

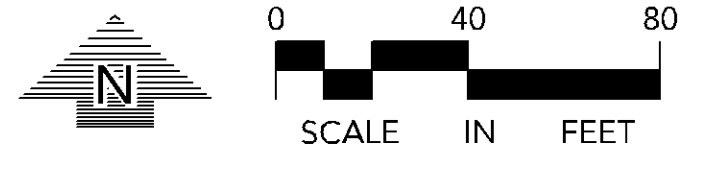


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CASE #PL2020-112

SURVEY LEGEND	
—	PROPERTY LINE
- - -	ADJACENT PROPERTY LINE
- - -	PERMANENT EASEMENT
- - -	TEMPORARY EASEMENT
- - -	RIGHT OF WAY
- - -	UNDERGROUND CABLE TV
- - -	UNDERGROUND POWER
- - -	UNDERGROUND FIBER OPTIC
- - -	OVERHEAD POWER LINE
- - -	UNDERGROUND TELEPHONE
- - -	UNDERGROUND TELEPHONE
- - -	SANITARY SEWER LINE
- - -	STORM SEWER LINE
- - -	WATERMAIN LINE
•	FOUND MONUMENT
○	SET MONUMENT
□	CATCH BASIN (STORM)
▲	STORM INLET (FES)
○	SANITARY MANHOLE
○	STORM MANHOLE
×	GATE VALVE
◇	HYDRANT
☼	LIGHT / LIGHT POLE
○	POLE
⊥	GUY ANCHOR
⊥	SPRINKER BOX
○	DECIDUOUS TREE
✱	CONIFEROUS TREE
□	ELECTRICAL BOX
□	ELECTRICAL BOX
⊥	PEDESTAL
⊥	ELECTRICAL BOX
⊥	HANDHOLE
⊥	FLAG POLE
■	CONCRETE SURFACE



NOTE:
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I hereby certify that this plan, specification or report is 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.

Name
Title
Date 07-08-2020 Lic./Reg. No. 53706

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Item Date
CITY SUBMITTAL 07-08-2020

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Comm. No. 3.2020095.00
Sheet Title
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EXISTING CONDITONS

Sheet No.

200.EX



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CASE #PL2020-112

DEMOLITION LEGEND:

- REMOVE EXISTING BUILDING
- REMOVE EXISTING BITUMINOUS PAVING
- REMOVE EXISTING CONCRETE PAVING, SIDEWALKS, ETC.
- MILL AND OVERLAY EXISTING PARKING LOT
- REMOVE EXISTING CURB & GUTTER, RETAINING WALLS, FENCE, ETC.
- REMOVE EXISTING UTILITIES
- REMOVE EXISTING MANHOLES, POWER POLES, LIGHT POLES, BOLLARDS, PARKING METERS, SIGNS, ETC.
- REMOVE EXISTING TREES

SURVEY LEGEND:

- PROPERTY LINE
- ADJACENT PROPERTY LINE
- PERMANENT EASEMENT
- TEMPORARY EASEMENT
- RIGHT OF WAY
- TV-BUR
- P-BUR
- FO
- P-OH
- T-BUR
- G
- >>
- I
- FOUND MONUMENT
- SET MONUMENT
- CATCH BASIN (STORM)
- STORM INLET (FES)
- SANITARY MANHOLE
- STORM MANHOLE
- GATE VALVE
- HYDRANT
- LIGHT / LIGHT POLE
- POLE
- GUY ANCHOR
- SPRINKER BOX
- DECIDUOUS TREE
- CONIFEROUS TREE
- ELECTRICAL BOX
- ELECTRICAL BOX
- PEDESTAL
- ELECTRICAL BOX
- HH
- FP
- CONCRETE SURFACE

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Sheet Title: DEMOLITION PLAN

210.SD



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Hydrant coverage shall be provided within 50' of the FDC and within 150' of all portions of the structure.

Emergency responder radio coverage meeting the requirements of appendix L in the 2015 MSFC shall be provided throughout the property and within the structures.

CASE #PL2020-112

Parking requirement and supply must be further discussed and analyzed with Planning and Traffic staff given multi-jurisdictional complexity and requested proof of parking. Additional information on the use characteristics and areas of the future building addition must be submitted to complete the parking analysis of the development proposed in the Preliminary Development Plans.

SITE DATA

CURRENT ZONING: IT - INNOVATION AND TECHNOLOGY
PROPOSED ZONING: IT - INNOVATION AND TECHNOLOGY
MILL & OVERLAY AREA: 2.04 AC
DISTURBED AREA: 6.14 AC
EXISTING IMPERVIOUS AREA: 6.14 AC (100%)
PROPOSED IMPERVIOUS AREA: 4.58 AC (74.7%)

DEVELOPMENT AND DESIGN STANDARDS

YARD (BUILDING) SETBACKS:
FRONT: 20 FT MINIMUM
SIDE: 25 FT MINIMUM
SIDE (RESIDENTIAL): 50 FT MINIMUM
REAR: 25 FT MINIMUM

OFF-STREET PARKING AND DESIGN STANDARD REQUIREMENTS

OFF-STREET PARKING SETBACKS:
FRONT: 20 FT MINIMUM
SIDE: 5 FT MINIMUM

MINIMUM PARKING LAYOUT DIMENSIONS (90 DEGREE PATTERN):
PARKING SPACE WIDTH: 9 FT
PARKING SPACE LENGTH: 18 FT
DRIVE LANE WIDTH: 24 FT

ACCESSIBLE PARKING

PROPOSED ACCESSIBLE PARKING: 8 STALLS

REQUIRED ACCESSIBLE PARKING: 7 STALLS**

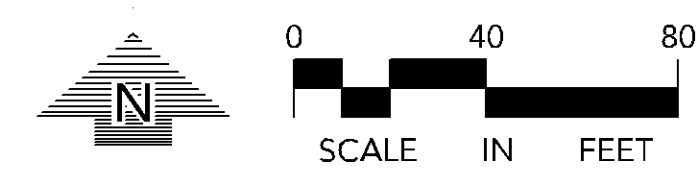
**REQUIRED MINIMUM NUMBER OF ACCESSIBLE SPACES FOR 201 TO 300 STALLS

SITE NOTES

1. ALL PAVING, CONCRETE CURB, GUTTER AND SIDEWALK SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH THE DETAILS SHOWN PER THE DETAIL SHEET(S) AND STATE/LOCAL JURISDICTION REQUIREMENTS.
2. ACCESSIBLE PARKING AND ACCESSIBLE ROUTES SHALL BE PROVIDED PER CURRENT ADA STANDARDS AND LOCAL/STATE REQUIREMENTS.
3. ALL CURB DIMENSIONS SHOWN ARE TO THE FACE OF CURB UNLESS OTHERWISE NOTED.
4. ALL BUILDING DIMENSIONS ARE TO THE OUTSIDE FACE OF WALL UNLESS OTHERWISE NOTED.
5. TYPICAL FULL SIZED PARKING STALL IS 9' X 18' UNLESS OTHERWISE NOTED.
6. ALL CURB RADI SHALL BE 5' UNLESS OTHERWISE NOTED.
7. BITUMINOUS IMPREGNATED FIBER BOARD TO BE PLACED AT FULL DEPTH OF CONCRETE ADJACENT TO EXISTING STRUCTURES AND BEHIND CURB ADJACENT TO DRIVEWAYS AND SIDEWALKS.
8. SEE SITE ELECTRICAL PLAN FOR SITE LIGHTING.

SIGNAGE AND STRIPING NOTES

1. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SITE SIGNAGE AND STRIPING AS SHOWN ON THIS PLAN.
2. CONTRACTOR SHALL PAINT ALL ACCESSIBLE STALLS, LOGOS AND CROSS HATCH LOADING AISLES WITH WHITE PAVEMENT MARKING PAINT, 4" IN WIDTH.
3. CONTRACTOR SHALL PAINT ANY/ALL DIRECTIONAL TRAFFIC ARROWS, AS SHOWN, IN WHITE PAINT.
4. ALL SIGNAGE SHALL INCLUDE POST, CONCRETE FOOTING AND STEEL CASING WHERE REQUIRED.
5. ALL SIGNAGE NOT PROTECTED BY CURB, LOCATED IN PARKING LOT OR OTHER PAVED AREAS TO BE PLACED IN STEEL CASING, FILLED WITH CONCRETE AND PAINTED YELLOW. REFER TO DETAIL.
6. ANY/ALL STOP SIGNS TO INCLUDE A 24" WIDE PAINTED STOP BAR IN WHITE PAINT, PLACED AT THE STOP SIGN LOCATION, A MINIMUM OF 4' FROM CROSSWALK IF APPLICABLE. ALL STOP BARS SHALL EXTEND FROM DIRECTIONAL TRANSITION BETWEEN LANES TO CURB.
7. ALL SIGNS TO BE PLACED 18" BEHIND BACK OF CURB UNLESS OTHERWISE NOTED.



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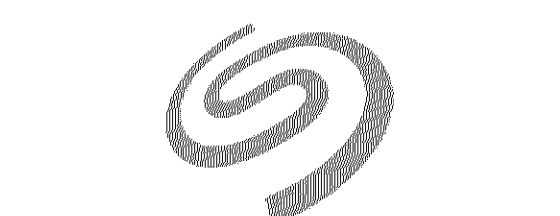
PAVEMENT TYPES

- CONCRETE SIDEWALK
- CONCRETE PAVEMENT
- LIGHT DUTY BITUMINOUS PAVEMENT
- HEAVY DUTY BITUMINOUS PAVEMENT
- MILL & OVERLAY BITUMINOUS PAVEMENT

NOTE:
SEE PAVEMENT SECTIONS ON SHEET 250.CD AND 251.CD
FOR TYPE AND DEPTH INFORMATION.

CIVIL LEGEND

EXISTING	PROPOSED



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Name: _____
Date: 07-08-2020 Lic./Reg. No. 53706

Issued For: _____

Item: _____ Date: 07-08-2020

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CALL BEFORE YOU DIG
Gopher State One Call
TWIN CITY AREA: 651-454-0002
TOLL FREE: 1-800-252-1166

WARNING:

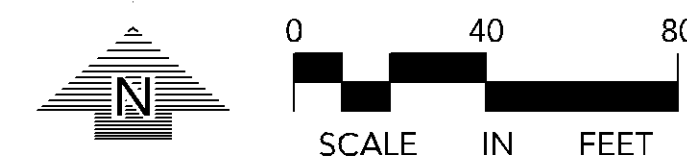
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Provide adequate turning radius for all emergency vehicle access lanes.

Provide a circulation route to/through the existing campus that doesn't create a dead end situation during construction.

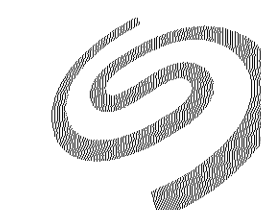
CASE #PL2020-112



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Name: David E. Gump, PE

Date: 07-08-2020 Lic./Reg. No. 53706

Issued For:

Item: CITY SUBMITTAL Date: 07-08-2020

Gate Must Be Accessible

Phase 1 Parking Ramp Site Logistics

Total Required Stalls per Zoning Code = 1,594 stalls

Existing stalls on north side (Edina) of campus to remain = 528 Stalls

Proposed parking ramp stalls = 600 stalls

Future parking ramp stalls = 200 stalls

Proposed surface parking stalls = 220 stalls (accounts for ADA stalls - surface parking only)

Proof of parking surface stalls = 66

Stalls removed for construction of future parking ramp = (-) 38

Future ramp parking) = 1,576 Stalls

Is it possible to not have fence next to the building?

Construction Fence

Gate for Seagate access to building for garbage and loading dock

Gate Must Be Accessible

Phase 1 construction parking

Gate 5

Gate 4

Gate 3

Fire Department access during phase 1 to Gate 5

Gate 2

Gate 1

Gate Must Be Accessible
220.CS

Jobsite Trailer

Drawn
TDG/ZRM/AMC

SITE PLAN

Dug Pipes found:
Cap #23677 found 0.14 southwesterly of boundary
Cap #24332 found 0.16 southeasterly of boundary

New parking stalls must be three feet shorter than the adjacent parking stall (Sec. 21.301.06(c)(2)(iv)).



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Gopher State One Call
TWIN CITY AREA 651-454-0002
TOLL FREE 1-800-252-1166

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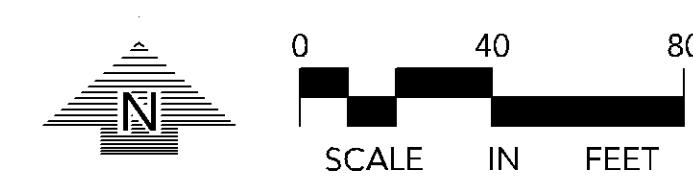
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CASE #PL2020-112

GRADING, DRAINAGE & EROSION CONTROL NOTES

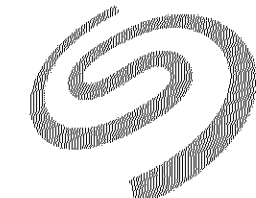
1. SPOT ELEVATIONS REPRESENT FINISHED SURFACE GRADES, GUTTER/FLOW LINE, FACE OF BUILDING, OR EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.
2. CATCH BASINS AND MANHOLES IN PAVED AREAS SHALL BE SUMPED 0.04 FEET. ALL CATCH BASINS IN CUTTERS SHALL BE SUMPED 0.16 FEET. RIM ELEVATIONS SHOWN ON PLANS DO NOT REFLECT SUMPED ELEVATIONS.
3. GRADING OF THE INFILTRATION AREAS SHALL BE ACCOMPLISHED USING LOW-IMPACT EARTH-MOVING EQUIPMENT TO PREVENT COMPACTION OF THE UNDERLYING SOILS. SMALL TRACKED DOZERS AND BOBCATS WITH RUNNER TRACKS ARE RECOMMENDED.
4. ALL DISTURBED UNPAVED AREAS ARE TO RECEIVE MINIMUM OF 4 INCHES OF TOP SOIL AND SEED/MULCH OR SOD. THESE AREAS SHALL BE WATERED/MAINTAINED BY THE CONTRACTOR UNTIL VEGETATION IS ESTABLISHED.
5. FOR SITE RETAINING WALLS "TW" EQUALS SURFACE GRADE AT TOP FACE OF WALL (NOT TOP OF WALL). "CW" EQUALS SURFACE GRADE AT WALL GRADE TRANSITION, AND "BW" EQUALS SURFACE GRADE AT BOTTOM FACE OF WALL (NOT BOTTOM OF BURIED WALL COURSES).
6. REFER TO THE PRELIMINARY BORING LOGS (REPORT NO. B7004036), DATED JUNE 4, 2020, AS PREPARED BY BRAUN INTERTEC FOR AN EXISTING SUBSURFACE SITE CONDITION ANALYSIS AND CONSTRUCTION RECOMMENDATIONS.
7. STREETS MUST BE CLEANED AND SWEEPED WHENEVER TRACKING OF SEDIMENTS OCCURS AND BEFORE SITES ARE LEFT IDLE FOR WEEKENDS AND HOLIDAYS. A REGULAR SWEEPING SCHEDULE MUST BE ESTABLISHED.
8. DUST MUST BE ADEQUATELY CONTROLLED.
9. SEE SWPPP FOR ADDITIONAL EROSION CONTROL NOTES AND REQUIREMENTS.
10. SEE UTILITY PLAN FOR WATER, STORM AND SANITARY SEWER INFORMATION.
11. SEE SITE PLAN FOR CURB AND BITUMINOUS TAPER LOCATIONS.



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CIVIL LEGEND

EXISTING	PROPOSED



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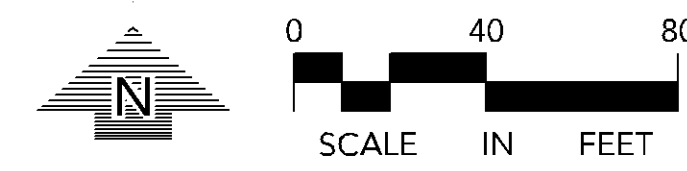
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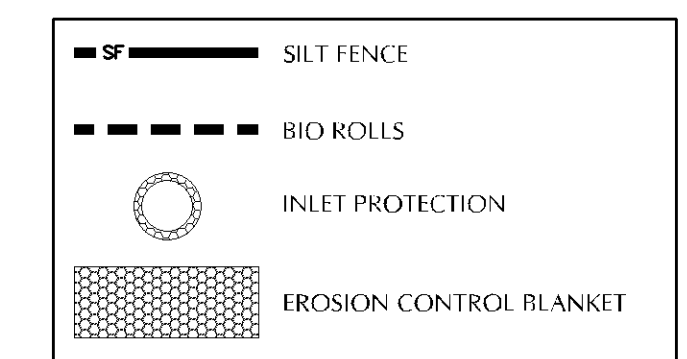
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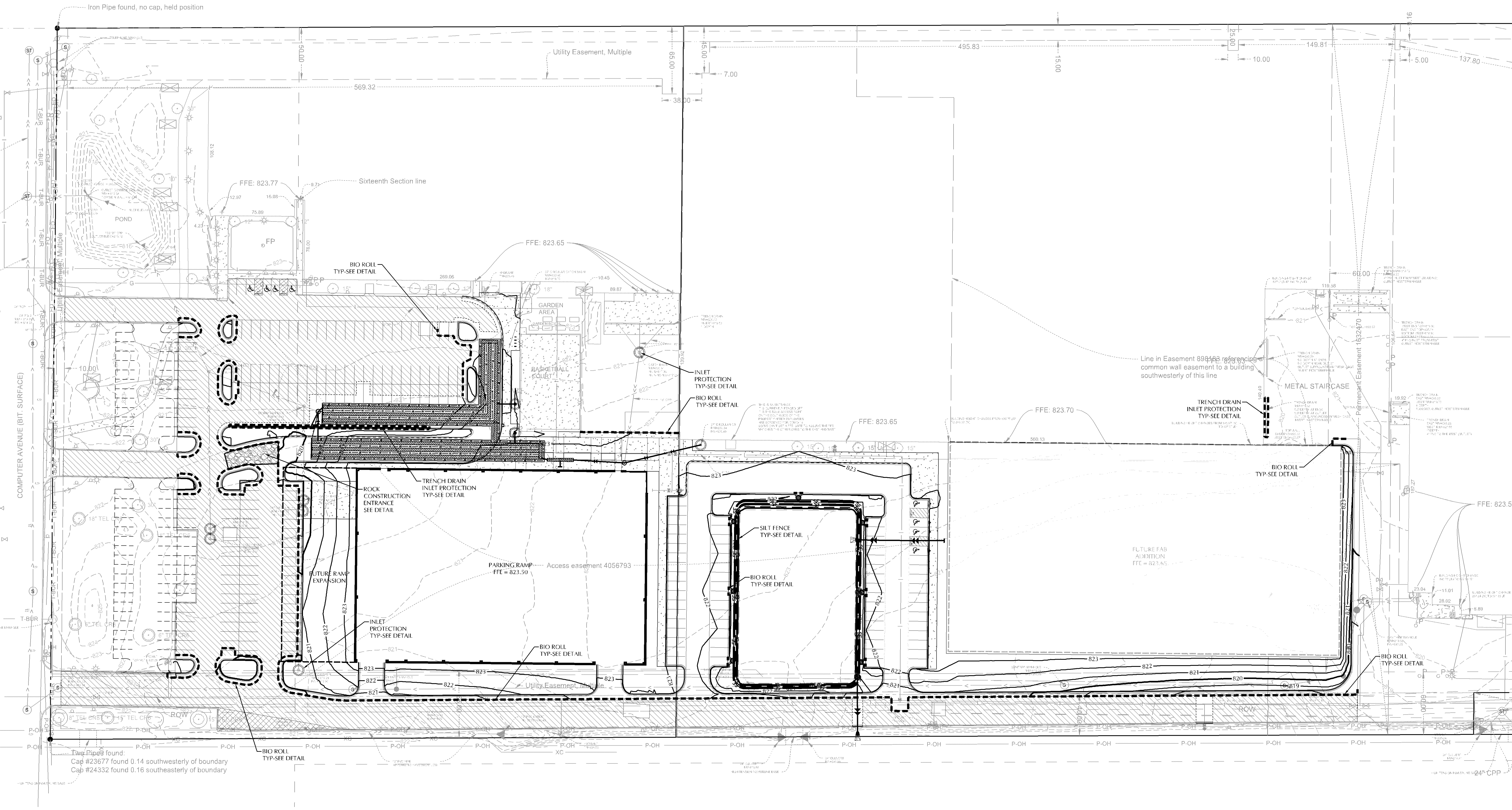
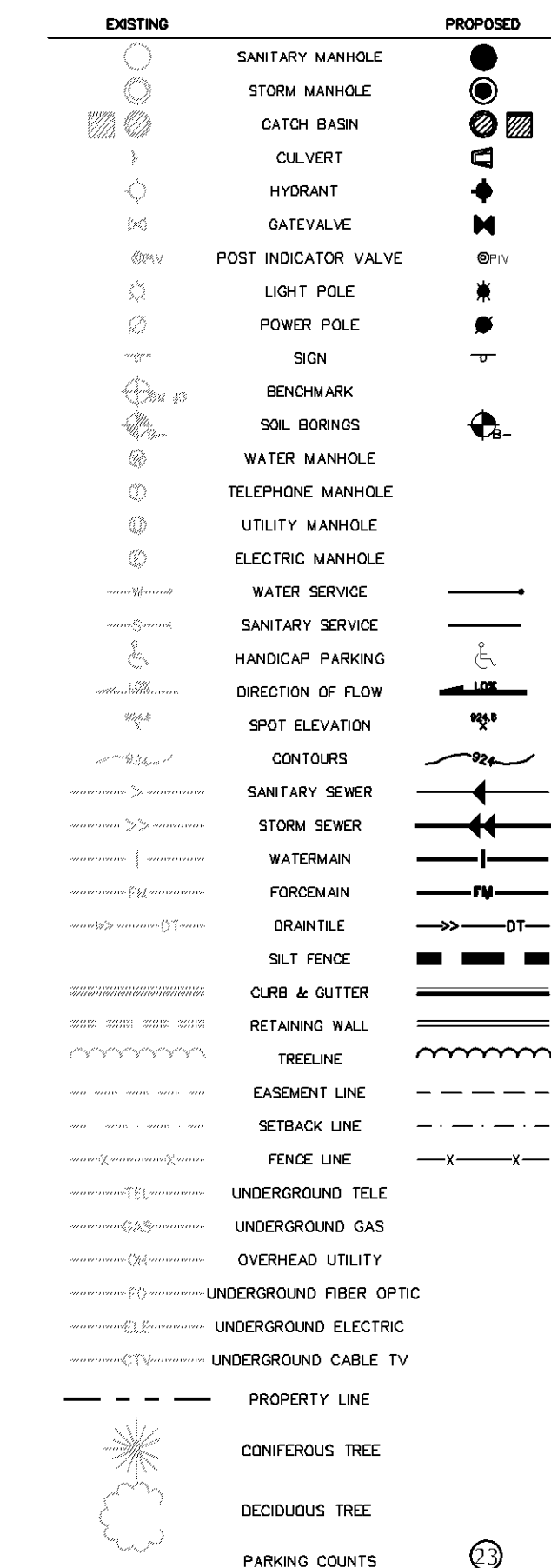


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SWPPP LEGEND



CIVIL LEGEND



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I hereby certify that this plan, specification or report is prepared by me, or under my direct supervision and that I am a duly Licensed Professional Engineer in the State of Minnesota.

Name: David E. Gump, PE

Date: 07-08-2020 Lic./Reg. No. 53706

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Sheet Title: STORM WATER POLLUTION PREVENTION PLAN (SWPPP)

Sheet No.

231.SW

SWPPP NOTES

- THE NATURE OF THIS PROJECT WILL CONSIST OF CONSTRUCTING A PROPOSED PARKING RAMP, SURFACE PAVEMENTS, UNDERGROUND FILTRATION SYSTEM, INFILTRATION BASIN, AND UTILITIES.
- THE INTENDED SEQUENCING OF MAJOR CONSTRUCTION ACTIVITIES ARE AS FOLLOWS:
 - INSTALL VEHICLE TRACKING BMP (SUMMER 2020)
 - INSTALL INLET PROTECTION (SUMMER 2020)
 - INSTALL SILT FENCE AROUND SITE (SUMMER 2020)
 - CLEAR AND GRUB SITE (SUMMER 2020)
 - STRIP AND STOCKPILE TOPSOIL (SUMMER 2020)
 - REMOVE PAVEMENTS AND UTILITIES (SUMMER 2020)
 - ROUGH GRADE SITE (SUMMER 2020)
 - IMPORT CLEAN FILL FOR REPLACEMENT AND BALANCE (SUMMER 2020)
 - INSTALL UTILITIES (SUMMER 2020)
 - IMPORT CLEAN FILL FOR REPLACEMENT AND BALANCE (FALL 2020)
 - INSTALL CURB AND GUTTER (FALL 2020)
 - INSTALL PAVEMENTS AND WALKS (FALL 2020)
 - FINAL GRADE SITE (FALL 2020)
 - REMOVE ACCUMULATED SEDIMENT FROM STORMWATER SYSTEMS (FALL 2020)
 - SEED AND MULCH (FALL 2020)
 - WHEN ALL CONSTRUCTION ACTIVITY IS COMPLETE AND THE SITE IS STABILIZED, REMOVE SILT FENCE, INLET PROTECTION, AND RESEED ANY AREAS DISTURBED BY THE REMOVAL.
- SITE DATA:

DISTURBED AREA:	6.14 AC
FILL AND OVERLAY AREA:	2.04 AC
PRE-CONSTRUCTION IMPERVIOUS AREA:	6.14 AC
POST-CONSTRUCTION IMPERVIOUS AREA:	4.58 AC

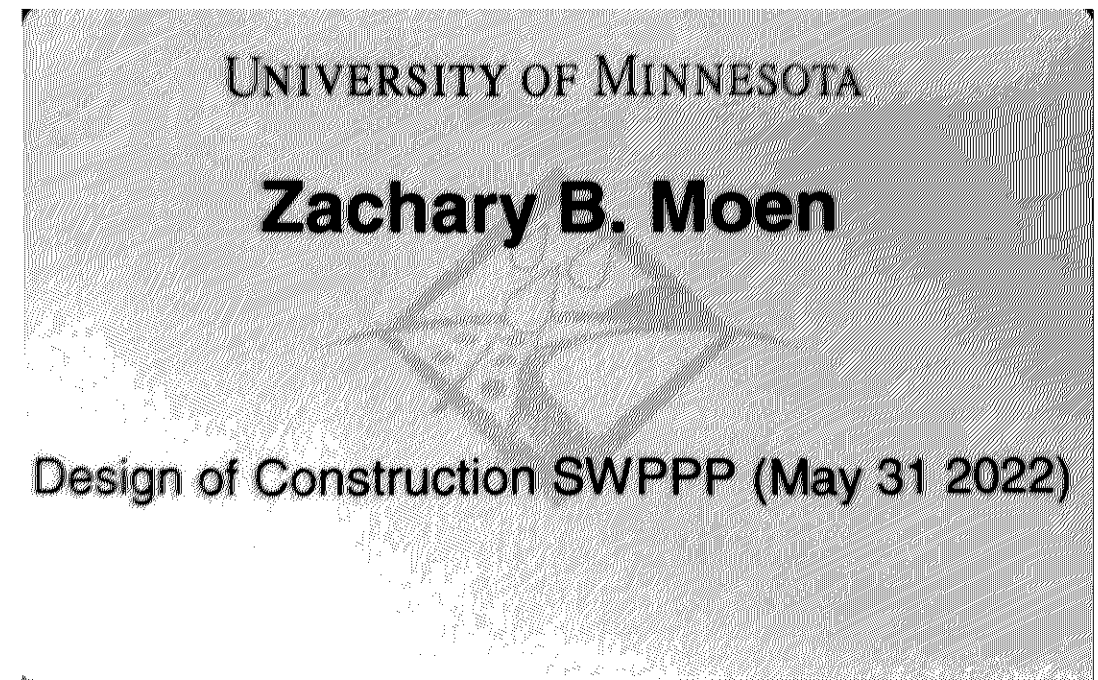
GENERAL SOIL TYPE: SEE PRELIMINARY GEOTECHNICAL SOIL BORINGS BY BRAUN/INTERTEC
HYDROLOGY INFORMATION: SEE HYDROLOGY REPORT PREPARED BY LOUCKS DATED JULY, 2020
- EROSION AND SEDIMENT CONTROLS WERE DESIGNED TO EFFECTIVELY CONTROL STORMWATER RUNOFF WITHIN THE PROJECT AREAS. EROSION AND SEDIMENT CONTROL HAVE BEEN PROPOSED TO MINIMIZE CHANNEL EROSION AND SCOUR IN THE IMMEDIATE VICINITY OF DISCHARGE POINTS. FACTORS THAT WERE CONSIDERED INCLUDE PROPOSED IMPERVIOUS AREAS, SLOPE OF IMPERVIOUS SURFACES, STORMWATER INFRASTRUCTURE DISCHARGE POINTS, AND ANNUAL AVERAGE PRECIPITATION DATA FOR THE PROJECT AREA.

HENNEPIN COUNTY RECEIVES AN AVERAGE OF 32 INCHES OF PRECIPITATION PER YEAR. THE FOLLOWING HENNEPIN COUNTY 24-HOUR STORM EVENTS ARE BASED ON ATLAS 14 RAINFALL DATA:
2-YR 2.86 INCHES
10-YR 4.26 INCHES
100-YR 7.32 INCHES
- SEE "EXHIBIT-PROPOSED DRAINAGE AREAS" FOR SITE MAP WITH DRAINAGE AREA BOUNDARIES.
- THE LOCATION OF AREAS NOT TO BE DISTURBED MUST BE IDENTIFIED WITH FLAGS, STAKES, SIGNS, SILT FENCE, ETC. BEFORE CONSTRUCTION BEGINS.
- CONTRACTOR SHALL INSTALL RAIN GAUGE ON SITE.
- GROUNDWATER EXPECTED TO BE ENCOUNTERED DURING CONSTRUCTION. FOLLOW LOCAL, STATE, AND FEDERAL REGULATIONS FOR GROUNDWATER PUMPING AND OBTAIN ALL NECESSARY PERMITS.
- NO SOIL CONTAMINATION EXPECTED TO BE ENCOUNTERED DURING EXCAVATION.
- ALL DISTURBED GROUND LEFT INACTIVE FOR SEVEN (7) OR MORE DAYS SHALL BE STABILIZED BY SEEDING OR SODDING (ONLY AVAILABLE PRIOR TO SEPTEMBER 15) OR BY MULCHING OR COVERING OR OTHER EQUIVALENT CONTROL MEASURE.
- ON SLOPES 3:1 OR GREATER MAINTAIN SHEET FLOW AND MINIMIZE RILLS AND/OR GULLIES. SLOPE LENGTHS CAN NOT BE GREATER THAN 75 FEET.

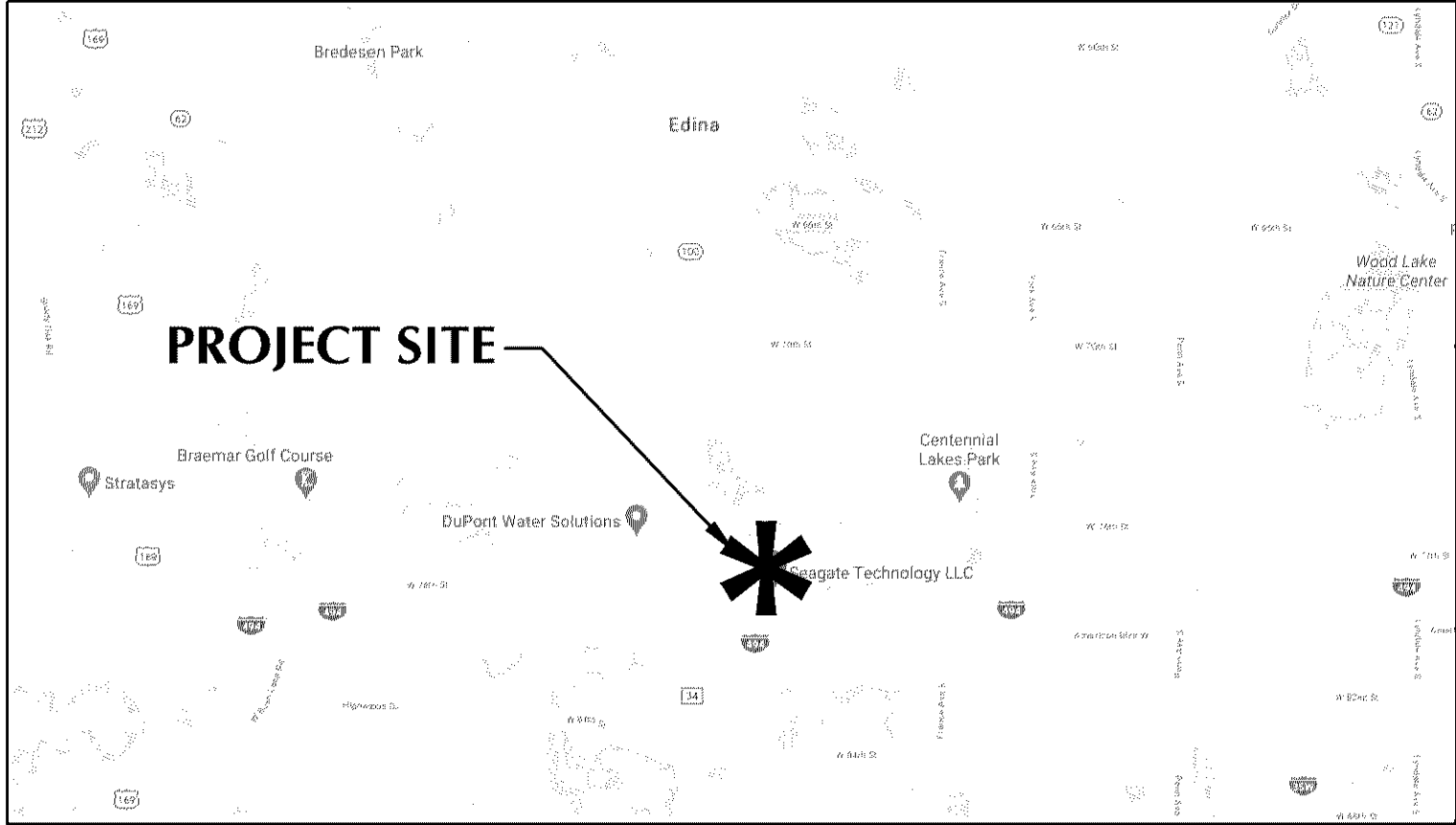
3:1 SLOPE	2.86 INCHES
4:1 SLOPE	4.26 INCHES
5:1 SLOPE	7.32 INCHES
- ALL STORM DRAINS AND INLETS MUST BE PROTECTED UNTIL ALL SOURCES OF POTENTIAL DISCHARGE ARE STABILIZED.
- SOIL COMPACTION SHALL BE MINIMIZED DURING CONSTRUCTION.
- TEMPORARY SOIL STOCKPILES MUST HAVE EFFECTIVE SEDIMENT CONTROL AND CAN NOT BE PLACED IN SURFACE WATERS OR STORM WATER CONVEYANCE SYSTEMS. TEMPORARY STOCKPILES WITHOUT SIGNIFICANT AMOUNT OF SILT, CLAY, OR ORGANIC COMPOUNDS ARE EXEMPT EX-CELSION CLEAN AGGREGATE STOCK PILES, DEMOLITION CONCRETE STOCKPILES, SAND STOCKPILES.
- SEDIMENT CONTROL PRACTICES SHALL BE INSTALLED ON ALL DOWNGRADE PERIMETERS AND UPGRADE OF ANY BUFFER ZONES.
- SEDIMENT LADEN WATER MUST BE DISCHARGED TO A SEDIMENTATION BASIN WHENEVER POSSIBLE. IF NOT POSSIBLE, IT MUST BE TREATED WITH THE APPROPRIATE BMP'S.
- SOLID WASTE MUST BE DISPOSED OF PROPERLY AND MUST COMPLY WITH MPCA DISPOSAL REQUIREMENTS.
- NO VEHICLE WASHING ALLOWED ON SITE.

ESTIMATED QUANTITIES

DESCRIPTION	UNIT	QUANTITY
TEMPORARY ROCK CONSTRUCTION ENTRANCE	EA	1
PREFABRICATED CONCRETE WASHOUT	EA	-
SILT FENCE (STANDARD)	LF	1,140
EROSION CONTROL BLANKET	SY	-
INLET PROTECTION	EA	9
TRENCH DRAIN INLET PROTECTION	EA	2
BIO-ROLL	LF	2,345



SITE VICINITY MAP



CASE #PL2020-112

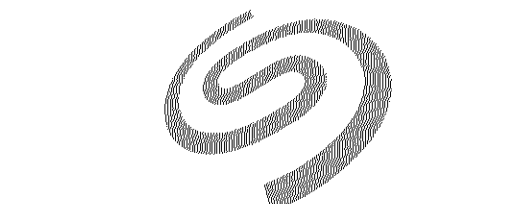
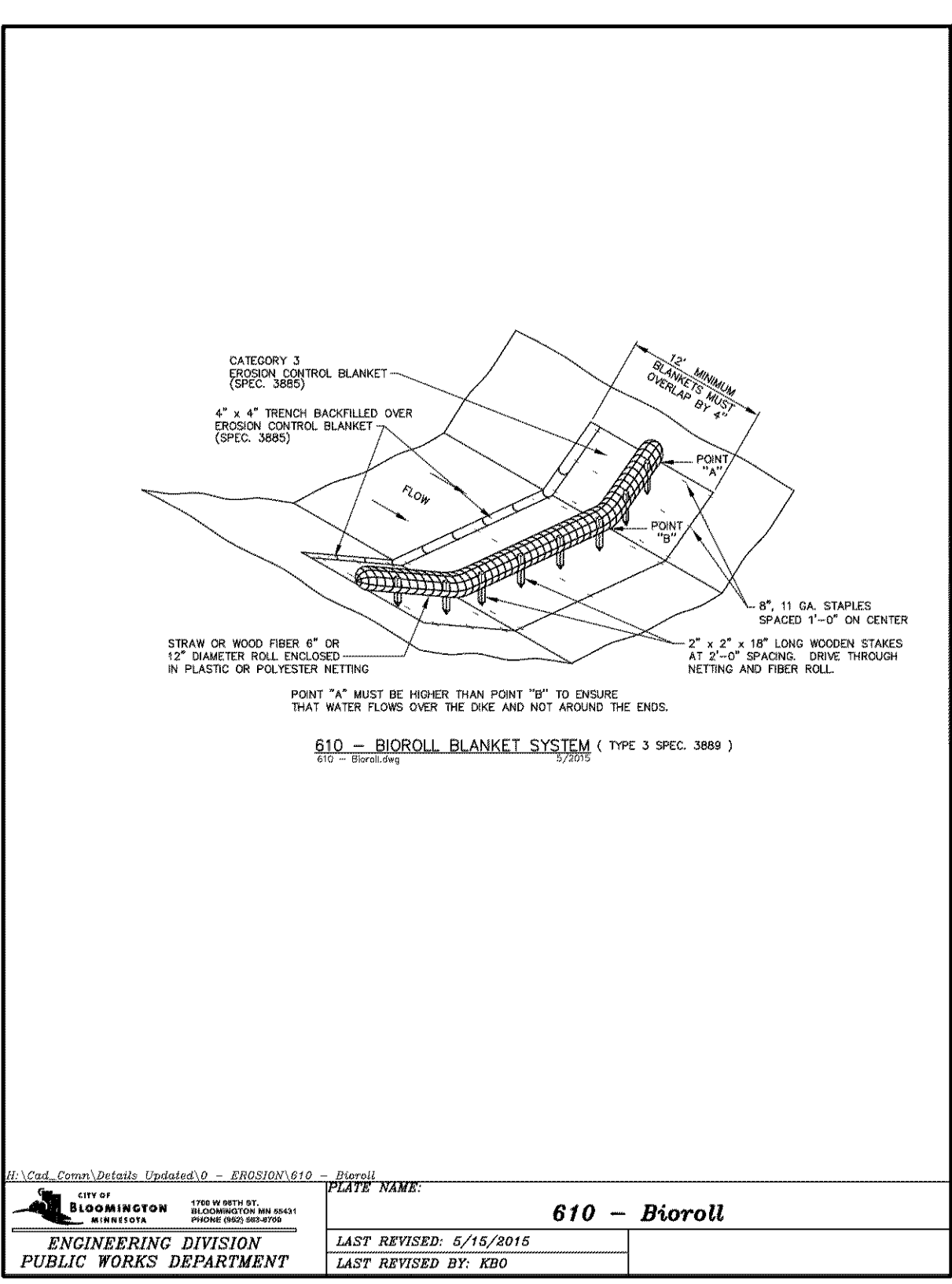
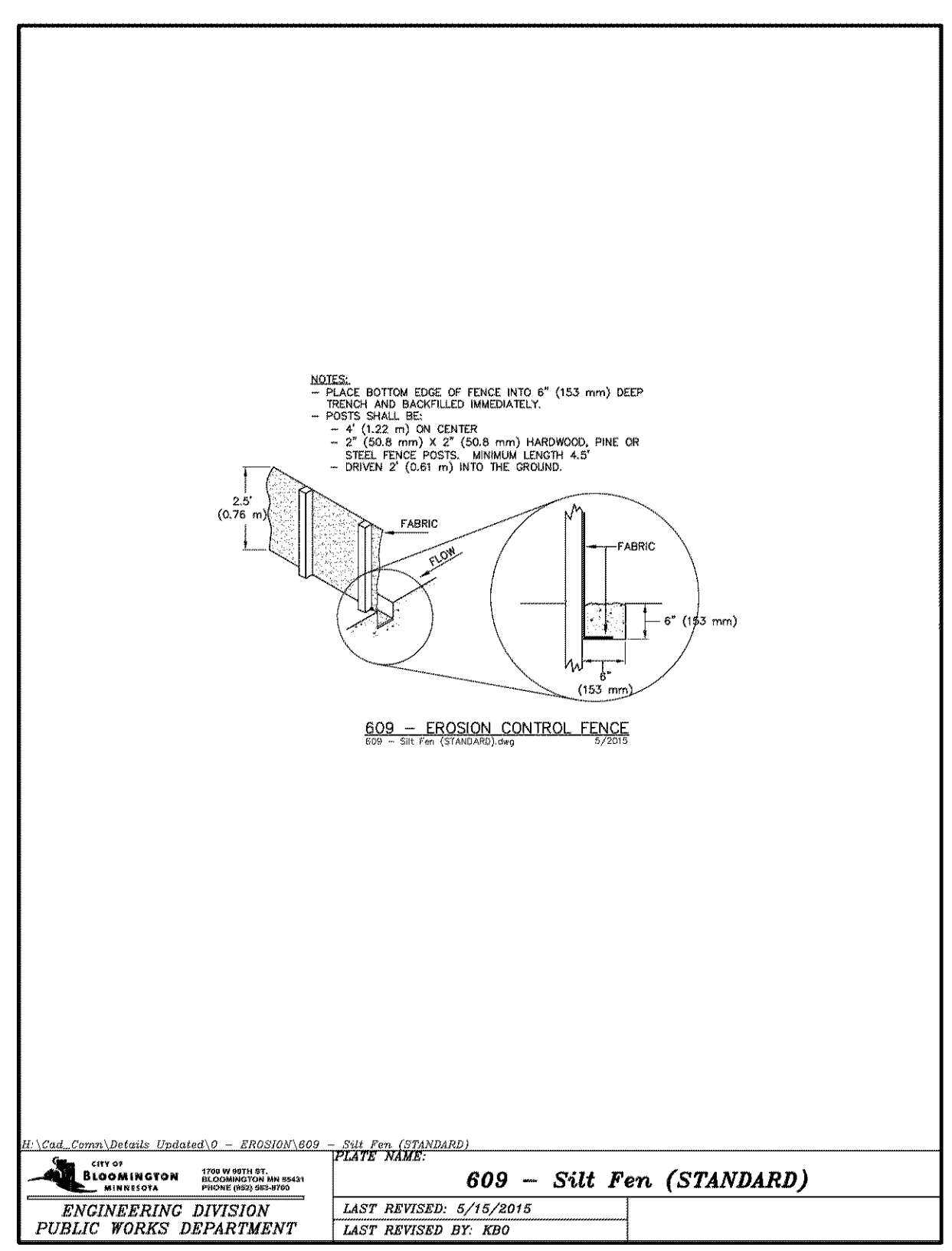
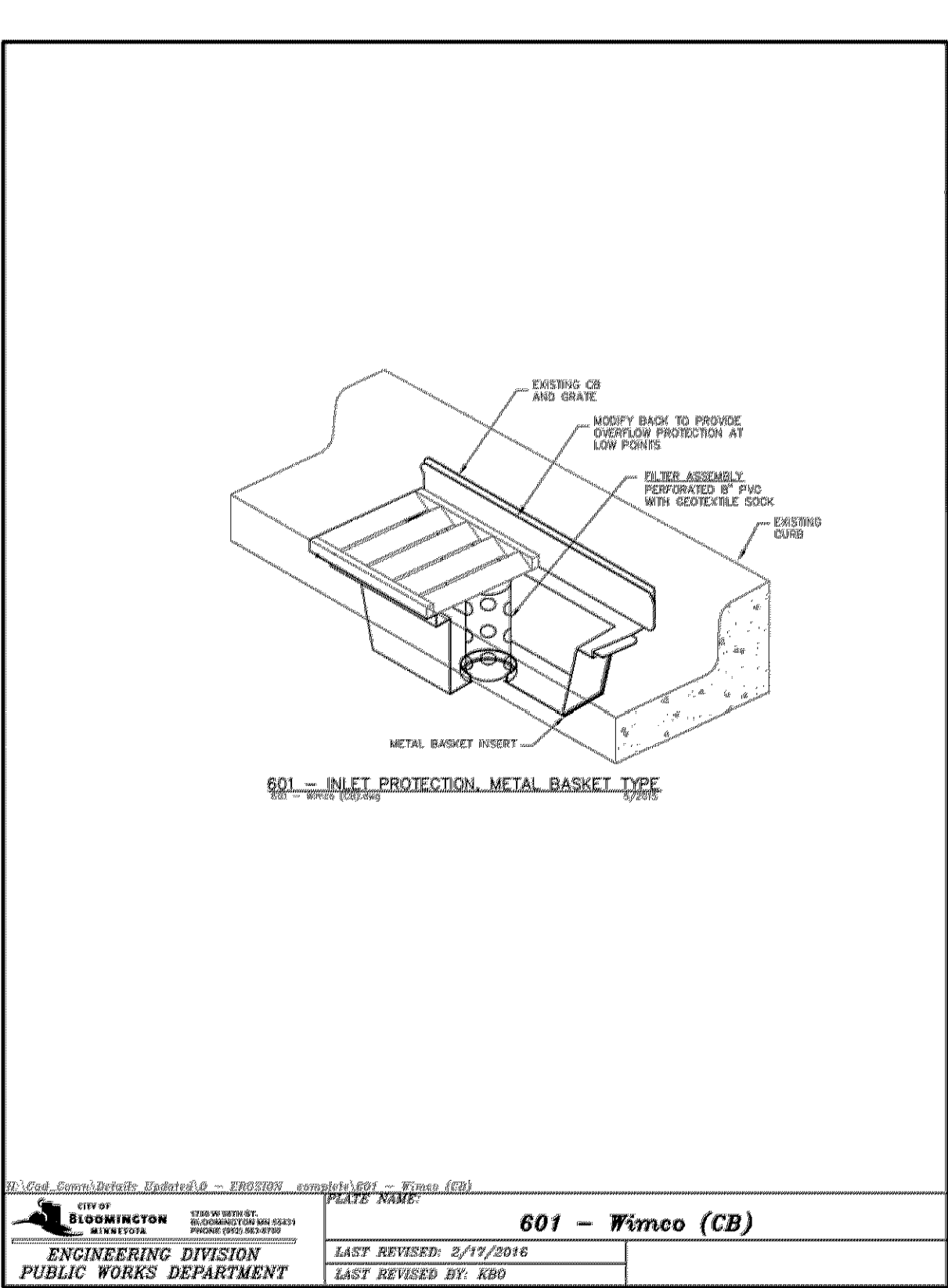
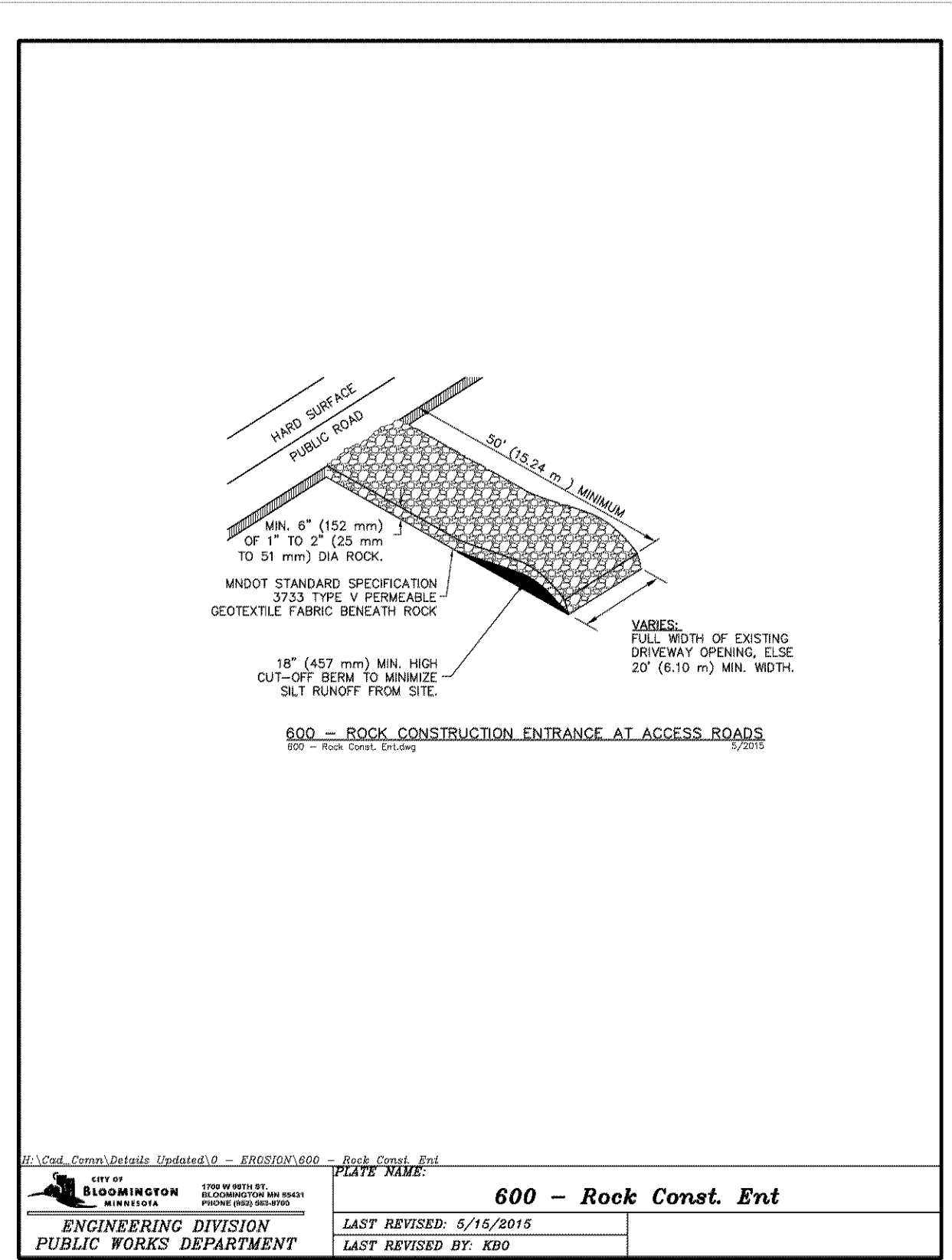
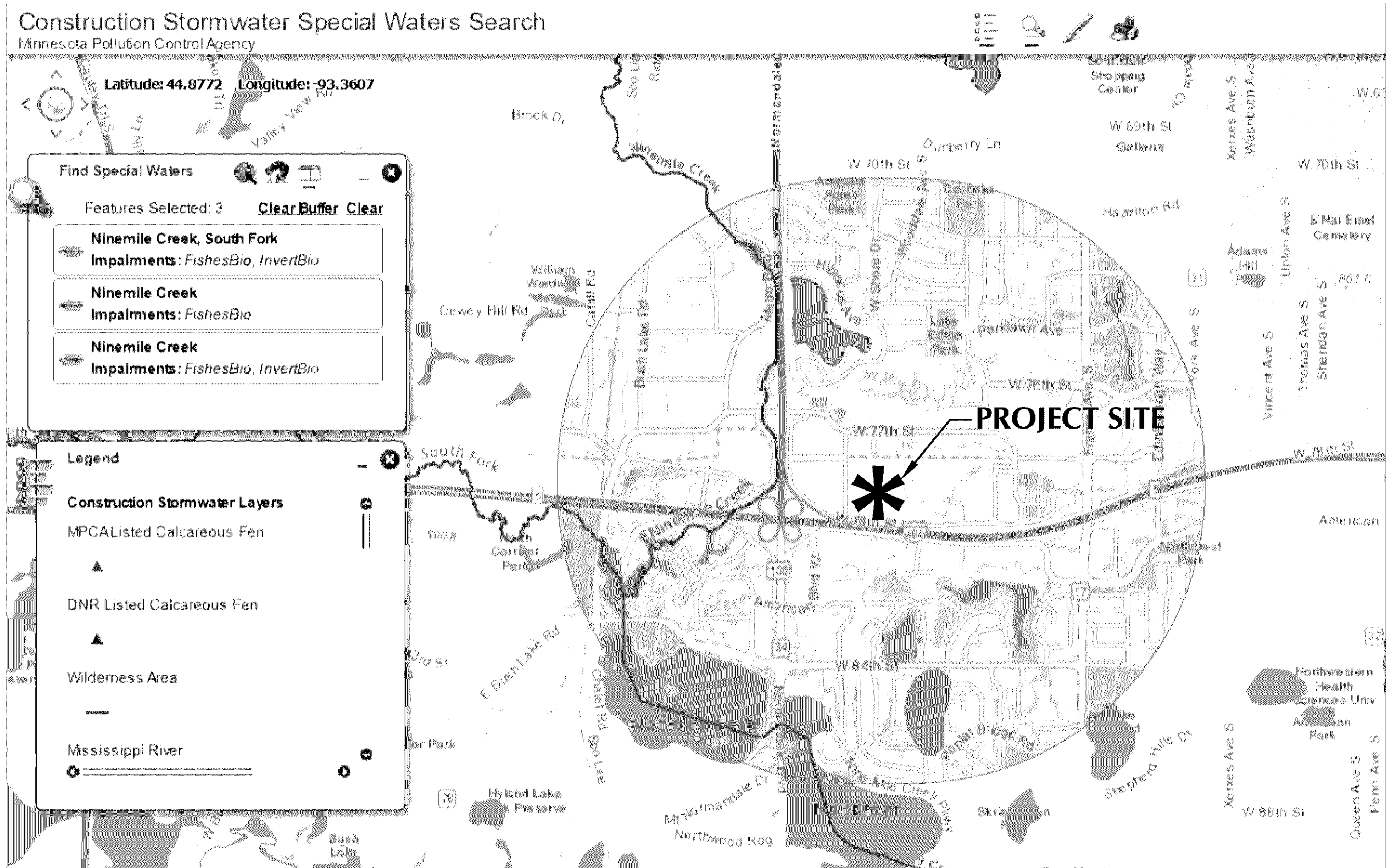
- NO ENGINE DEGREASING IS ALLOWED ON SITE.
- THE OWNER IS RESPONSIBLE FOR COMPLIANCE WITH ALL TERMS AND CONDITIONS OF THE PERMIT. THE OPERATOR IS RESPONSIBLE FOR COMPLIANCE WITH SECTIONS 3, 4, 6, 22, 24 AND APPLICABLE REQUIREMENTS FOR CONSTRUCTION ACTIVITY IN SECTION 23.
- TERMINATION OF COVERAGE PERMITS(S) WISHING TO TERMINATE COVERAGE MUST SUBMIT A NOTICE OF TERMINATION (NOT) TO THE MPCA. ALL PERMITS(S) MUST SUBMIT A NOT WITHIN 30 DAYS AFTER THE FOLLOWING CONDITIONS HAVE BEEN MET:
 - PERMIT TERMINATION CONDITIONS, PER NPDES PERMIT SECTION 13.1 HAVE BEEN ACHIEVED ON ALL PORTIONS OF THE SITE FOR WHICH THE PERMITTEE IS RESPONSIBLE.
 - PERMANENT UNIFORM PERENNIAL VEGETATIVE COVER MUST BE ESTABLISHED AT 70% DENSITY OR ITS EXPECTED FINAL GROWTH.
 - THE PERMANENT STORMWATER TREATMENT SYSTEM IS CONSTRUCTED, MEETS ALL REQUIREMENTS, AND IS OPERATING AS DESIGNED.
 - ALL TEMPORARY SYNTHETIC EROSION PREVENTION AND SEDIMENT CONTROL BMP'S MUST BE REMOVED.
 - CLEAN OUT SEDIMENT FROM CONVEYANCE SYSTEMS AND PERMANENT STORMWATER TREATMENT SYSTEMS (RETURN TO DESIGN CAPACITY).
- INSPECTIONS
 - INITIAL INSPECTION FOLLOWING SILT FENCE INSTALLATION BY CITY REPRESENTATIVE IS REQUIRED.
 - EXPOSED SOIL AREAS: ONCE EVERY 7 DAYS AND WITHIN 24 HOURS FOLLOWING A 0.5" OVER 24 HOUR RAIN EVENT.
 - STABILIZED AREAS: ONCE EVERY 30 DAYS
 - FROZEN GROUND: AS SOON AS RUNOFF OCCURS OR PRIOR TO RESUMING CONSTRUCTION.
 - INSPECTION AND MAINTENANCE RECORDS MUST BE RETAINED FOR 3 YEARS AFTER FILING OF THE NOTICE OF TERMINATION AND MUST INCLUDE: DATE AND TIME OF ACTION, NAME OF PERSON(S) CONDUCTING WORK, FINDING OF INSPECTIONS AND RECOMMENDATIONS FOR CORRECTIVE ACTION, DATE AND AMOUNT OF RAINFALL EVENTS GREATER THAN 0.5 INCHES IN A 24 HOUR PERIOD.
 - OBSERVE ANY DISCHARGE OCCURRING ONSITE AND DOCUMENT CORRECTIVE ACTIONS TAKEN. DISCHARGE SHOULD BE DESCRIBED AND PHOTOGRAPHED.
- MINIMUM MAINTENANCE
 - ALL NONFUNCTIONAL BMP'S MUST BE REPAIRED, REPLACED, OR SUPPLEMENTED WITH FUNCTIONAL BMP'S BY THE END OF THE NEXT BUSINESS DAY AFTER DISCOVERY OR AS SOON AS FIELD CONDITIONS ALLOW.
 - REPAIR, REPLACE, OR SUPPLEMENT ALL PERIMETER CONTROL DEVICES WHEN THEY BECOME NONFUNCTIONAL OR THE SEDIMENT REACHES THE HEIGHT OF THE DEVICE.
 - SEDIMENT BASINS DRAINED AND SEDIMENT REMOVED WHEN REACHES 1/2 STORAGE VOLUME.
 - SEDIMENT REMOVED FROM SURFACE WATERS WITHIN (7) SEVEN CALENDAR DAYS OF DISCOVERY.
 - CONSTRUCTION SITE EXITS INSPECTED, TRACKED SEDIMENT REMOVED WITHIN (1) ONE CALENDAR DAY.
 - PROVIDE COPIES OF EROSION INSPECTION RESULTS TO CITY ENGINEER FOR ALL EVENTS GREATER THAN 1/2" IN 24 HOURS.
- THE SWPPP, INCLUDING ALL CHANGES TO IT, AND INSPECTIONS AND MAINTENANCE RECORDS MUST BE KEPT AT THE SITE DURING CONSTRUCTION ACTIVITY BY THE PERMITTEE(S) WHO HAVE OPERATIONAL CONTROL OF THE SITE.
- OWNER MUST KEEP RECORDS OF ALL PERMITS REQUIRED FOR THE PROJECT, THE SWPPP, ALL INSPECTIONS AND MAINTENANCE, PERMANENT OPERATION AND MAINTENANCE AGREEMENTS, AND REQUIRED CALCULATIONS FOR TEMPORARY AND PERMANENT STORMWATER MANAGEMENT SYSTEMS. THESE RECORDS MUST BE RETAINED FOR THREE YEARS AFTER FILING NPDES NOTICE OF TERMINATION.
- SWPPP MUST BE AMENDED WHEN:
 - THERE IS A CHANGE IN DESIGN, OPERATION, MAINTENANCE, WEATHER OR SEASONAL CONDITIONS THAT HAS A SIGNIFICANT EFFECT ON DISCHARGE.
 - INSPECTIONS INDICATE THAT THE SWPPP IS NOT EFFECTIVE AND DISCHARGE IS EXCEEDING WATER QUALITY STANDARDS.
 - THE BMP'S IN THE SWPPP ARE NOT CONTROLLING POLLUTANTS IN DISCHARGES OR IS NOT CONSISTENT WITH THE TERMS AND CONDITIONS OF THE PERMIT.
- CONCRETE WASHOUT AREA
 - CONCRETE WASH-OUT SITES NOT ALLOWED ON SITE AND MUST BE CONTAINED ON TRUCKS.
 - ALL SPILLS SHALL BE CLEANED UP IMMEDIATELY.
- IN THE EVENT OF ENCOUNTERING A WELL OR SPRING DURING CONSTRUCTION CONTRACTOR TO CEASE CONSTRUCTION ACTIVITY AND NOTIFY ENGINEER.
- PIPE OUTLETS MUST BE PROVIDED WITH TEMPORARY OR PERMANENT ENERGY DISSIPATION WITHIN 24 HOURS AFTER CONNECTION TO A SURFACE WATER.
- FINAL STABILIZATION

FINAL STABILIZATION REQUIRES THAT ALL SOIL DISTURBING ACTIVITIES HAVE BEEN COMPLETED AND THAT DISTURBED AREAS ARE STABILIZED BY A UNIFORM PERENNIAL VEGETATIVE COVER WITH 70% OF THE EXPECTED FINAL DENSITY, AND THAT ALL PERMANENT PAVEMENTS HAVE BEEN INSTALLED. ALL TEMPORARY BMP'S SHALL BE REMOVED, DITCHES STABILIZED, AND SEDIMENT SHALL BE REMOVED FROM PERMANENT CONVEYANCES AND SEDIMENTATION BASINS IN ORDER TO RETURN THE POND TO DESIGN CAPACITY.
- RESPONSIBILITIES
 - THE OWNER MUST IDENTIFY A PERSON WHO WILL OVERSEE THE SWPPP IMPLEMENTATION AND THE PERSON RESPONSIBLE FOR INSPECTION AND MAINTENANCE:

CONTACT:
COMPANY:
PHONE:
 - THE OWNER MUST IDENTIFY THE A PERSON WHO WILL BE RESPONSIBLE FOR LONG TERM OPERATIONS AND MAINTENANCE OF THE PERMANENT STORMWATER MANAGEMENT SYSTEM:

CONTACT:
COMPANY:
PHONE:
- THE WATERSHED DISTRICT OR THE CITY MAY HAVE REQUIREMENTS FOR INSPECTIONS OR AS-BUILT DRAWINGS VERIFYING PROPER CONSTRUCTION OF THE BMP'S.
- EROSION CONTROL DEVICES CANNOT BE REMOVED UNTIL THE WATERSHED DISTRICT HAS DETERMINED THE SITE HAS BEEN PERMANENTLY RESTABILIZED AND SHALL BE REMOVED WITHIN 30 DAYS THEREAFTER.

CONSTRUCTION STORMWATER SPECIAL WATERS SEARCH MAP



MINNESOTA CAMPUS PARKING RAMP

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I hereby certify that this plan, specification 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.

Name: Kevin M. Grogan, PE
Date: 07-08-2020 Lic./Reg. No: 53706

Issued For:

Item: Date:
CITY SUBMITTAL 07-08-2020

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SWPPP NOTES AND DETAILS

Sheet No.

232.SW



WARNING:
THE CONTRACTOR SHALL BE RESPONSIBLE FOR CALLING FOR LOCATIONS OF ALL EXISTING UTILITIES. THEY SHALL COOPERATE WITH ALL UTILITY COMPANIES IN MAINTAINING THEIR SERVICE AND / OR RELOCATION OF LINES.
THE CONTRACTOR SHALL CONTACT GOPHER STATE ONE CALL AT 651-454-0902 AT LEAST 48 HOURS IN ADVANCE FOR THE LOCATIONS OF ALL UNDERGROUND UTILITIES. LOCATIONS OF EXISTING UTILITIES, VALVES, OR OTHER BURIED STRUCTURES BEFORE DIGGING. THE CONTRACTOR SHALL REPAIR OR REPLACE THE ABOVE WHEN DAMAGED DURING CONSTRUCTION AT NO COST TO THE OWNER.

CASE #PL2020-112

UTILITY NOTES

1. ALL SANITARY SEWER, STORM SEWER AND WATERMAIN UTILITIES SHALL BE FURNISHED AND INSTALLED PER THE REQUIREMENTS OF THE SPECIFICATIONS, THE MINNESOTA PLUMBING CODE, THE LOCAL GOVERNING UNIT, AND THE STANDARD UTILITIES SPECIFICATION OF THE CITY ENGINEERS ASSOCIATION OF MINNESOTA (CEAM), 2018 EDITION.
2. ALL UTILITY PIPE BEDDING SHALL BE COMPACTED SAND OR FINE GRANULAR MATERIAL. ALL COMPACTION SHALL BE PERFORMED PER THE REQUIREMENTS OF THE CEAM SPECIFICATION AND THE GEOTECHNICAL REPORT.
3. ALL CONNECTIONS TO EXISTING UTILITIES SHALL BE PERFORMED PER THE REQUIREMENTS OF THE STATE AND LOCAL JURISDICTIONS, THE CITY DEPARTMENT OF ENGINEERING AND BUILDING INSPECTIONS DEPARTMENT AND THE CONSTRUCTION ENGINEER MUST BE NOTIFIED AT LEAST 48 HOURS PRIOR TO ANY WORK WITHIN THE PUBLIC RIGHT OF WAY, OR WORK IMPACTING PUBLIC UTILITIES.
4. ALL STORM SEWER, SANITARY SEWER AND WATER SERVICES SHALL TERMINATE 5' FROM THE BUILDING FACE UNLESS OTHERWISE NOTED.
5. A MINIMUM OF 18 INCHES OF VERTICAL SEPARATION AND 10 FEET OF HORIZONTAL SEPARATION IS REQUIRED BETWEEN WATERMAIN AND ALL UTILITIES UNLESS OTHERWISE NOTED.
6. ALL NEW WATERMAIN AND SERVICES MUST HAVE A MINIMUM OF 8.0 FEET OF COVER. EXTRA DEPTH MAY BE REQUIRED TO MAINTAIN A MINIMUM 18" VERTICAL SEPARATION TO SANITARY OR STORM SEWER LINES. THE CONTRACTOR SHALL FIELD ADJUST WATERMAIN TO AVOID CONFLICTS WITH SANITARY SEWER, STORM SEWER, AND SERVICES AS REQUIRED. INSULATION OF WATER AND SANITARY SEWER LINES SHALL BE PROVIDED WHERE 6.0 FEET MINIMUM DEPTH CAN NOT BE ATTAINED.
7. ALL FIRE HYDRANTS SHALL BE LOCATED 3 FEET BEHIND BACK OF CURB OR EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.
8. PROPOSED PIPE MATERIALS:

WATERMAIN	DIP CL 52	6" TO 8" DIAMETER
SANITARY SEWER	PVC SDR 35	6" TO 10" DIAMETER
STORM SEWER	DUAL WALL HDPE	10" TO 18" DIAMETER
	PVC SCH 40	8" TO 12" DIAMETER
	RCP	24" DIAMETER
	PERFORATED PVC DRAIN TILE	6" DIAMETER
9. CONTRACTOR TO SUBMIT SHOP DRAWINGS OF UNDERGROUND STORMWATER SYSTEM FOR ENGINEER'S REVIEW.
10. ALL PORTIONS OF THE STORM SEWER SYSTEM, INCLUDING CATCH BASINS, LOCATED WITHIN 10 FEET OF THE BUILDING OR WATER SERVICE LINE MUST BE TESTED ACCORDANCE WITH MINNESOTA RULES, PART 4714.
11. ALL JOINTS AND CONNECTIONS IN THE STORM SEWER SYSTEM SHALL BE CAST-IRON OR WATER-TIGHT (SEE MINNESOTA RULES, PART 4714). APPROVED RESILIENT RUBBER JOINTS MUST BE USED TO MAKE WATER-TIGHT CONNECTIONS TO MANHOLES, CATCH BASINS, AND OTHER STRUCTURES.
12. HIGH-DENSITY POLYETHYLENE (HDPE) STORM DRAINS MUST COMPLY WITH MINNESOTA RULES, PART 4714:
 - a. PIPES 4-INCH TO 10-INCH IN SIZE MUST COMPLY WITH ASTM M252.
 - b. PIPES 12-INCH TO 60-INCH IN SIZE MUST COMPLY WITH ASTM F2306.
 - c. ALL FITTINGS MUST COMPLY WITH ASTM D3212.
 - d. WATER-TIGHT JOINTS MUST BE USED AT ALL CONNECTIONS INCLUDING STRUCTURES.

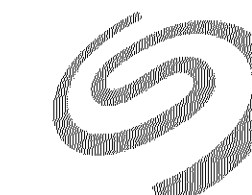


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Date: 07-08-2020 Lic./Reg. No. 53706

Issued For:

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Sheet Title:

UTILITY PLAN
SANITARY SEWER & WATERMAIN

Sheet No.:

240.CU



CALL BEFORE YOU DIG
Gopher State One Call
TWIN CITY AREA: 651-454-0002
TOLL FREE: 1-800-252-1168

WARNING:

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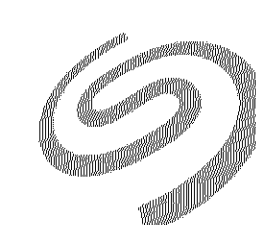


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Date: 07-08-2020 Lic./Reg. No: 53706

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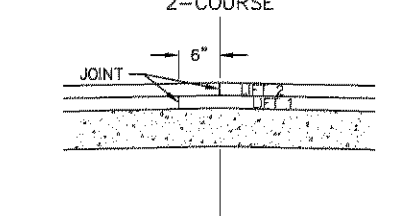
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UTILITY PLAN
STORM SEWER

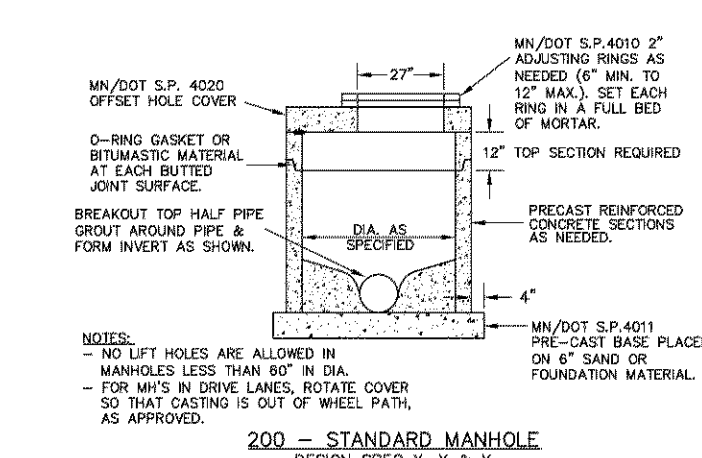
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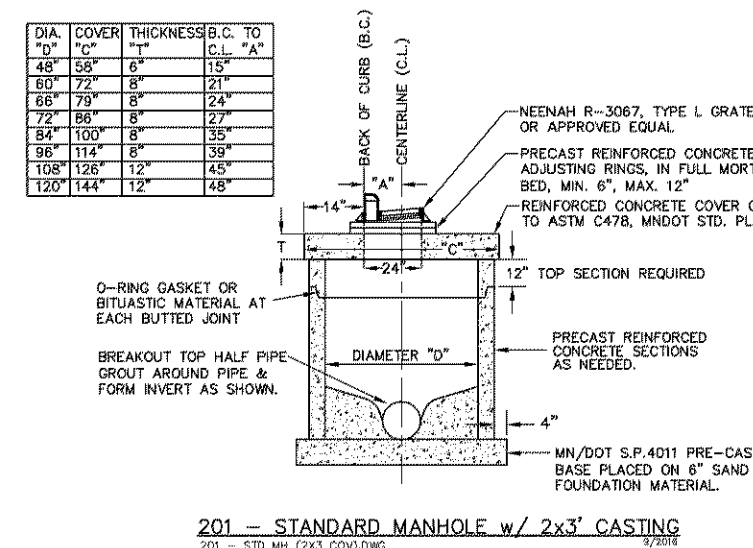
LONGITUDINAL JOINT DETAIL



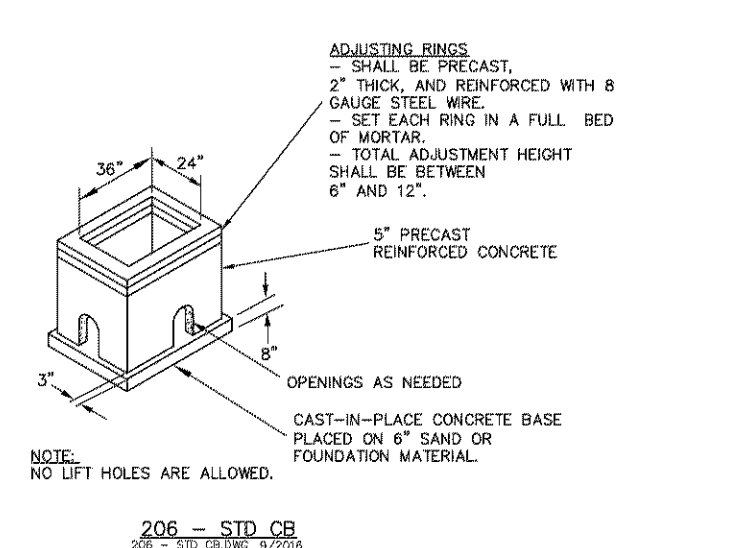
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 LAST REVISED: 6/15/2015
 LAST REVISED BY: KBO
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 PUBLIC WORKS DEPARTMENT



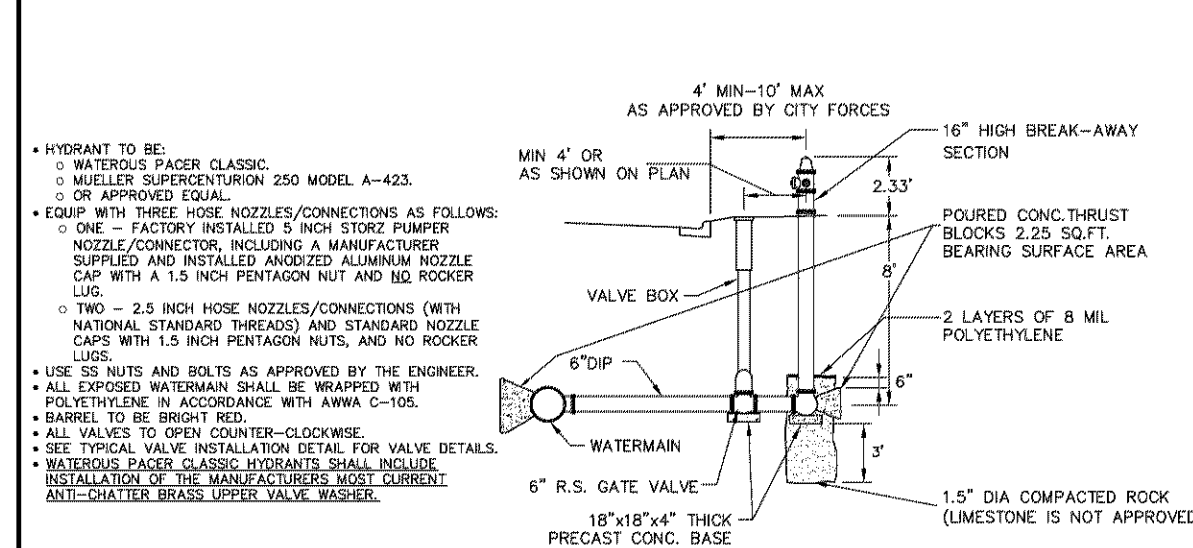
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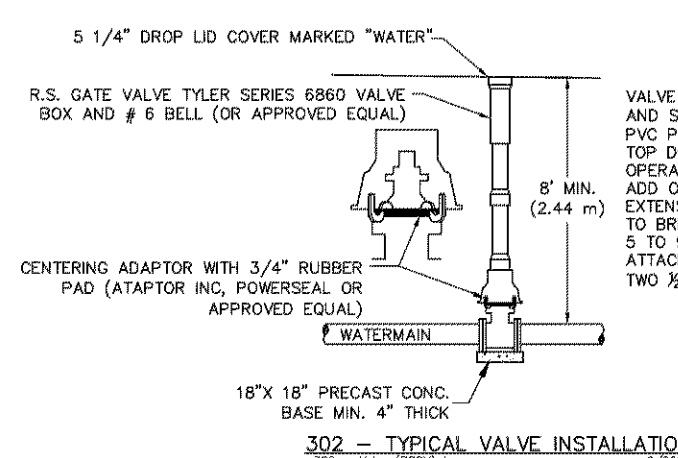
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 LAST REVISED BY: KBO
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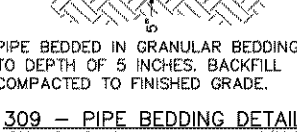
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 LAST REVISED BY: KBO
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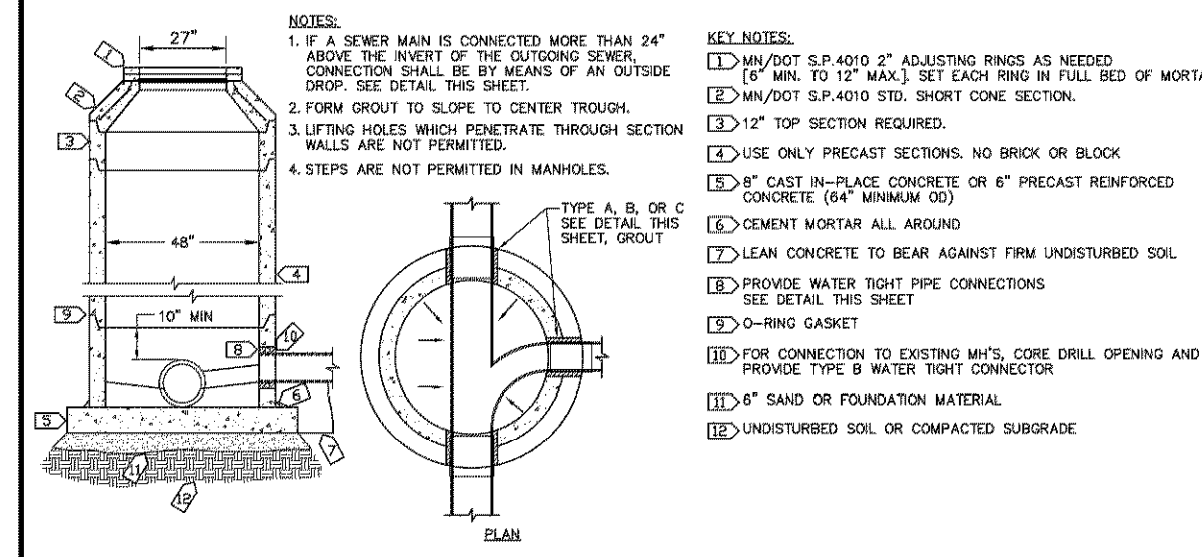
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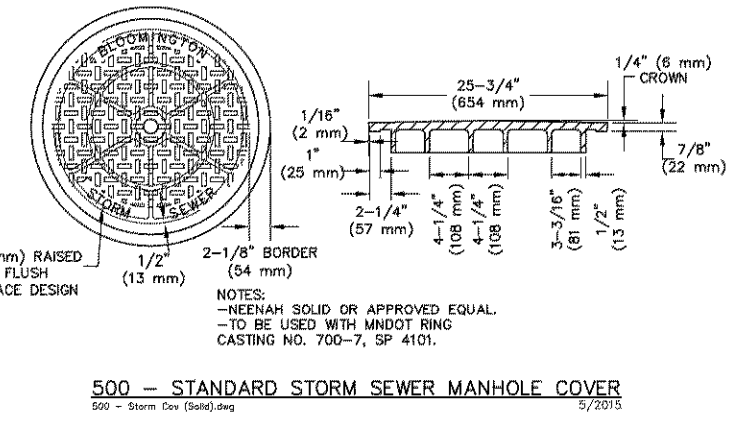
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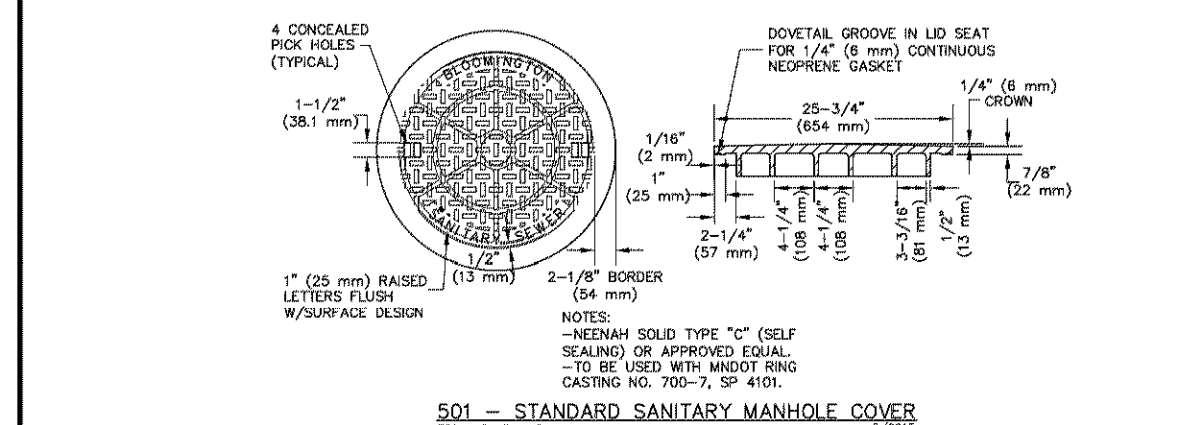
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 LAST REVISED BY: KBO
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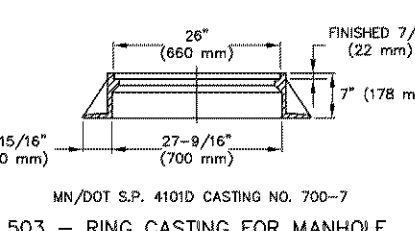
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 LAST REVISED BY: KBO
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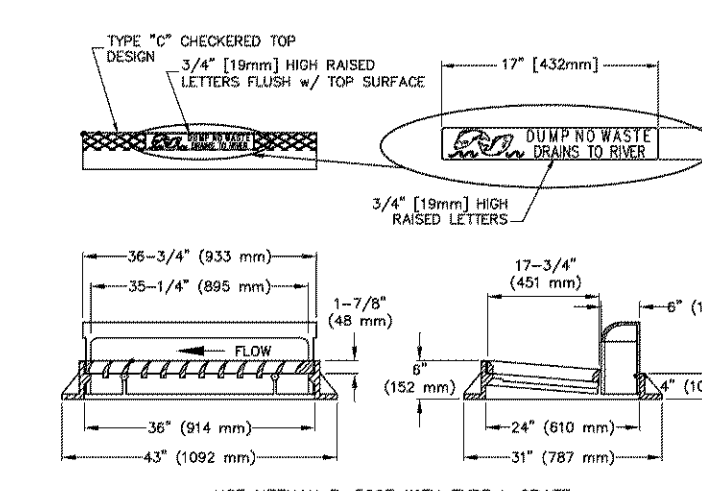
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 LAST REVISED: 6/15/2015
 LAST REVISED BY: KBO
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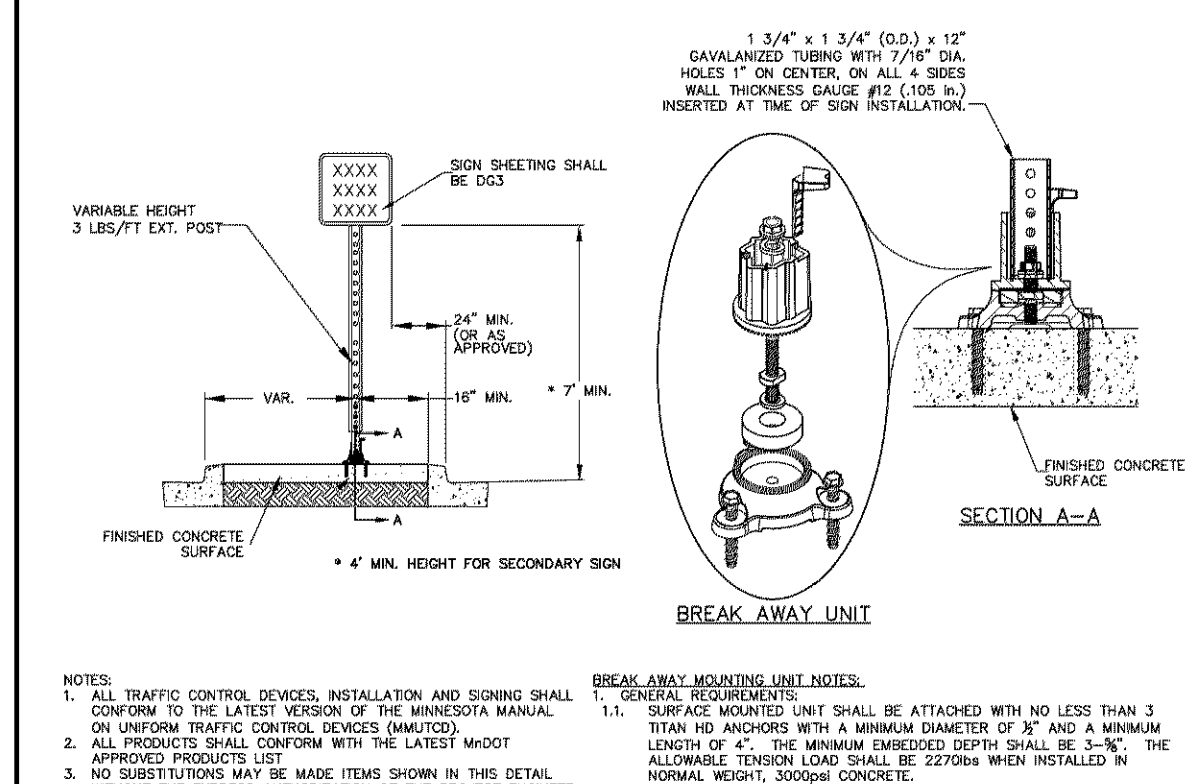
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PLATE NAME: 501 - Sanitary Cov
 LAST REVISED: 6/15/2015
 LAST REVISED BY: KBO
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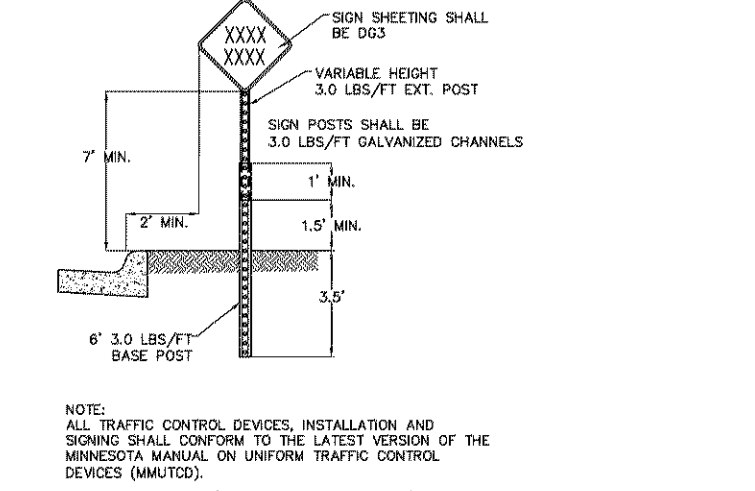
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 LAST REVISED: 6/15/2015
 LAST REVISED BY: KBO
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 LAST REVISED BY: KBO
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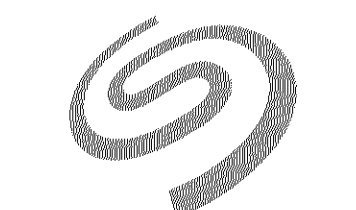


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PLATE NAME: 700 - Sign (Conc. Mounted)
 LAST REVISED: 6/27/2018
 LAST REVISED BY: KBO
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W:\City-Data\Details\Update\PL - 2020\PL2020-112 - 2020\PL2020-112.dwg
PLATE NAME: 701 - Sign (Ground Mounted)
 LAST REVISED: 6/16/2015
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Provide thrust block detail, see City website



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I hereby certify that this plan, specification 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.

Name: Victor E. Camp, P.E.

Date: 07-08-2020 Lic./Reg. No.: 53706

Issued For:

Item: Date:

CITY SUBMITTAL: 07-08-2020

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Comm. No.: 3.2020095.00

Drawn: TDG/ZBM/MDG

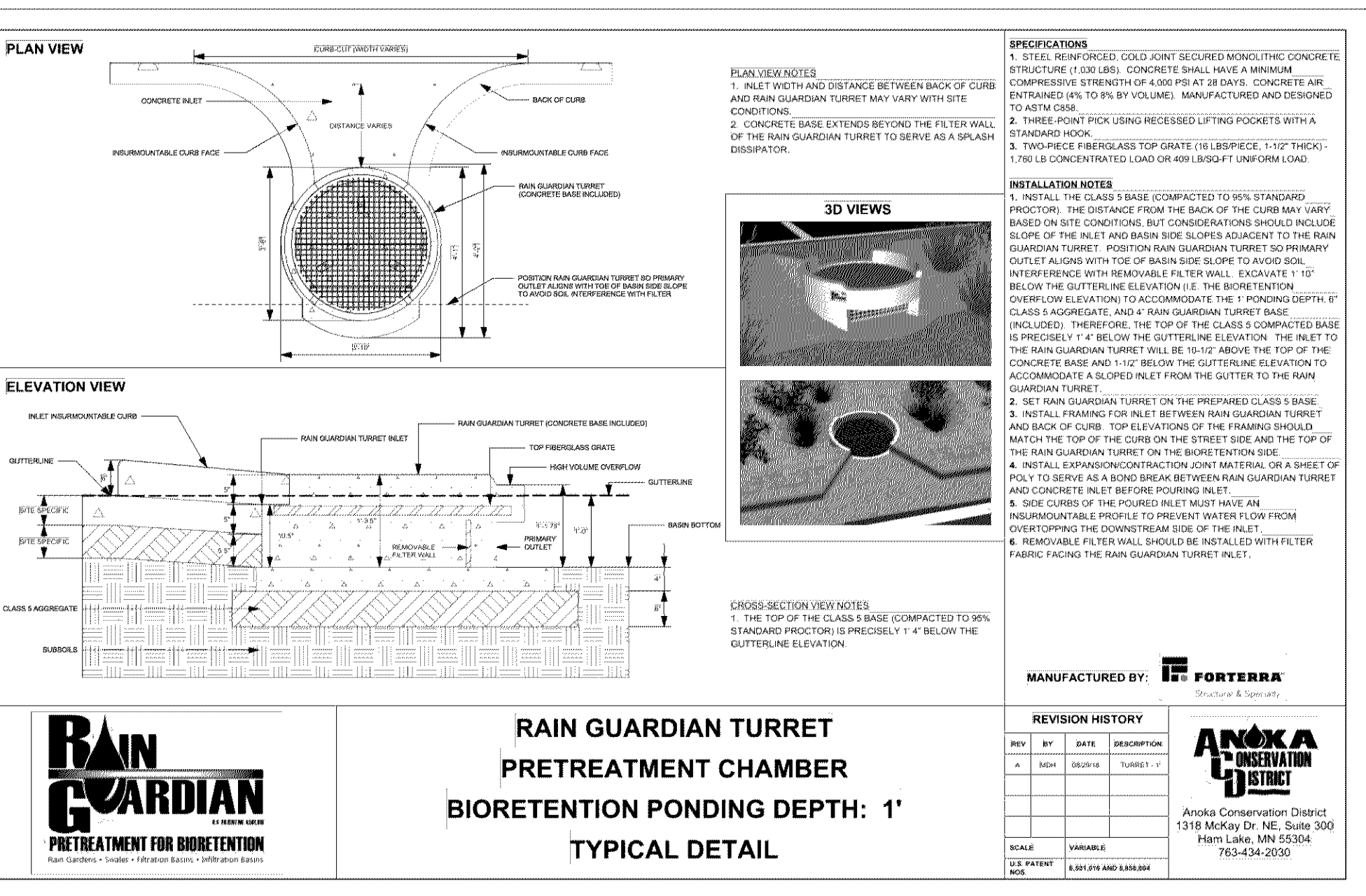
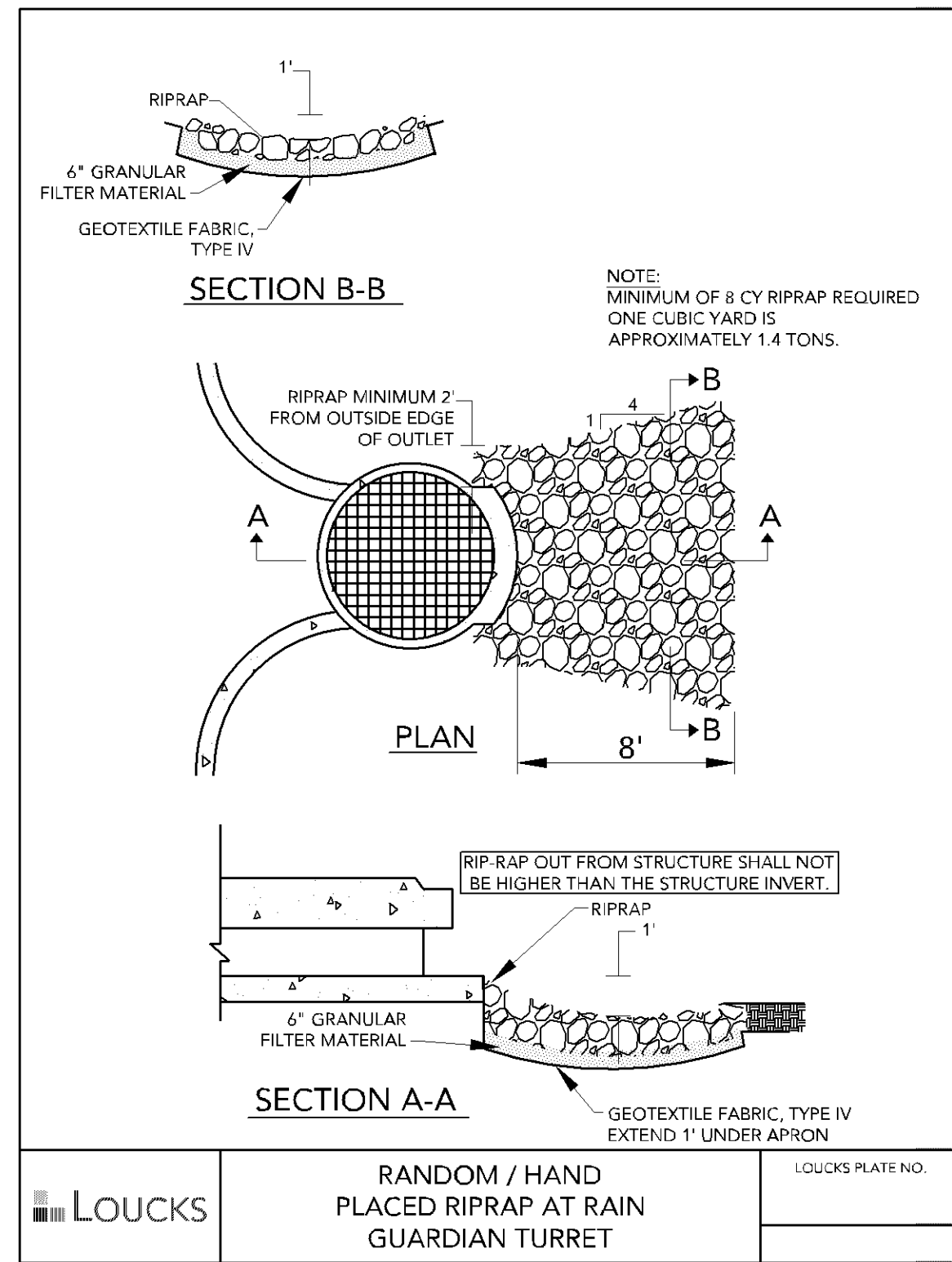
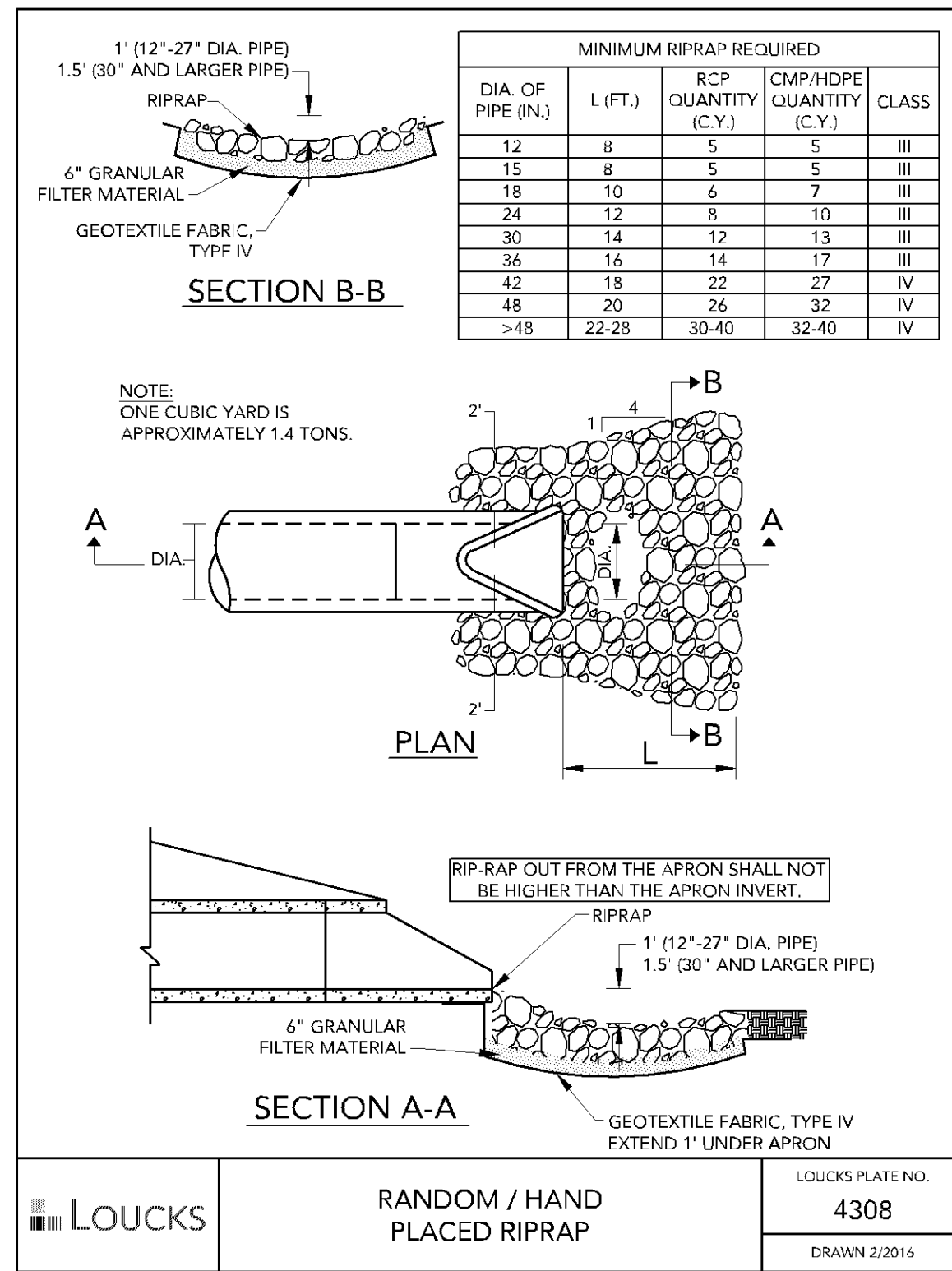
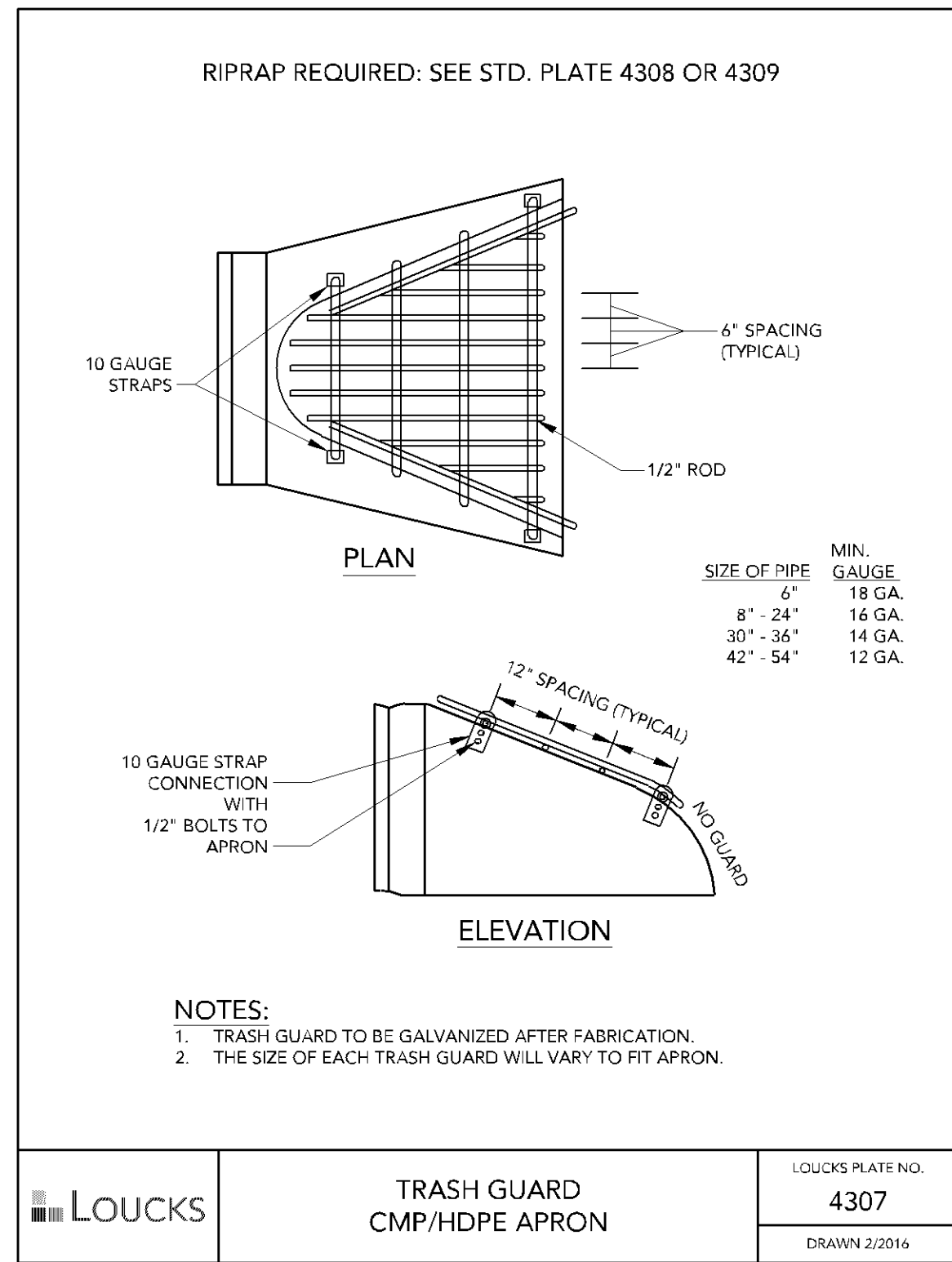
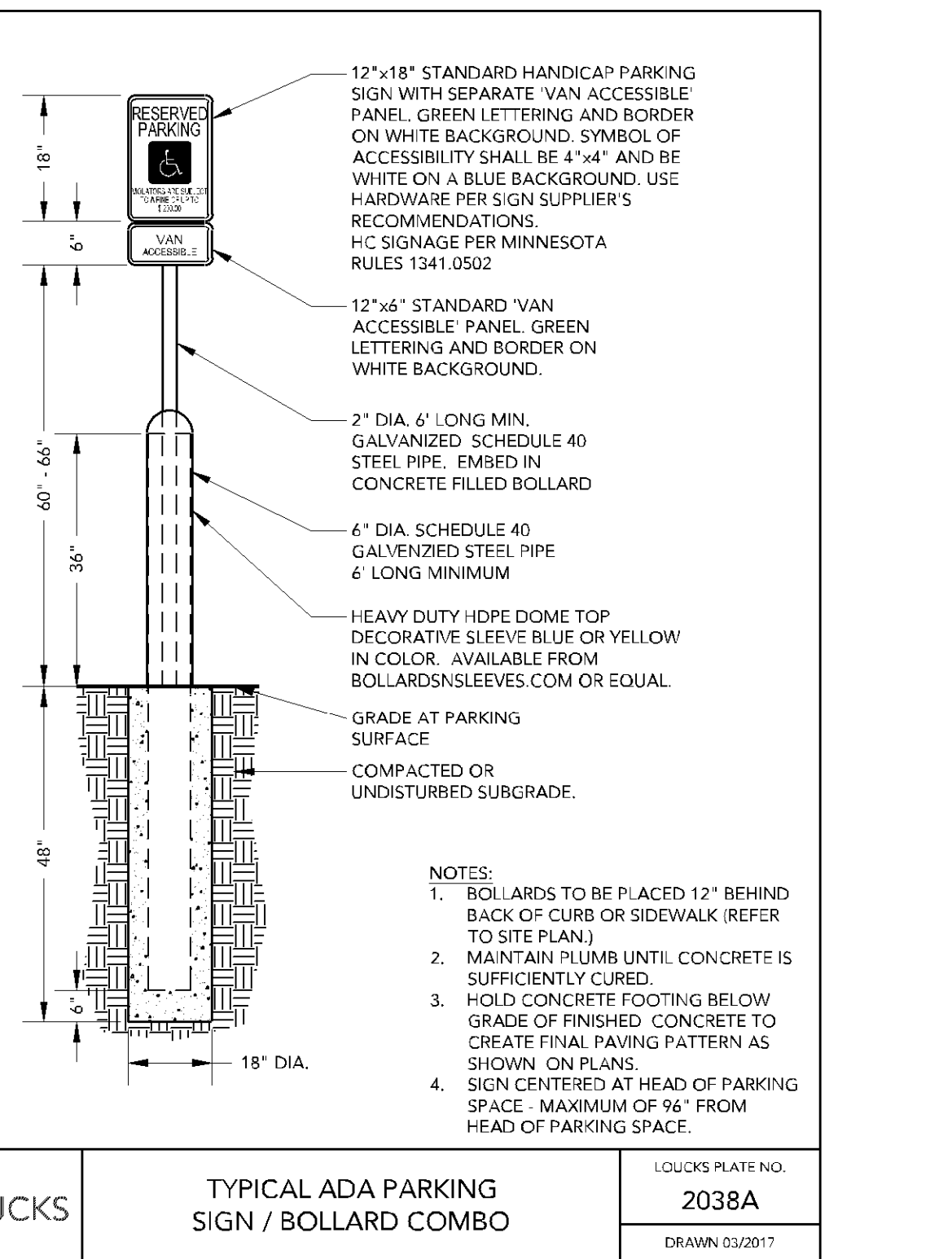
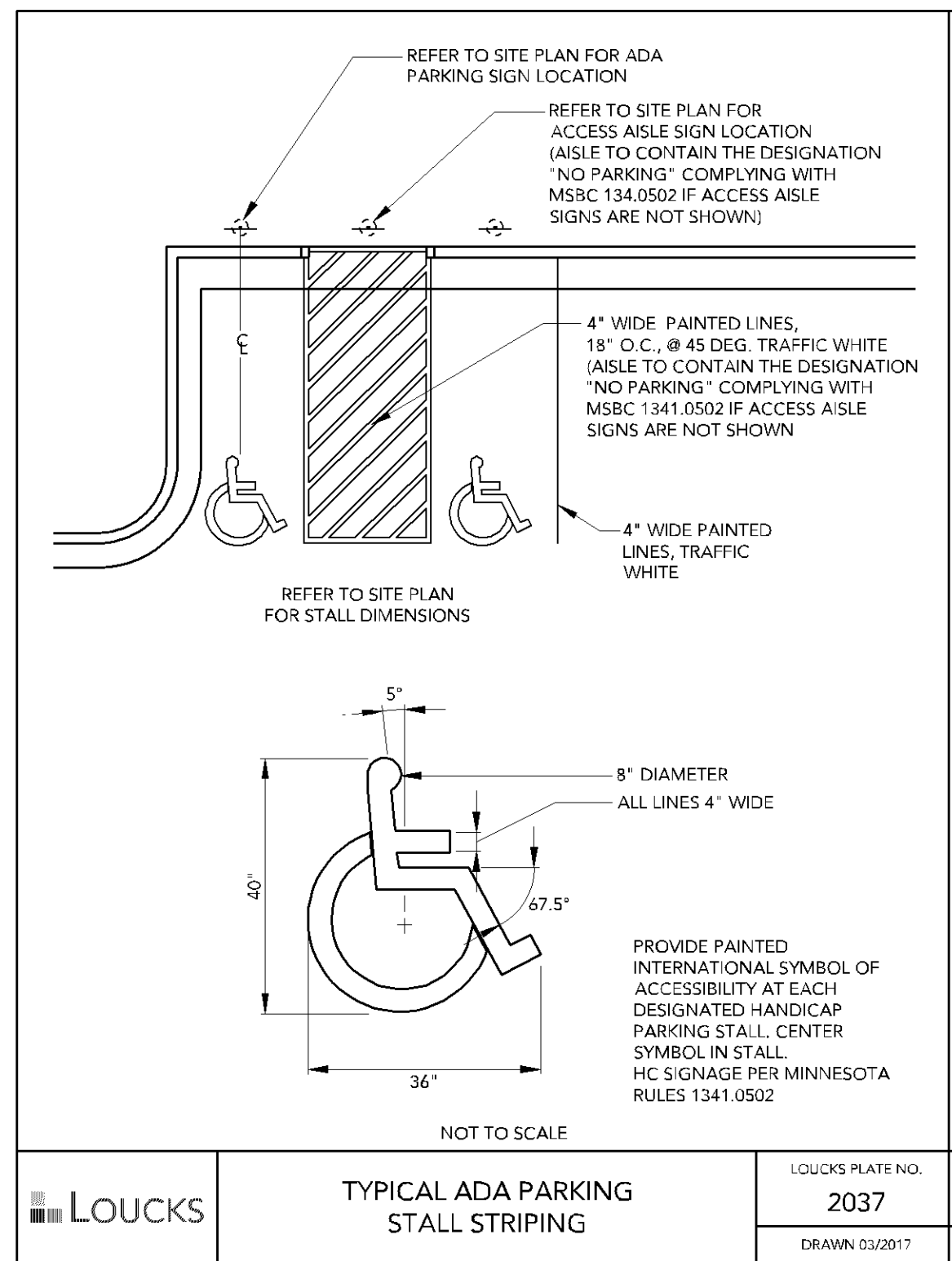
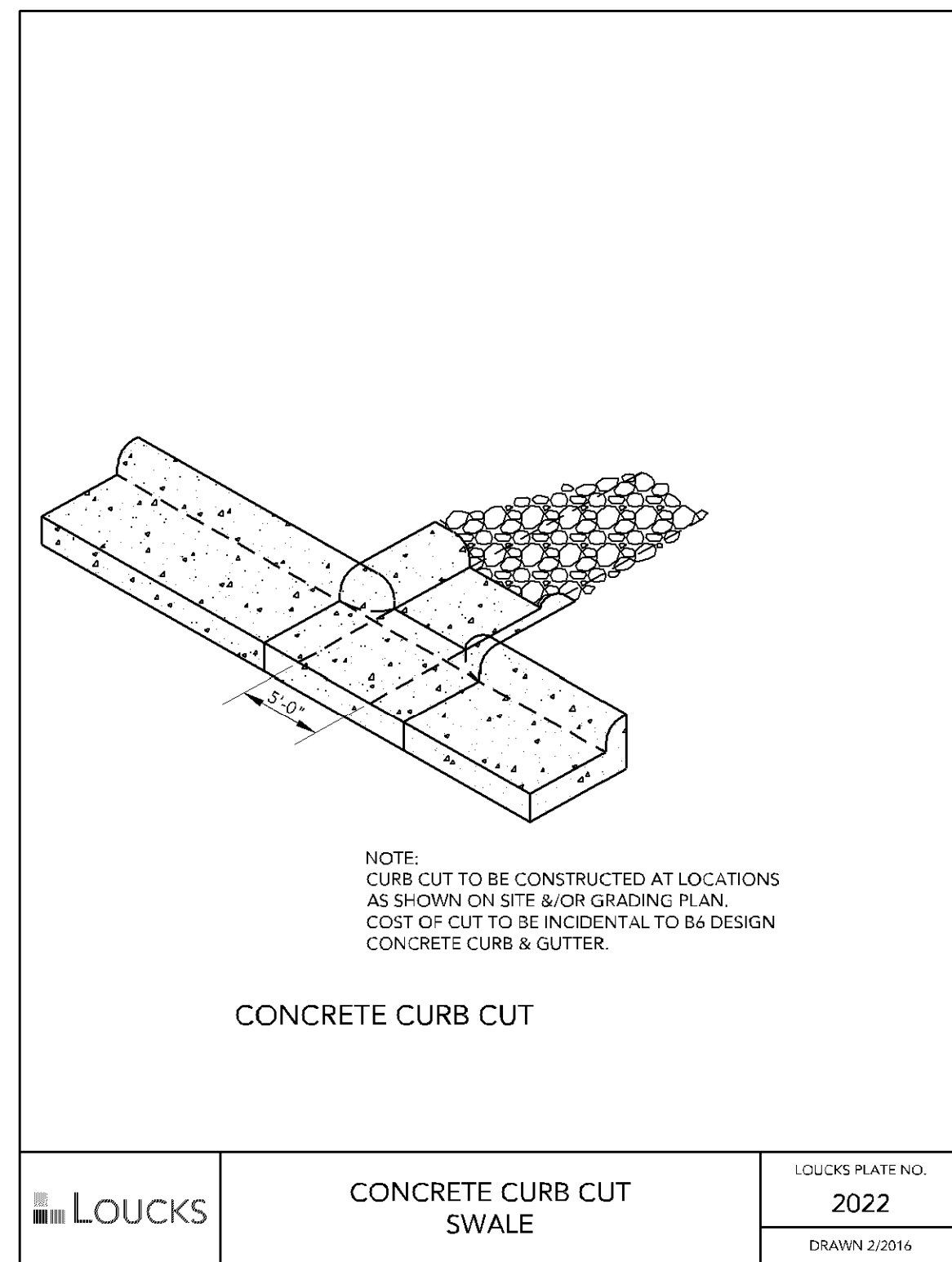
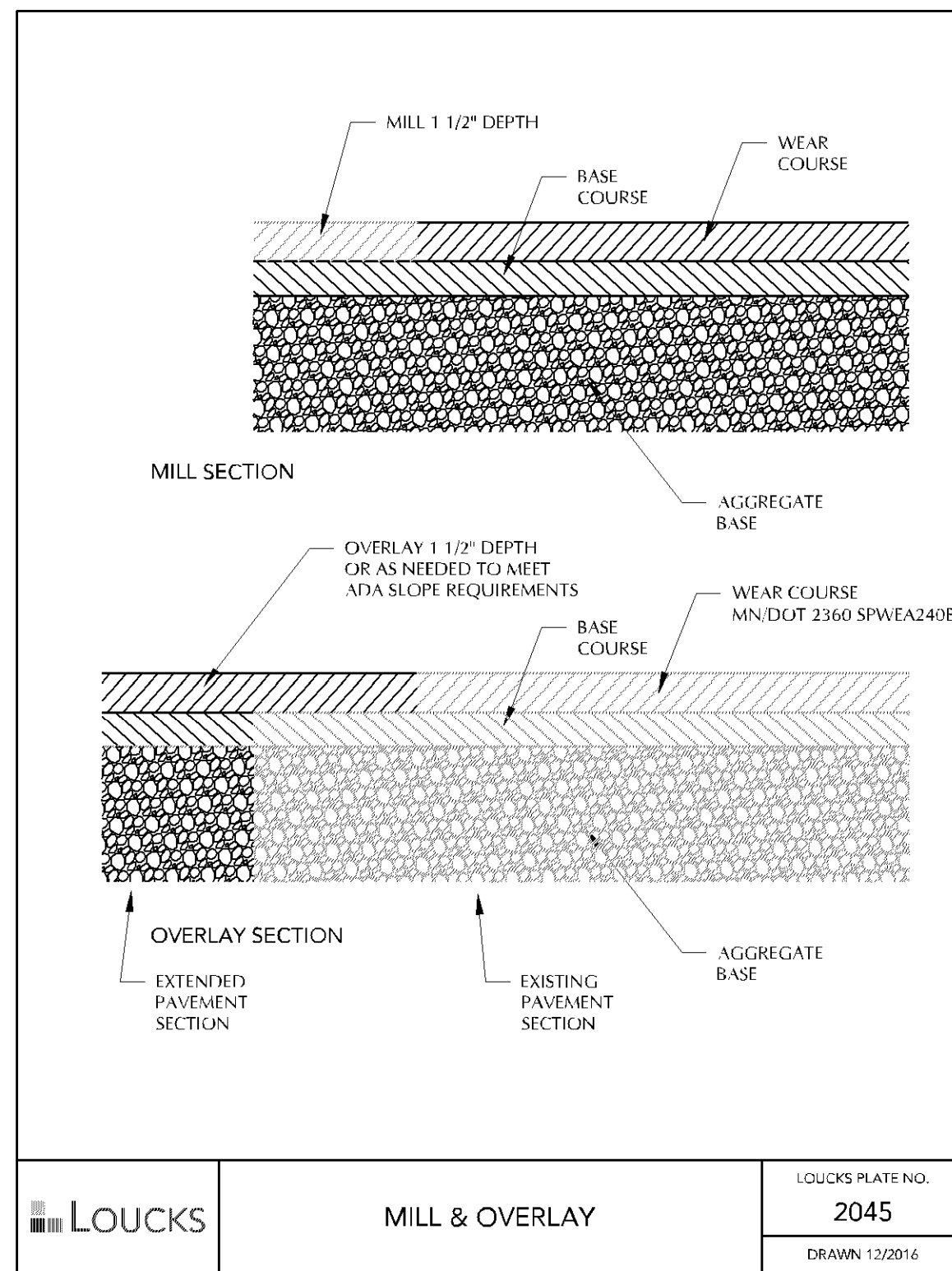
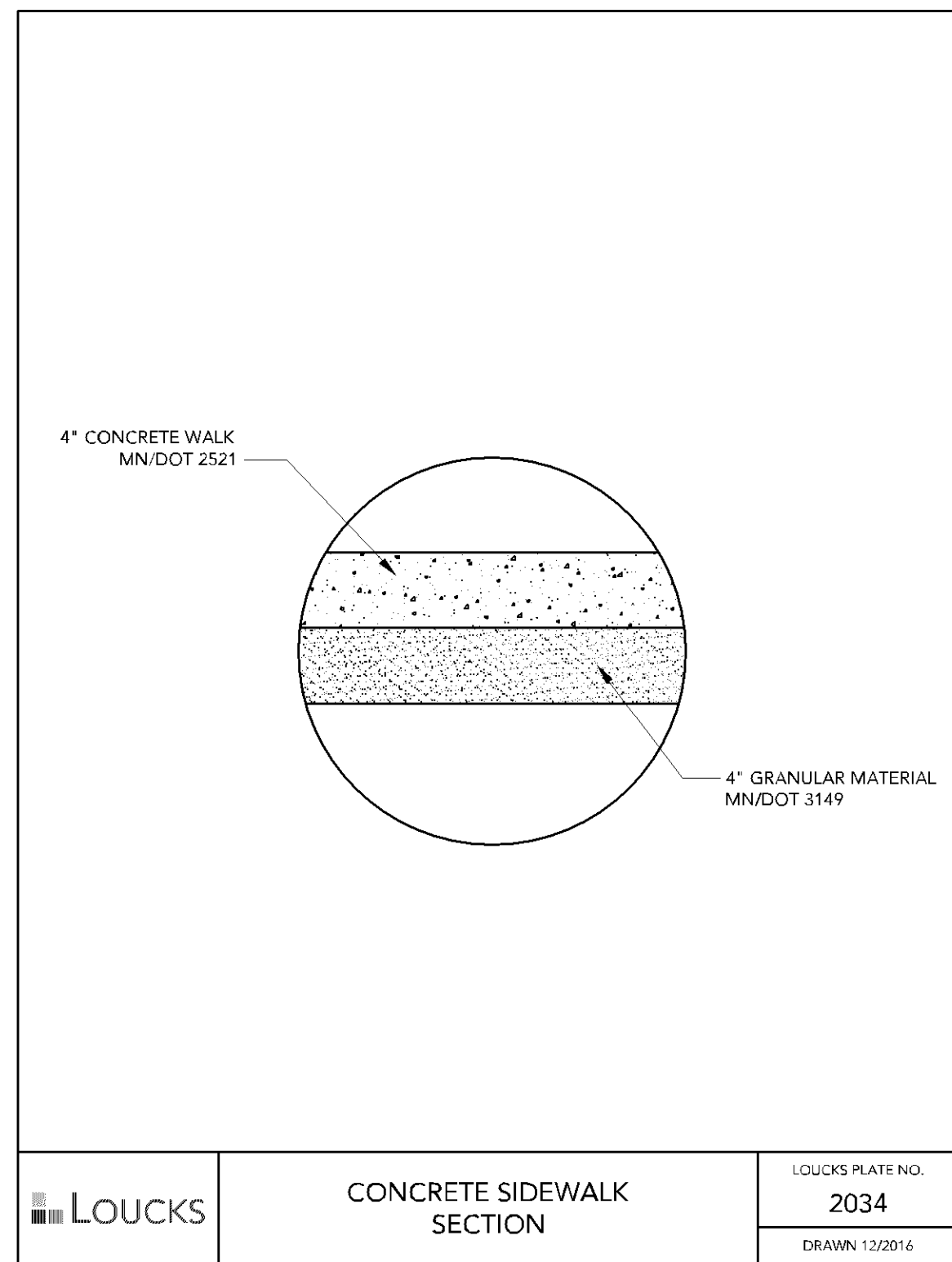
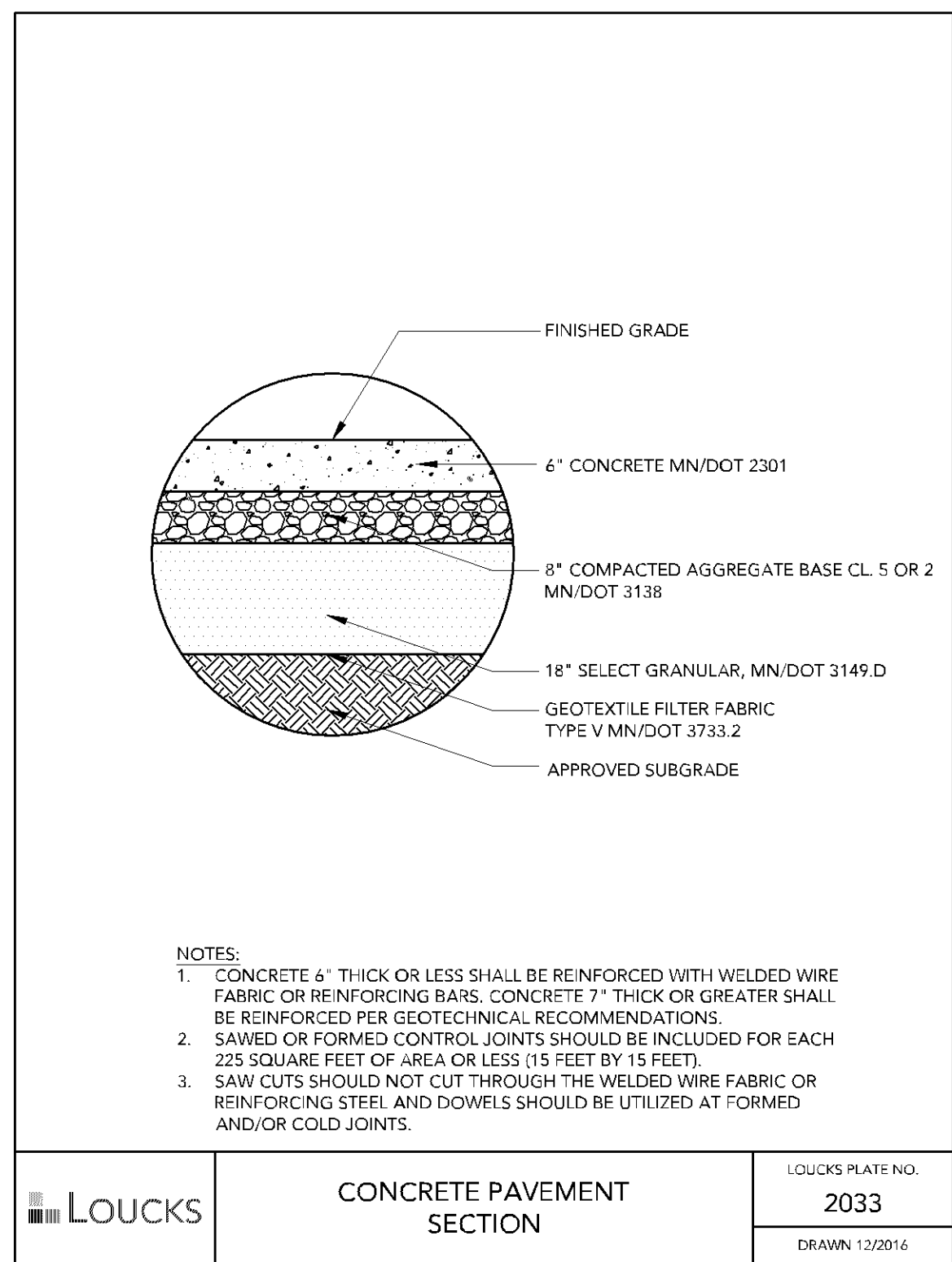
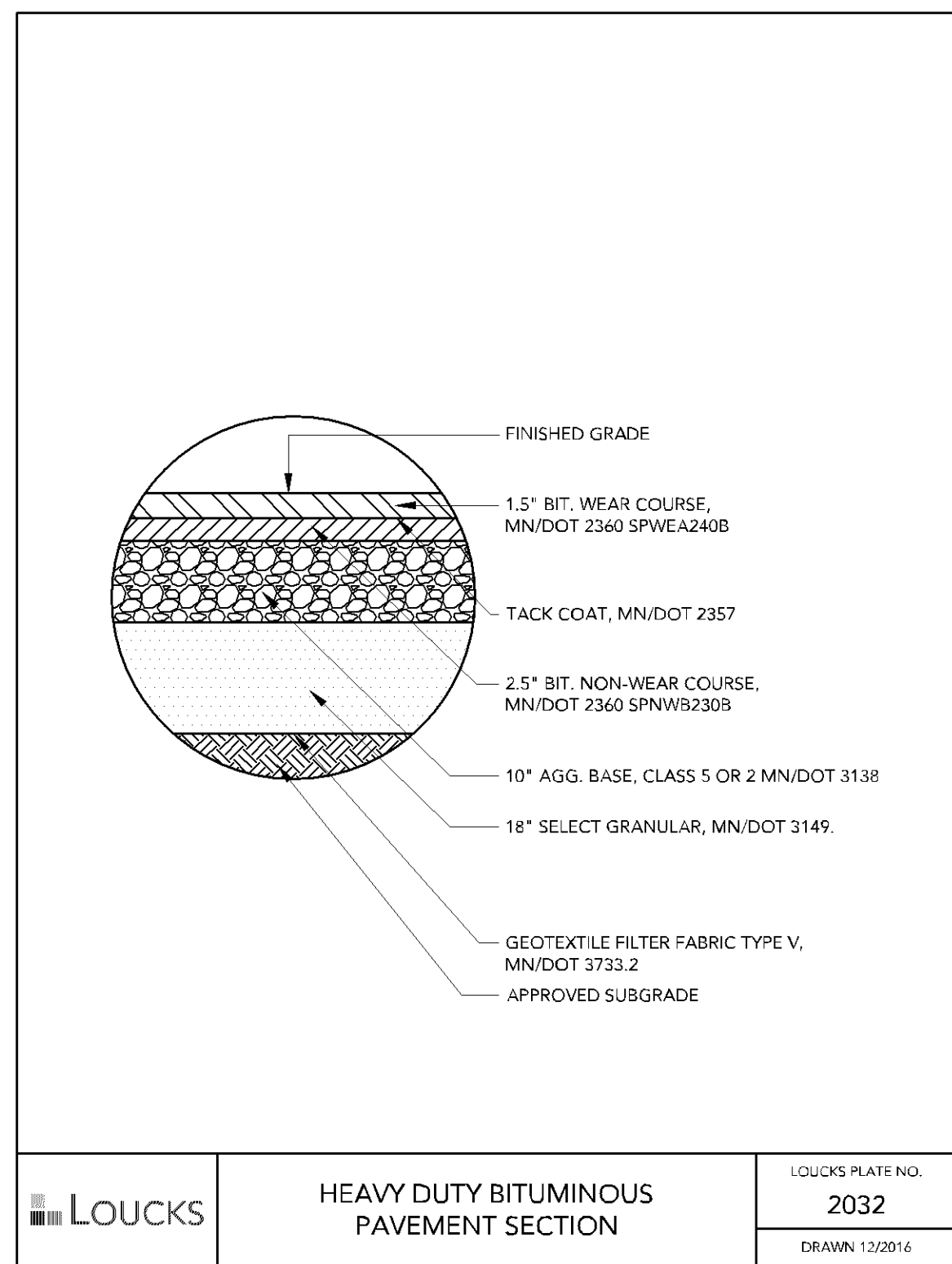
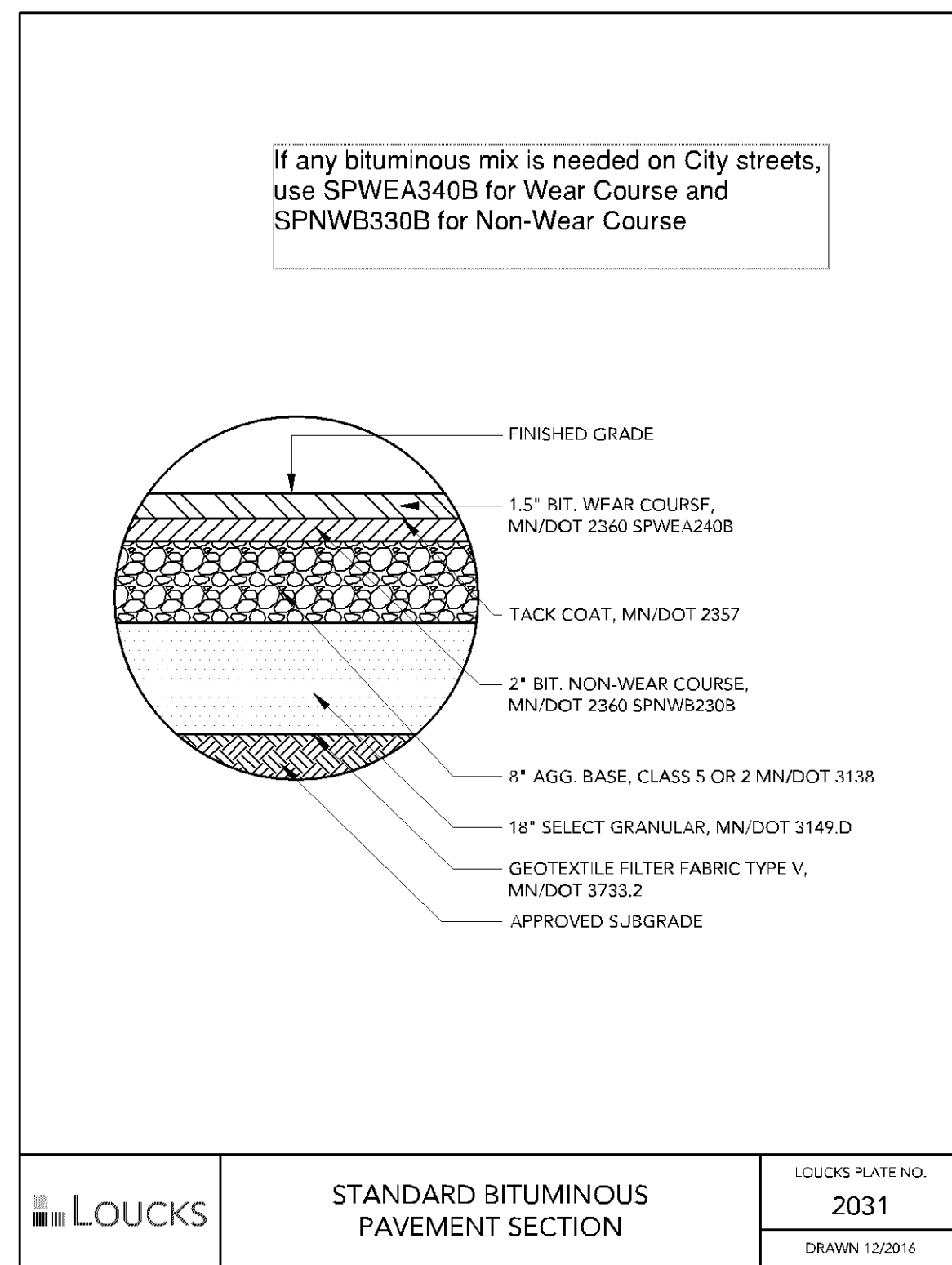
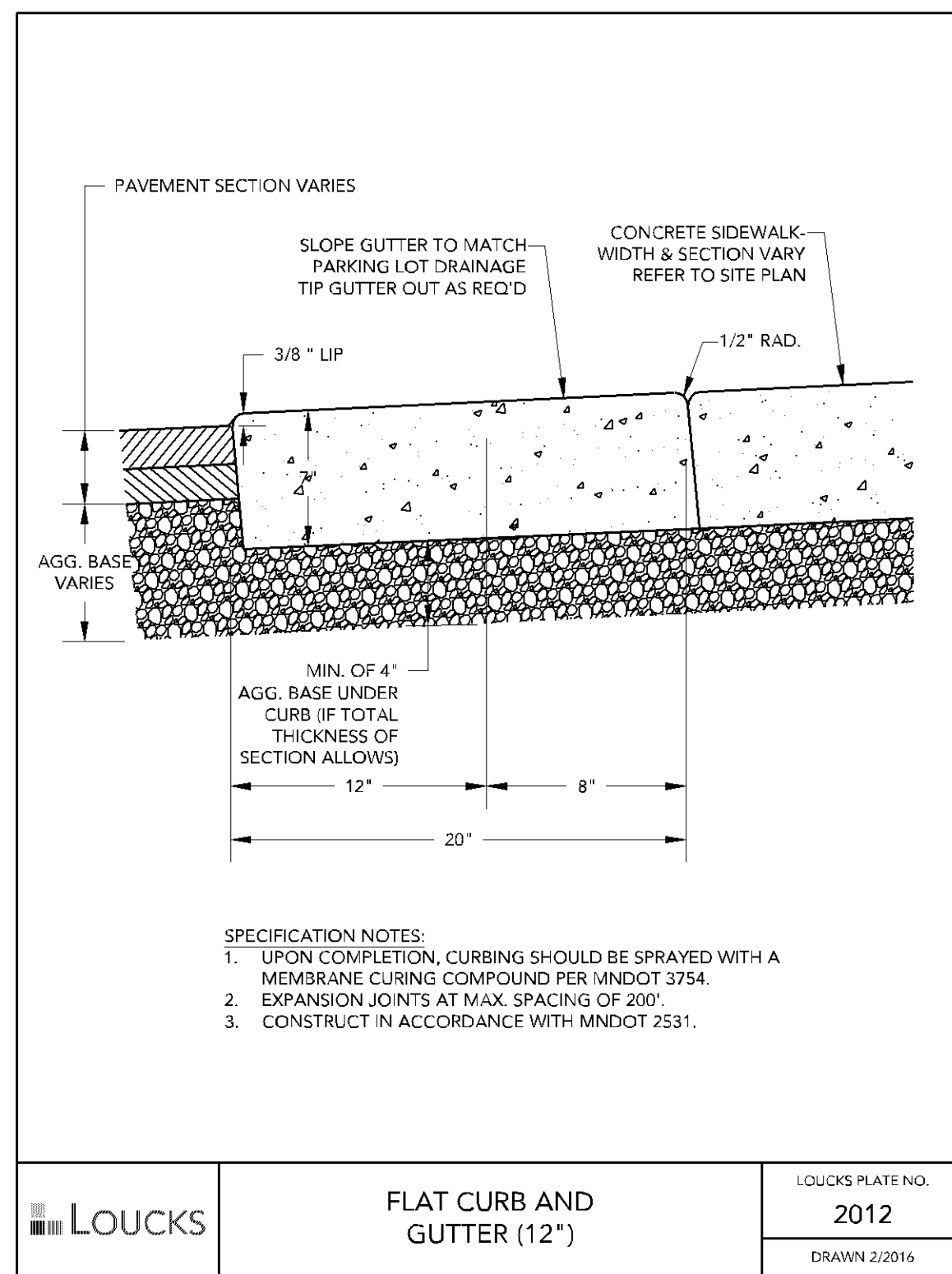
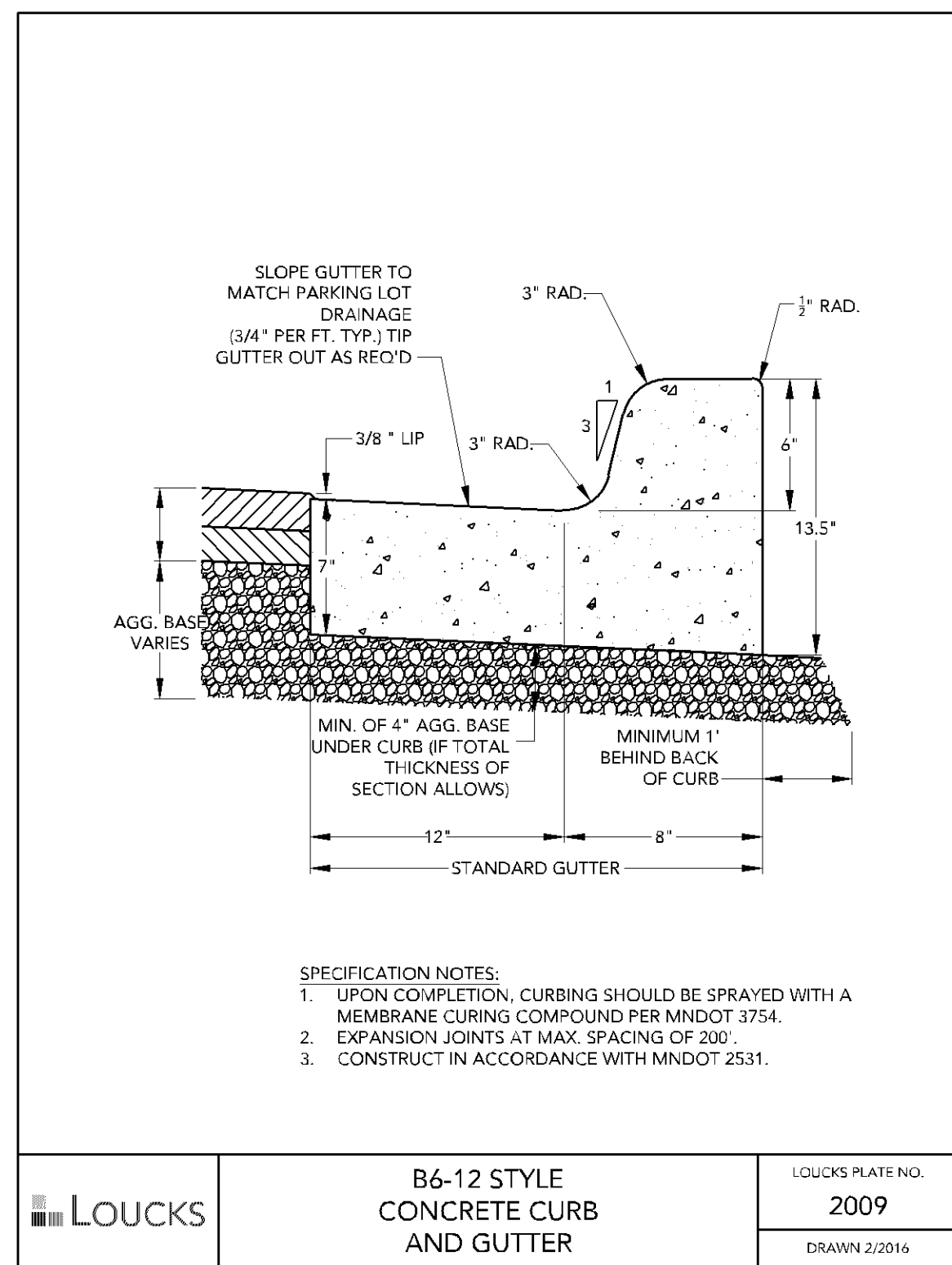
Sheet Title:

CIVIL DETAILS

Sheet No.:

250.CD

CASE #PL2020-112



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Name: **David E. Gump, PE**
Date: **07-08-2020** Lic./Reg. No. **53706**
Issued For:

Item: **CITY SUBMITTAL** Date: **07-08-2020**

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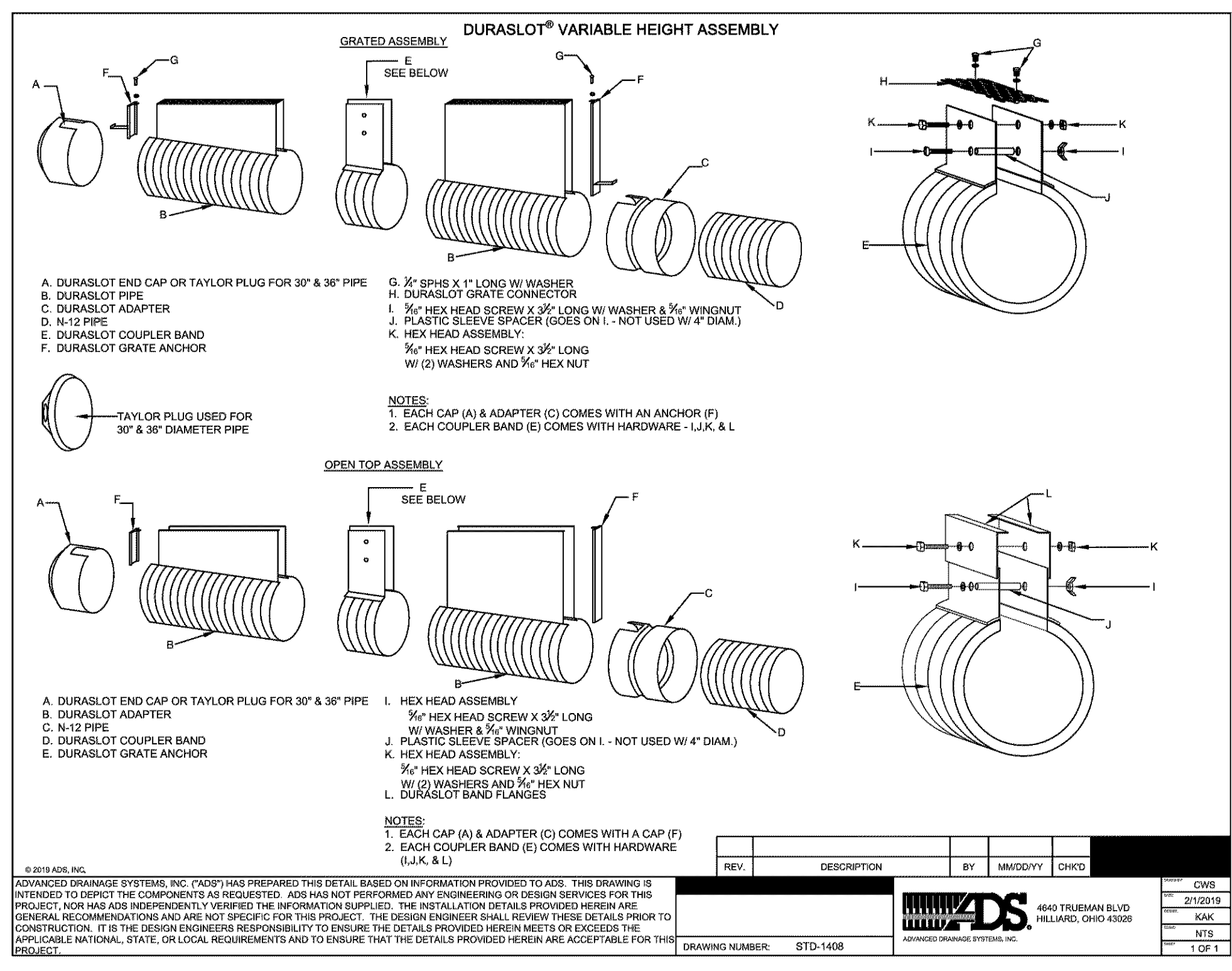
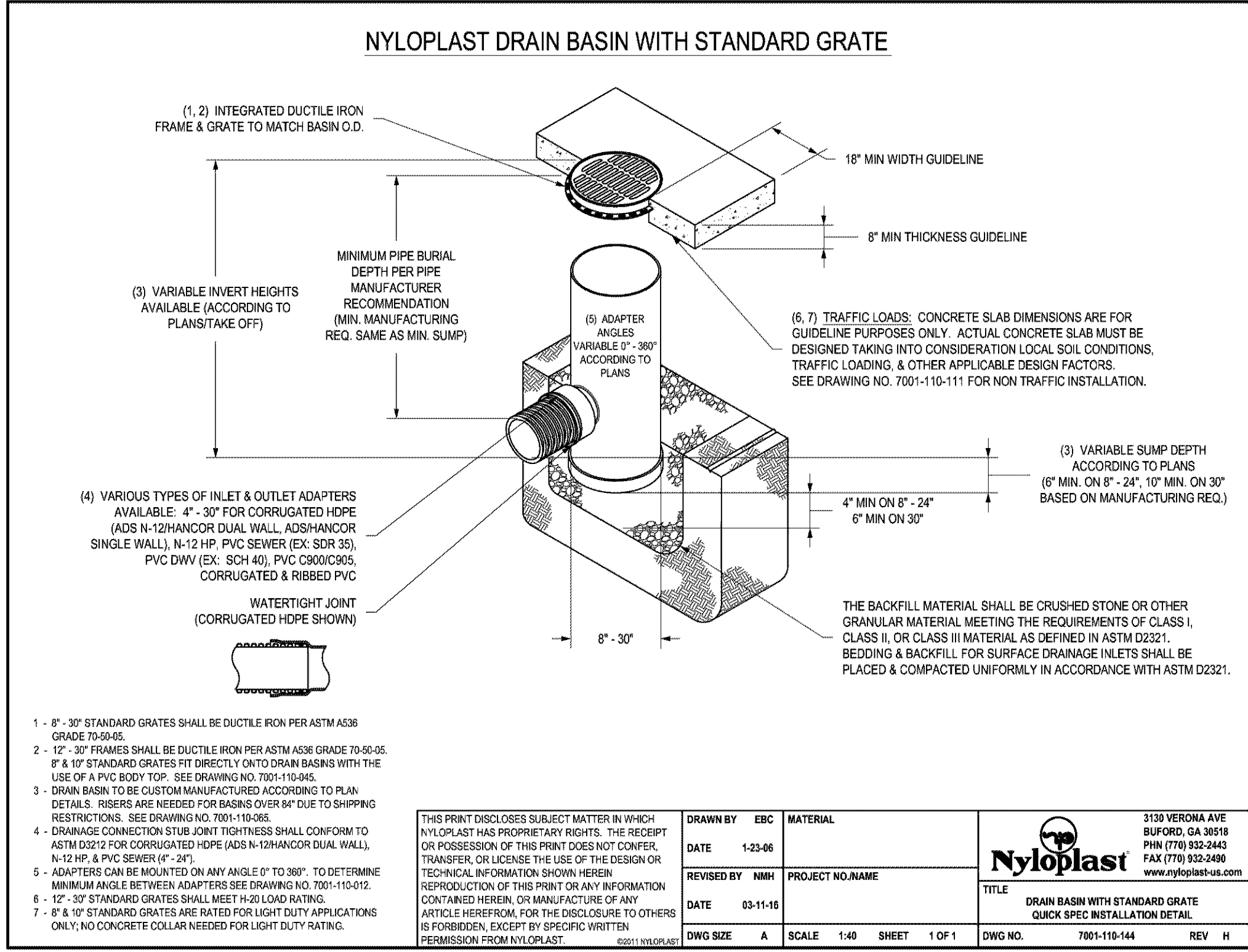
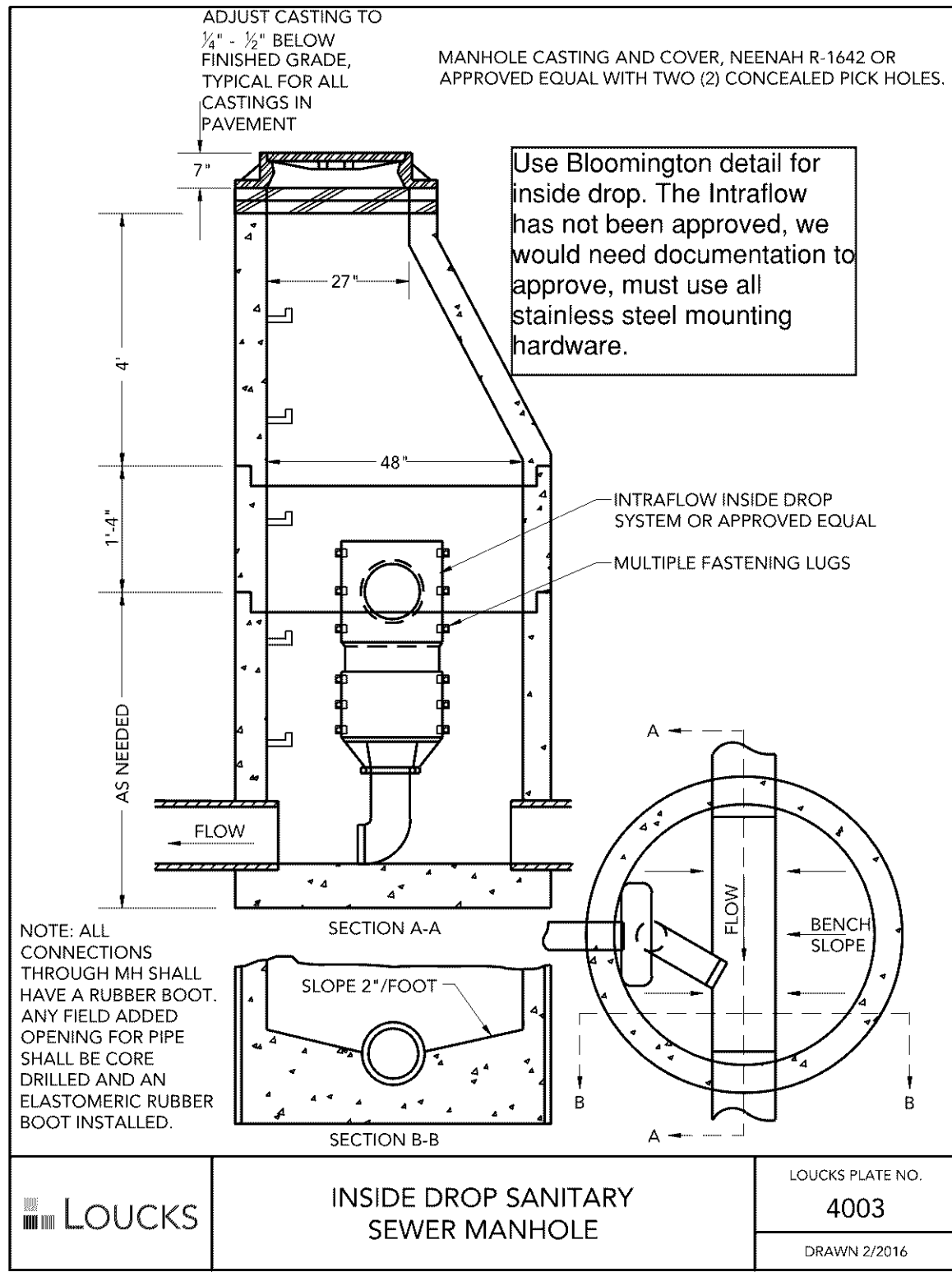
Comm. No. **3.2020095.00** Drawn **TDB/ZRM/ADC**
Sheet Title

CIVIL DETAILS

Sheet No.

251.CD

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PLANT SCHEDULE					
DECIDUOUS TREES	QTY	COMMON NAME	BOTANICAL NAME	CONT	SIZE
RO	28	CRIMSON SPIRE OAK	Quercus robur x Q. alba 'Crimedmidt'	B & B	2.5"Cal
RB	8	RIVER BIRCH CLUMP	Betula nigra	B & B	8' HGT
SGM	6	SIENNA GLEN MAPLE	Acer freemanii 'Sienna Glen'	B & B	2.5"Cal
SKH	23	SKYLINE HONEYLOCUST	Gleditsia triacanthos 'Skycole'	B & B	2.5"Cal
AM	6	STATE STREET HONEYMAPLE	Acer niyabei 'Morton'	B & B	2.5"Cal
QB	20	SWAMP WHITE OAK	Quercus bicolor	B & B	2.5"Cal
SHRUBS	QTY	COMMON NAME	BOTANICAL NAME	MIN CONT	MIN SIZE
OAC	29	GREEN MOUND ALPINE CURRANT	Ribes alpinum 'Green Mound'	5 gal	24" HGT
GF	132	GRO-LOW FRAGRANT SUMAC	Rhus aromatica 'Gro-Low'	5 gal	24" SPRD
GRASSES	QTY	COMMON NAME	BOTANICAL NAME	MIN CONT	MIN SIZE
FG	152	FEATHER REED GRASS	Calamagrostis x acutiflora 'Karl Foerster'	1 gal	24" o.c.
CONIFEROUS SHRUBS	QTY	COMMON NAME	BOTANICAL NAME	MIN CONT	MIN SIZE
SG	100	SEA GREEN JUNIPER	Juniperus chinensis 'Sea Green'	5 gal	18" SPRD
PERENNIALS	QTY	COMMON NAME	BOTANICAL NAME	MIN CONT	MIN SIZE
SD	55	STELLA D'ORO DAYLILY	Hemerocallis x 'Stella de Oro'	1 gal	24" o.c.
GROUND COVERS	CODE	COMMON NAME	BOTANICAL NAME		
	NS	NATIVE SEED MIX STORMWATER SOUTH & WEST BWSR SEED MIX - #33-261. APPLY PER MNDOT SEEDING MANUAL			
	SM 1	STONE MULCH WASHED GREY TRAP ROCK 2.5" 3" DEPTH OVER FABRIC			
	SM 2	STONE RIP RAP GREY TRAP ROCK RIP RAP SIZE - 5"-12" OVER FABRIC			
	SOD	TURF SOD			
	WM 1	WOOD MULCH SHREDDED HARDWOOD BARK MULCH			

CASE #PL2020-112

Development Landscaping Area would include all areas of site disturbance if the base material is replaced or disturbed. Please verify mill and overlay areas do not include disturbance of base material.

Based upon the development landscape area provided, the landscape plan is deficient by 19 trees based upon required landscaping and proposed removals. An updated landscape plan with 110 trees must be provided.

LANDSCAPE REQUIREMENTS:

TREE & SHRUB REQUIREMENTS
1 TREE PER 2,500 SF OF DEVELOPMENT LANDSCAPING AREA
1 SHRUB PER 1,000 SF OF DEVELOPMENT LANDSCAPING AREA

DEVELOPMENT LANDSCAPING AREA:
256,100 SF
TREES REQUIRED - 102
SHRUBS REQUIRED - 256

EXISTING TREES WITHIN DEVELOPMENT LANDSCAPE AREA: 8
EXISTING TREES SAVED: 0

EXISTING SHRUBS WITHIN DEVELOPMENT LANDSCAPE AREA: 0

NEW TREES PROVIDED: 191
NEW SHRUBS PROVIDED: 256

LANDSCAPE YARD PROVIDED ALONG COMPUTER AVE AND SITE PERIMETER

1 TREE PER PARKING LOT ISLAND PROVIDED

PARKING LOT SCREENING IS NOT REQUIRED. DISTANCE TO PARKING LOT FROM STREET IS GREATER THAN 40 FEET

SOIL FOR PARKING LOT ISLANDS SHOULD BE COMPOSED OF A 1:1:1 MIX OF SOIL, COMPOST AND SAND. THE EXISTING SOIL SHOULD BE EXCAVATED TO A MINIMUM DEPTH OF TWO FEET AND BE REPLACED WITH THE APPROVED SOILS MIX.

GENERAL NOTES:

CONTRACTOR SHALL VISIT SITE PRIOR TO SUBMITTING BID.
CONTRACTOR TO INSPECT SITE AND BECOME FAMILIAR WITH EXISTING CONDITIONS RELATING TO THE NATURE AND SCOPE OF WORK.

VERIFY LAYOUT AND ANY DIMENSIONS SHOWN AND BRING TO THE ATTENTION OF THE LANDSCAPE ARCHITECT ANY DISCREPANCIES WHICH MAY COMPROMISE THE DESIGN AND/OR INTENT OF THE PROJECT'S LAYOUT.

ASSURE COMPLIANCE WITH ALL APPLICABLE CODES AND REGULATIONS GOVERNING THE WORK OR MATERIALS SUPPLIED.

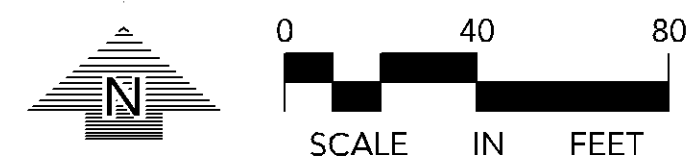
CONTRACTOR SHALL PROTECT ALL EXISTING ROADS, CURBS/CUTTERS, TRAILS, TREES, LAWNS AND SITE ELEMENTS DURING PLANTING OPERATIONS. ANY DAMAGE TO SAME SHALL BE REPAIRED AT NO COST TO THE OWNER.

CONTRACTOR SHALL VERIFY ALIGNMENT AND LOCATION OF ALL UNDERGROUND AND ABOVE GRADE UTILITIES AND PROVIDE THE NECESSARY PROTECTION FOR SAME BEFORE CONSTRUCTION / MATERIAL INSTALLATION BEGINS (MINIMUM 10' - 0" CLEARANCE).

ALL UNDERGROUND UTILITIES SHALL BE LAID SO THAT TRENCHES DO NOT CUT THROUGH ROOT SYSTEMS OF ANY EXISTING TREES TO REMAIN.

EXISTING CONTOURS, TRAILS, VEGETATION, CURB/CUTTER AND OTHER EXISTING ELEMENTS BASED UPON INFORMATION SUPPLIED TO LANDSCAPE ARCHITECT BY OTHERS. CONTRACTOR SHALL VERIFY ANY AND ALL DISCREPANCIES PRIOR TO CONSTRUCTION AND NOTIFY LANDSCAPE ARCHITECT OF SAME.

THE ALIGNMENT AND GRADES OF THE PROPOSED WALKS, TRAILS AND/OR ROADWAYS ARE SUBJECT TO FIELD ADJUSTMENT REQUIRED TO CONFORM TO LOCALIZED TOPOGRAPHIC CONDITIONS AND TO MINIMIZE TREE REMOVAL AND GRADING. ANY CHANGE IN ALIGNMENT MUST BE APPROVED BY LANDSCAPE ARCHITECT.



NOTE:
EXISTING CONDITIONS
INFORMATION SHOWN IS FROM
A TOPO SURVEY PREPARED BY
SEH AND DATED JUNE, 2020.



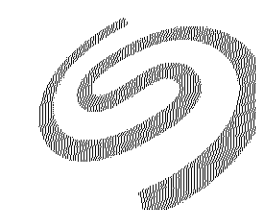
CALL BEFORE YOU DIG!

Gopher State One Call

TWIN CITY AREA: 651-454-0002
TOLL FREE: 1-800-252-1866

WARNING:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR CALLING FOR LOCATIONS OF ALL EXISTING UTILITIES. THEY SHALL COOPERATE WITH ALL UTILITY COMPANIES IN MAINTAINING THEIR SERVICE AND / OR RELOCATION OF LINES.
THE CONTRACTOR SHALL CONTACT GOPHER STATE ONE CALL AT 651-454-0002, AT LEAST 48 HOURS IN ADVANCE FOR THE LOCATIONS OF ALL UNDERGROUND WIRES, CABLES, CONDUITS, PIPES, MANHOLES, VALVES OR OTHER BURIED STRUCTURES. BEFORE DIGGING, THE CONTRACTOR SHALL REPAIR OR REPLACE THE ABOVE WHEN DAMAGED DURING CONSTRUCTION AT NO COST TO THE OWNER.



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This drawing is a preliminary plan. Specific values or quantities are approximate. No time or money should be spent on this drawing. Use is at the user's discretion. No warranty is made for use of this drawing.

Name: NAWATKUL, L.S.
Date: 07-08-2020 Lic./Reg. No. 52650

Issued For:

Item: CITY SUBMITTAL Date: 07-08-2020

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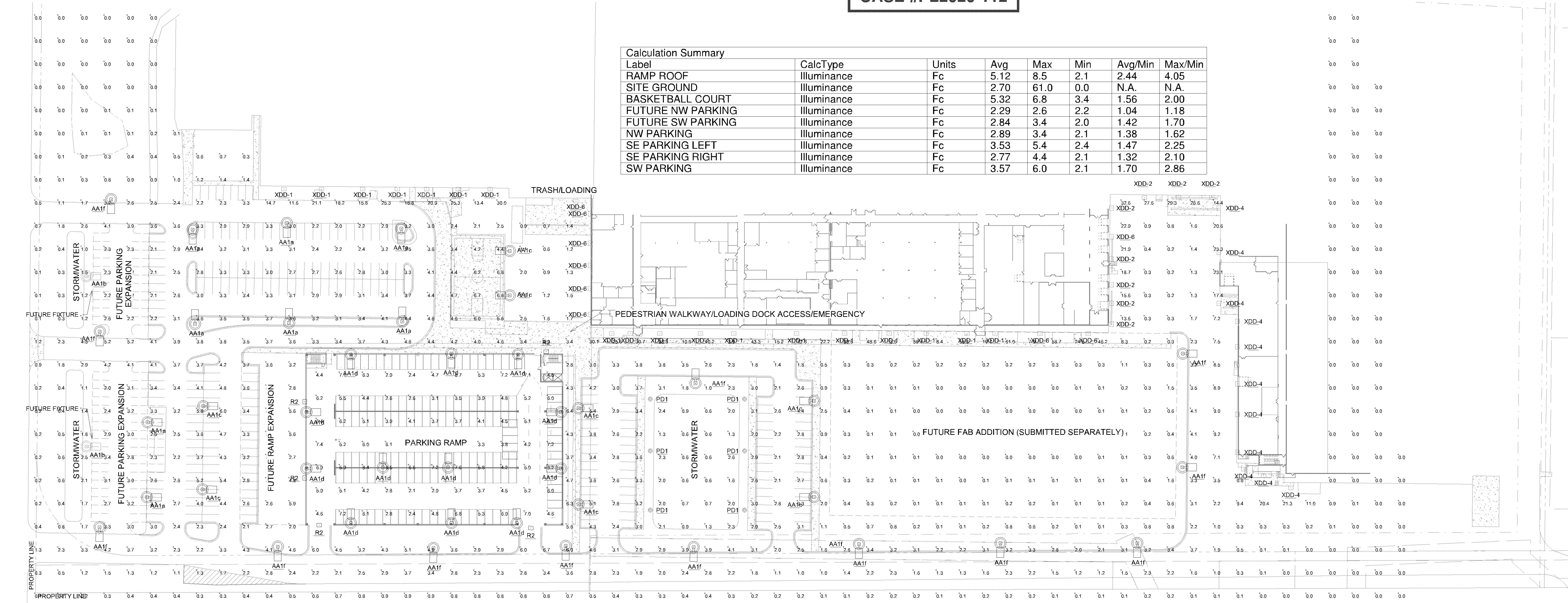
LANDSCAPE PLAN

Sheet No.:

260.LP

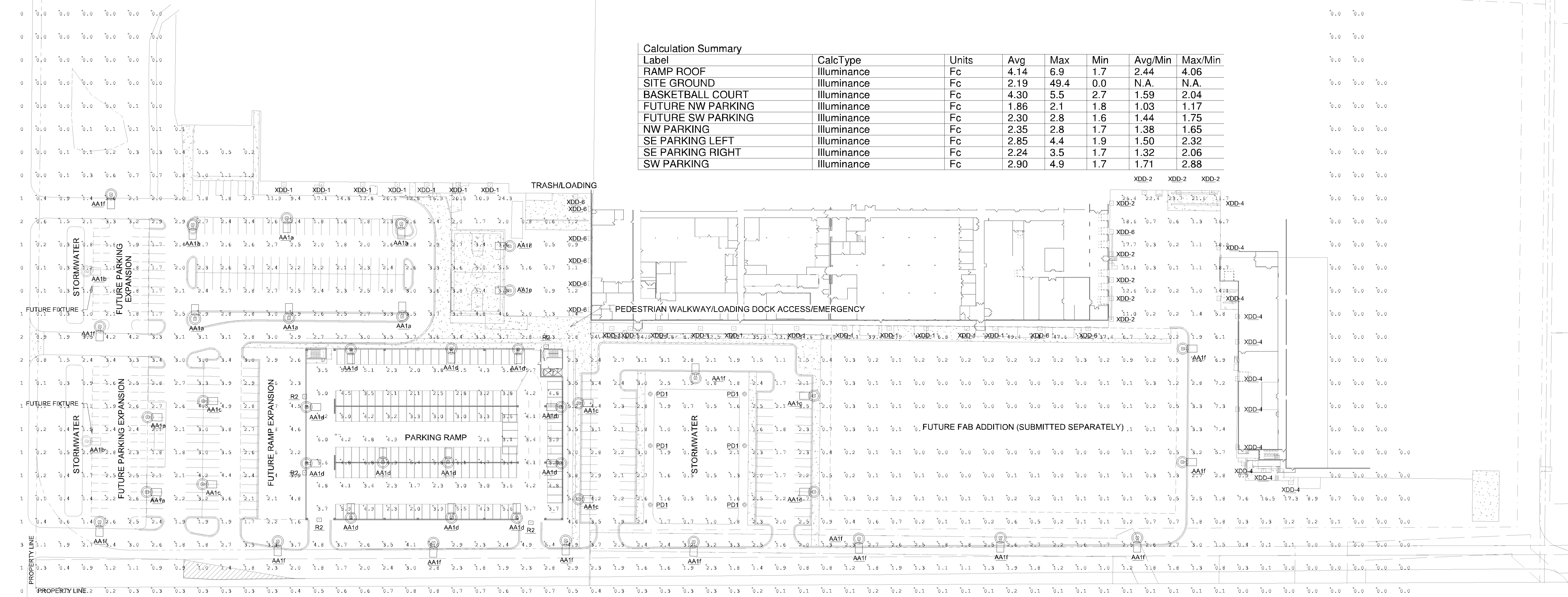
CASE #PL2020-112

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SITE GROUND	Illuminance	Fc	2.70	61.0	0.0	N.A.	N.A.
BASKETBALL COURT	Illuminance	Fc	5.32	6.8	3.4	1.56	2.00
FUTURE NW PARKING	Illuminance	Fc	2.29	2.6	2.2	1.04	1.18
FUTURE SW PARKING	Illuminance	Fc	2.84	3.4	2.0	1.42	1.70
NW PARKING	Illuminance	Fc	2.89	3.4	2.1	1.38	1.62
SE PARKING LEFT	Illuminance	Fc	3.53	5.4	2.4	1.47	2.25
SE PARKING RIGHT	Illuminance	Fc	2.77	4.4	2.1	1.32	2.10
SW PARKING	Illuminance	Fc	3.57	6.0	2.1	1.70	2.86

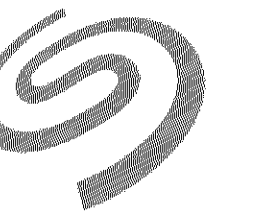


1 ELECTRICAL SITE PLAN - PHOTOMETRICS (INITIAL)
1" = 50'-0"

Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
RAMP ROOF	Illuminance	Fc	4.14	6.9	1.7	2.44	4.06
SITE GROUND	Illuminance	Fc	2.19	49.4	0.0	N.A.	N.A.
BASKETBALL COURT	Illuminance	Fc	4.30	5.5	2.7	1.59	2.04
FUTURE NW PARKING	Illuminance	Fc	1.86	2.1	1.8	1.03	1.17
FUTURE SW PARKING	Illuminance	Fc	2.30	2.8	1.6	1.44	1.75
NW PARKING	Illuminance	Fc	2.35	2.8	1.7	1.38	1.65
SE PARKING LEFT	Illuminance	Fc	2.85	4.4	1.9	1.50	2.32
SE PARKING RIGHT	Illuminance	Fc	2.24	3.5	1.7	1.32	2.06
SW PARKING	Illuminance	Fc	2.90	4.9	1.7	1.71	2.88



3 ELECTRICAL SITE PLAN - PHOTOMETRICS (MAINTAINED)
1" = 50'-0"



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Consultant:



DUNHAM

Dunham Associates, Inc.
50 South Sixth Street / Suite 1100
Minneapolis, Minnesota 55402-1540
PHONE: 612.465.7550
FAX: 612.465.7551
WEB: dunhameng.com
mechanical + electrical
consulting engineering

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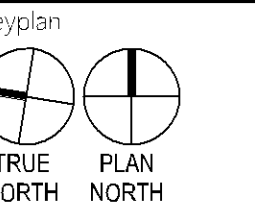
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PHOTOMETRIC
CALCULATIONS

Sheet No.

E100

