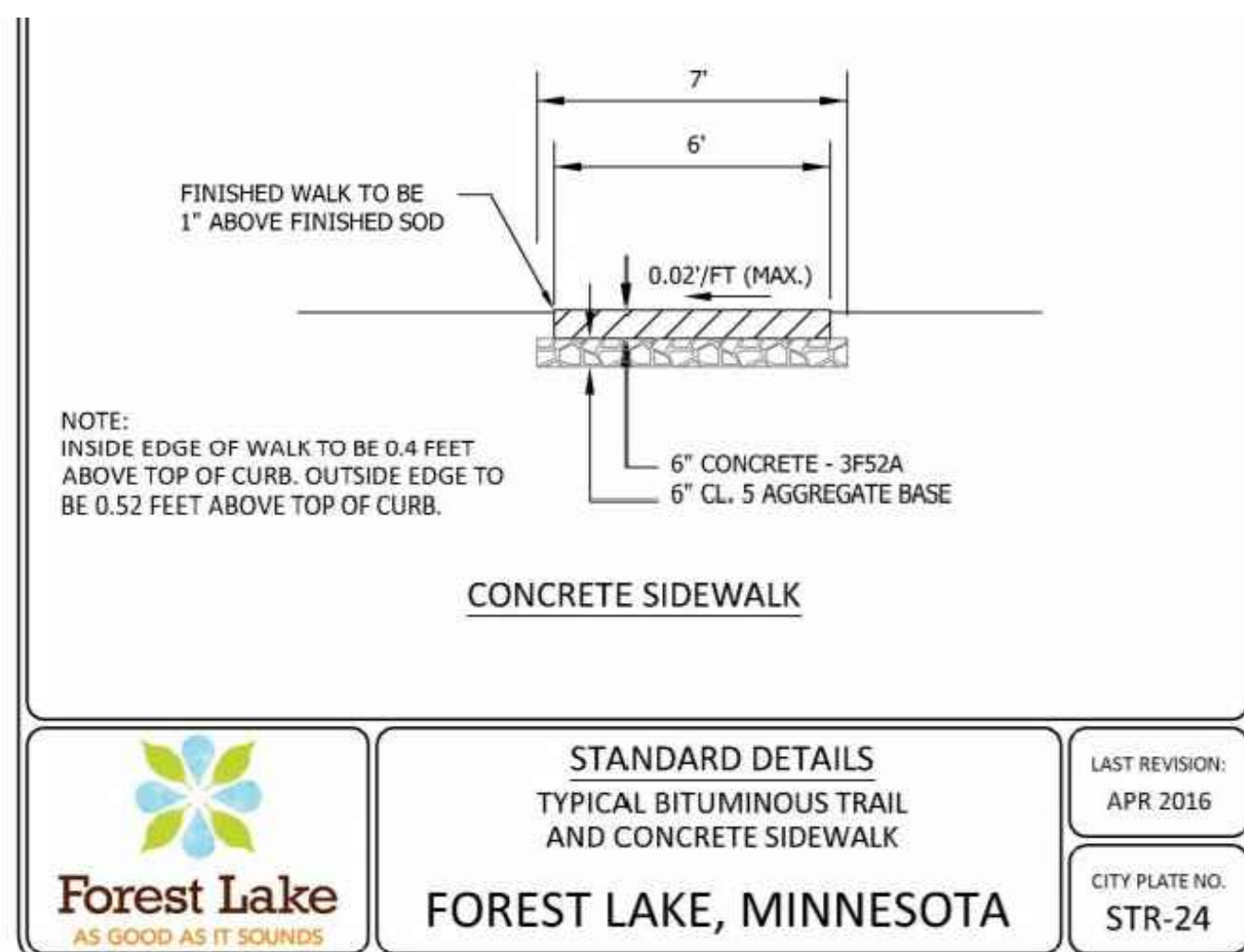


1 C7
HYDRANT STANDARD DETAIL
NOT TO SCALE

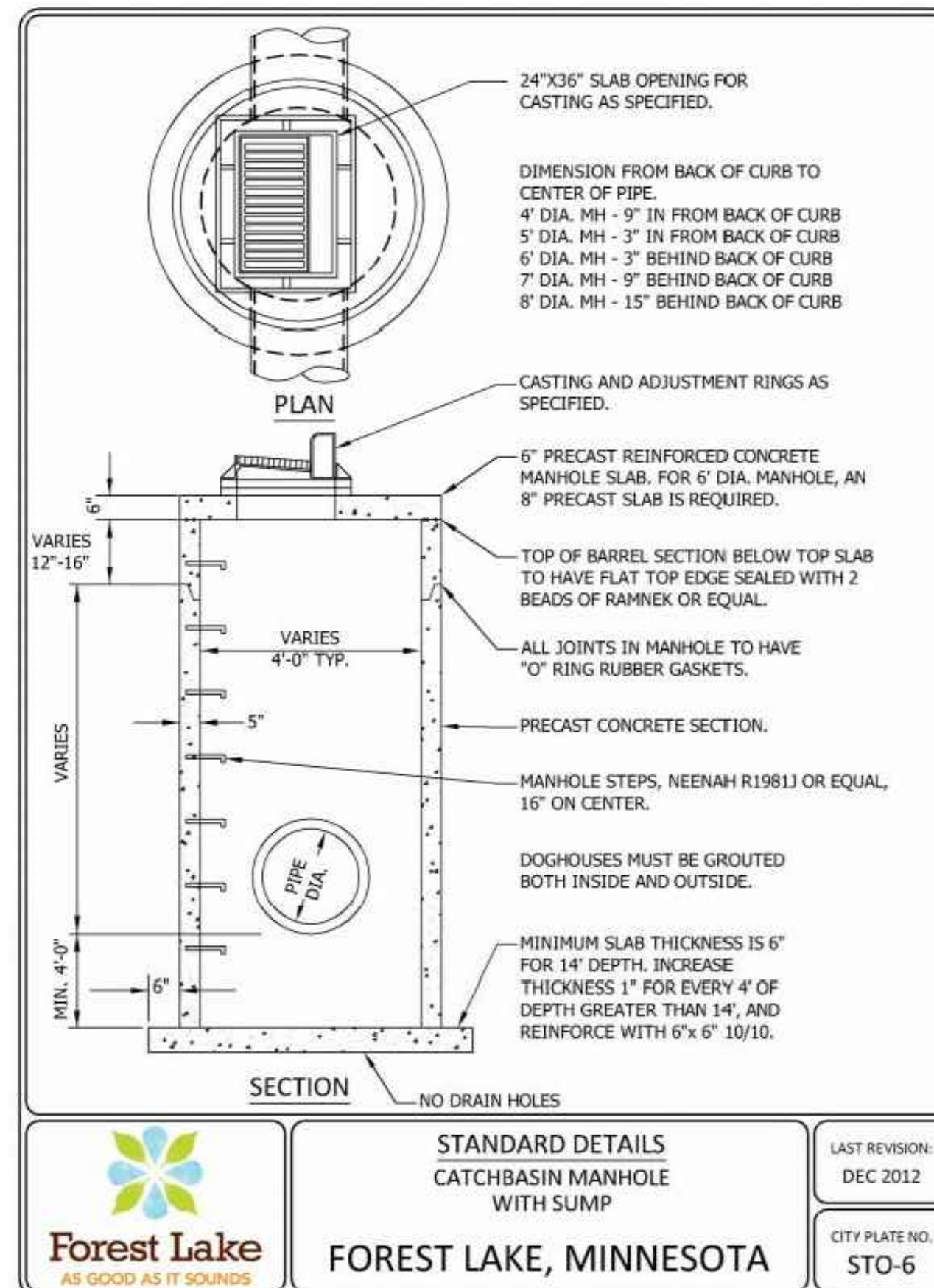
2 C7
CONCRETE THRUST BLOCKING STANDARD DETAIL
NOT TO SCALE

3 C7
APRON DETAIL CONCRETE DRIVEWAY
NOT TO SCALE

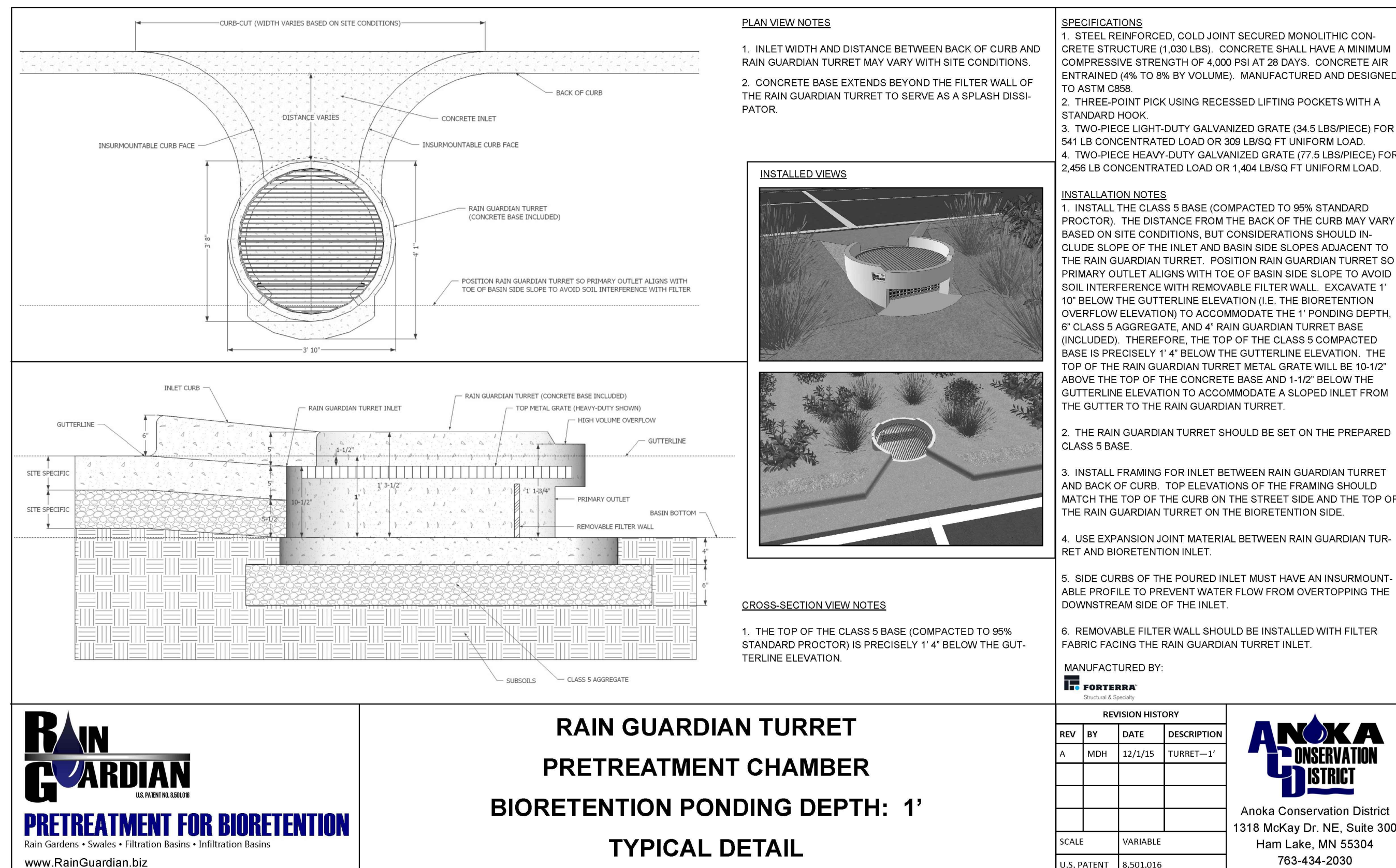
4 C7
GATE VALVE & BOX STANDARD DETAIL
NOT TO SCALE



5 C7
CONCRETE SIDEWALK STANDARD DETAIL
NOT TO SCALE



6 C7
CATCH BASIN MANHOLE WITH SUMP DETAIL
NOT TO SCALE



7 C7
RAIN GUARDIAN DETAIL
NOT TO SCALE

Larson Engineering, Inc.
3524 Labors Road
White Bear Lake, MN 55110
651.481.9120 (F) 651.481.9201
www.larsonengr.com

TRFL, LLC
333 NORTH MAIN STREET, SUITE 110
STILLWATER, MN 55082

TIMBER RIDGE APARTMENTS
4777 19TH STREET SW
FOREST LAKE, MN 55025

I hereby certify that this plan, specifications or report was prepared by me or under my direct supervision and that I am a duly licensed Professional Engineer under the laws of the state of Minnesota.

Matt Woodruff
Matt Woodruff, P.E.
Date: 10.10.17 Reg. No.: 41885

Rev.	Date	Description
1	12.22.17	City Comments
2	01.08.18	City Comments
3	11.17.17	Watershed Submittal
4	11.30.17	City Submittal
5	12.12.17	Watershed Comments
6	12.18.17	City Comments

Project #: 12176130
Drawn By: NJN
Checked By: MJW
Issue Date: 10.10.17
Sheet Title:

DETAILS
C7