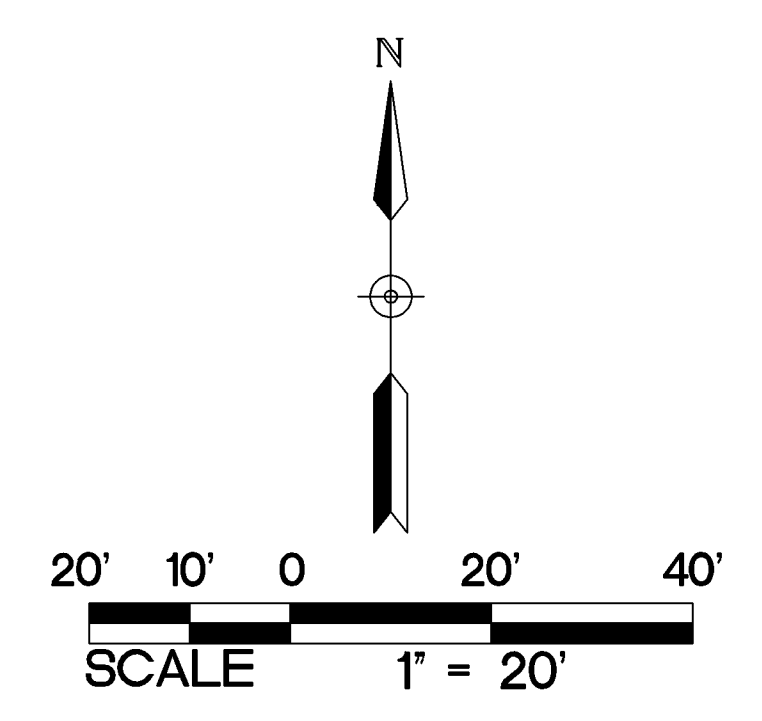


ABBREVIATIONS

CB	Color Basin
E	Electrical Manhole
H	Hand Hole
INV	Invert
MAX	Maximum
MH	Manhole
MIN	Minimum
OU	Overhead Utility
PVC	Polyvinyl Chloride
RCP	Reinforced Concrete Pipe
SAN	Sanitary Sewer Structure
SMH	Storm Sewer Structure
T	Telephone Manhole
TP	Telephone Pedestal
UE	Underground Electrical Line
VCP	Verfired Clay Pipe
WV	Water Valve



PROPOSED PLAN SYMBOLS

CONSTRUCTION LIMITS	---
SILTATION FENCE	XXXXXX
SEDIMENT CONTROL LOC	
TREE PROTECTION FENCE	XXXXXX
PROPERTY LINE	---
SAWCUT LINE (APPROX.)	---
CONSTRUCTION ENTRANCE	---
BITUMINOUS REMOVAL	---/---
CONCRETE REMOVAL	---/---
CURB REMOVAL	---/---
PIPE REMOVAL	---

NOTE: STORM SEWER INLETS NOT SHOWN ON PLAN MAY RECEIVE RUNOFF FROM CONSTRUCTION ACTIVITIES. INSTALL INLET SEDIMENT PROTECTION PER DETAILS 4/C500.0, 5/C500.0, AND 6/C500.0 ON ALL STORM INLETS THAT MAY RECEIVE RUNOFF.

NOTE: CONSTRUCTION LIMITS ARE ANTICIPATED TO BE PROPERTY LINE UNLESS OTHERWISE SHOWN.

KEYED NOTES

- KEYED NOTES ARE DENOTED BY [] ON PLAN.
- INSTALL CONSTRUCTION ENTRANCE. REFER TO DETAIL 1/C500.0.
 - INSTALL PERIMETER EROSION CONTROL. REFER TO DETAILS 2/C500.0 AND 3/C500.0.
 - INSTALL INLET SEDIMENT PROTECTION. REFER TO DETAILS 4/C500.0, 5/C500.0, AND 6/C500.0.
 - REMOVE CURB AND GUTTER IN ITS ENTIRETY TO THE APPROXIMATE EXTENTS SHOWN. SAWCUT AND REMOVE AT NEAREST JOINT.
 - SAWCUT AND REMOVE BITUMINOUS PAVEMENT IN ITS ENTIRETY TO THE APPROXIMATE EXTENTS SHOWN.
 - SAWCUT AND REMOVE CONCRETE PAVEMENT IN ITS ENTIRETY TO THE APPROXIMATE EXTENTS SHOWN.
 - EXISTING CONCRETE PAVEMENT TO REMAIN. PROTECT AT ALL TIMES.
 - EXISTING CONCRETE CURB AND GUTTER TO REMAIN. PROTECT AT ALL TIMES.
 - EXISTING BITUMINOUS PAVEMENT TO REMAIN. PROTECT AT ALL TIMES.
 - EXISTING LIGHT POLES, HANDHOLES, TRANSFORMER, OVERHEAD LINES, AND UNDERGROUND LINES TO REMAIN. PROTECT AT ALL TIMES.
 - EXISTING GAS MAIN TO REMAIN. PROTECT AT ALL TIMES.
 - EXISTING COMMUNICATION LINE TO REMAIN. PROTECT AT ALL TIMES.
 - REMOVE BRICK STAMPED CONCRETE AS NEEDED TO INSTALL 6-INCH WATER SERVICES, TO CAP OR CONNECT TO EXISTING 6-INCH WATER STUB, AND TO INSTALL SANITARY SEWER SERVICE REFER TO C500.0 FOR PROPOSED UTILITY LOCATIONS.
 - EXISTING BRICK STAMPED CONCRETE TO REMAIN. PROTECT AT ALL TIMES.
 - REMOVE AND RELOCATE EXISTING ELECTRICAL EQUIPMENT AS NECESSARY FOR INSTALLATION OF PROPOSED WATER SERVICE. CONTRACTOR SHALL COORDINATE WITH UTILITY OWNER FOR RELOCATION OF EXISTING ELECTRICAL EQUIPMENT. REINSTALLATION SHALL BE WITHIN EXISTING TRAFFIC SIGNAL EASEMENT.
 - THE CITY OF BLOOMINGTON HAS REQUESTED THAT THE EXISTING COMMUNICATIONS PEDESTAL BE RELOCATED SO THAT IT IS WITHIN THE EXISTING TRAFFIC SIGNAL EASEMENT. CONTRACTOR SHALL COORDINATE WITH THE CITY FOR REMOVAL AND RELOCATION.
 - NOT USED.
 - EXISTING SANITARY SEWER SERVICE TO REMAIN. PROTECT AT ALL TIMES.
 - REMOVE WATER SERVICE TO MAIN. CAP SERVICE AT MAIN PER CITY OF BLOOMINGTON STANDARDS.

DEMOLITION AND REMOVAL NOTES:

- CONTRACTOR SHALL FOLLOW ALL CITY OF BLOOMINGTON STANDARDS AND SPECIFICATIONS.
- PRIOR TO START OF ANY CONSTRUCTION ACTIVITY, ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE INSTALLED BY THE CONTRACTOR AND INSPECTED BY THE CITY OF BLOOMINGTON AND NINE MILE CREEK WATERSHED DISTRICT. PERIMETER SEDIMENT PROTECTION SHALL BE INSTALLED ALONG THE CONTOUR.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO ASCERTAIN THE LOCATION OF ALL EXISTING UTILITIES. THE CONTRACTOR SHALL VERIFY THE LOCATION AND ELEVATION AND MARK ALL EXISTING UTILITIES 48 HOURS BEFORE CONSTRUCTION STARTS. THE ENGINEER, ARCHITECT, OR OWNER DOES NOT GUARANTEE THAT ALL THE UTILITIES ARE MAPPED, OR IF MAPPED, ARE SHOWN CORRECTLY. CONTACT Gopher State One Call at 651-454-0002 FOR FIELD LOCATING EXISTING UTILITIES. CONTACT UTILITY OWNER IF DAMAGE OCCURS DUE TO CONSTRUCTION.
- PRIOR TO START OF CONSTRUCTION, THE CONTRACTOR IS TO CLEARLY IDENTIFY IN THE FIELD THE WETLAND PERIMETERS THAT ARE NOT TO BE IMPACTED SO THAT NO ENCROACHMENT OCCURS. AFTER THE PERIMETERS ARE CLEARLY MARKED IN THE FIELD, THE CONTRACTOR SHALL CONTACT NINE MILE CREEK WATERSHED DISTRICT TO CONFIRM AND APPROVE NO ENCROACHMENT LIMITS.
- THERE MAY BE MISCELLANEOUS ITEMS TO BE REMOVED THAT ARE NOT IDENTIFIED ON THESE PLANS. THE CONTRACTOR SHALL VISIT THE SITE AND REVIEW THE DOCUMENTS TO OBTAIN A CLEAR UNDERSTANDING OF THE INTENDED SCOPE OF WORK.
- REMOVE ALL GAS AND ELECTRIC LINES UNDER PROPOSED BUILDING FOOTPRINT. COORDINATE DISCONNECTION OF EACH UTILITY WITH THE UTILITY OWNER.
- ANY UTILITIES NOT INDICATED FOR REMOVAL OR ABANDONMENT ARE TO BE PROTECTED AT ALL TIMES.
- EXISTING CONCRETE PAVEMENT AND CURB AND GUTTER SHOWN TO BE REMOVED WITHIN THE SCOPE OF THE PROJECT SHALL BE REMOVED FROM THE SAW CUT LINES TO THE NEAREST JOINT.
- THE BACKGROUND INFORMATION WAS PREPARED BY STANTEC: (612) 712-2000.
- ALL WORK IN THE PUBLIC RIGHT OF WAY IS TO BE COORDINATED WITH THE CITY OF BLOOMINGTON. ROADWAY REPAIRS, BOULEVARD REPAIRS, AND TRAFFIC CONTROL ARE TO BE PER CITY OF BLOOMINGTON STANDARDS AND SPECIFICATIONS.

GENERAL NOTES:

- CONCRETE CURB AND GUTTER REMOVAL, PAVEMENT REMOVAL, AND UTILITY REMOVAL LIMITS ARE TO BE COORDINATED WITH THE CITY OF BLOOMINGTON AND UTILITY OWNER.
- THE CONTRACTOR SHALL DEVELOP AND IMPLEMENT A TRAFFIC CONTROL PLAN WHILE WORKING WITHIN THE RIGHT-OF-WAY. THE TRAFFIC CONTROL PLAN SHALL BE APPROVED BY THE CITY ENGINEERING DEPARTMENT PRIOR TO STREET ENCROACHMENT. CLOSURE OF LYNDALE AVE S FOR UTILITY INSTALLATIONS WILL NEED TO BE COORDINATED WITH ANY TRAFFIC CONTROL AND DETOURS RELATED TO THE I-494 RECONSTRUCTION PROJECT.
- CONTRACTOR SHALL VISIT THE SITE PRIOR TO BIDDING AND REVIEW ALL CONSTRUCTION DOCUMENTS AND GEOTECHNICAL REPORTS. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR ITEMS THAT SHOULD HAVE BEEN ANTICIPATED BY PERFORMING THE ABOVE.
- THE CONSTRUCTION ENTRANCE INDICATED ON THE PLAN IS SHOWN IN AN APPROXIMATE LOCATION. PRIOR TO START OF CONSTRUCTION, THE CONTRACTOR IS TO COORDINATE WITH THE CITY OF BLOOMINGTON FOR THE EXACT CONSTRUCTION ENTRANCE LOCATION.

1 SELECTIVE SITE DEMOLITION AND EROSION CONTROL PLAN
C100.0 1" = 20'

700 American
700 W AMERICAN BLVD - BLOOMINGTON, MN

URBANWORKS

CONSULTANT
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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.
Keith A. Matto
SIGNED: Keith A. Matto
DATE: 4/11/2024
LICENSE #: 49674

PERMIT SET
4/11/2024

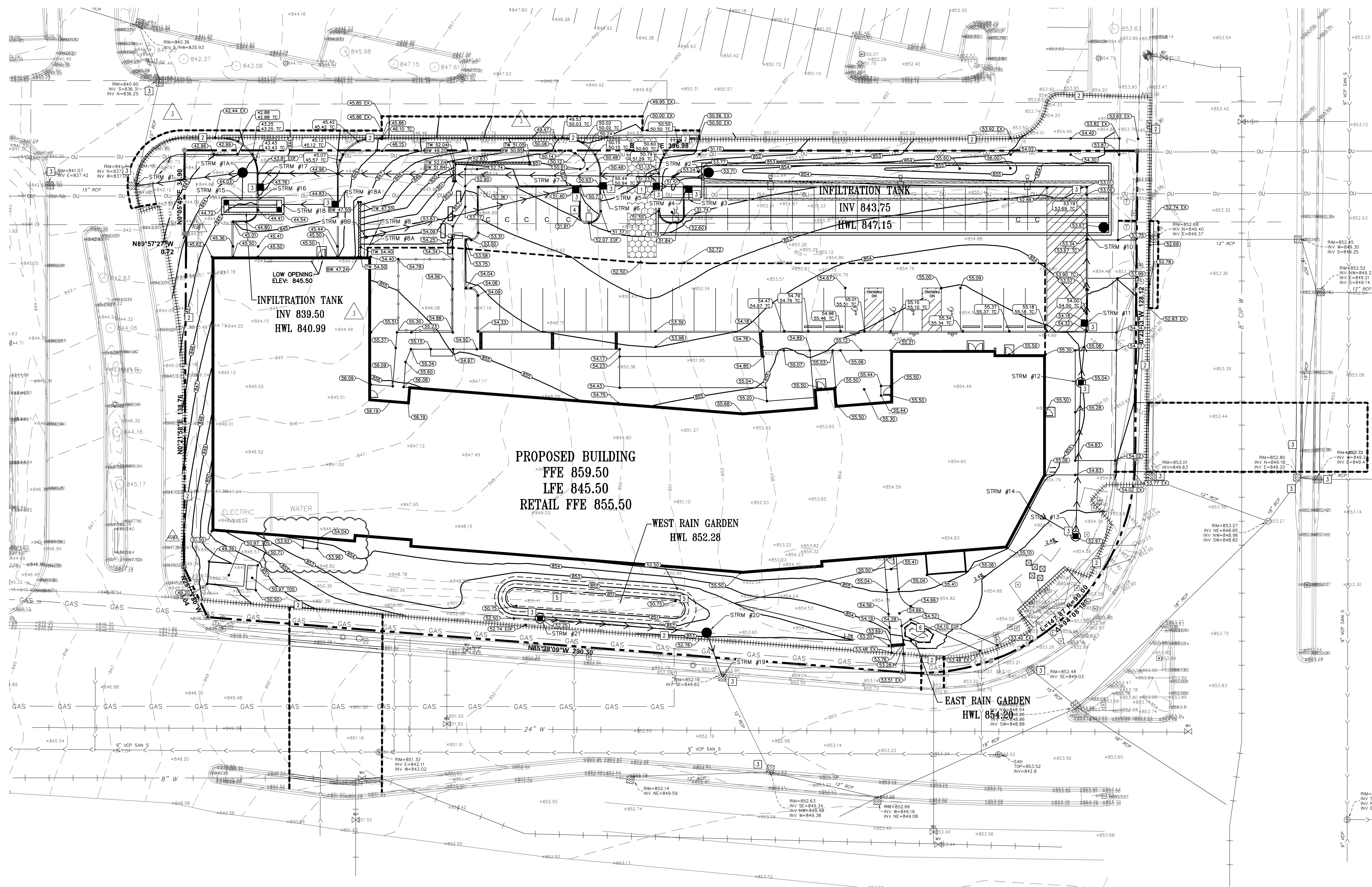
REVISIONS

PERMIT COMMENTS 1	2024-05-20
ASI #01	2024-07-10
ASI #02	2024-09-19
ASI #04	2024-10-28

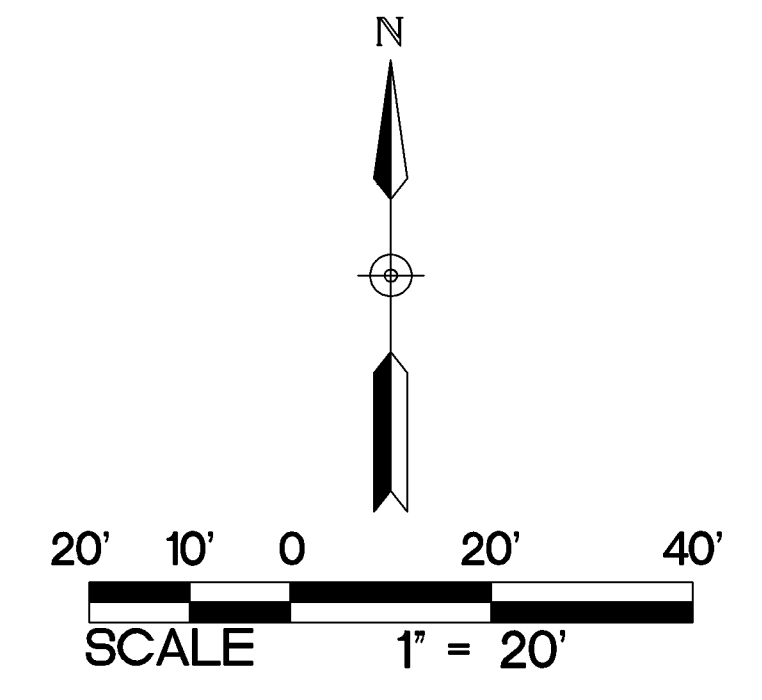
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PROJECT #: 23-001
PHASE: PERMIT SET
DRAWN BY: WH
CHECKED BY: WH STD

ENGINEERING DIVISION
Approved By: Julie Long, PE
10/29/2024 1:48:01 PM

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ABBREVIATIONS table listing symbols for Bottom of Slab, Bottom of Wall, Catch Basin, Electrical Manhole, Elevation, Existing, Finished Floor Elevation, Hand Hole, Invert, Lower Floor Elevation, Maximum, Manhole, Minimum, Overhead Utility, Polyvinyl Chloride, Reinforced Concrete Pipe, Storm Sewer Structure, Telephone Manhole, Telephone Pedestal, Top of Slab, Top of Slope, Top of Wall, Underground Electric Line, Washout, etc.



PROPOSED PLAN SYMBOLS table defining symbols for Construction Limits, Siltation Fence, Sediment Control Log, Property Line, Sawcut Line, Proposed Contour, Drain Tile, Storm Sewer, Catch Basin, Manhole, Rock Construction Entrance, Drainage Flow Arrow, Spot Elevation, Soil Elevation, Concrete Washout Area, etc.

NOTE: STORM SEWER INLETS NOT SHOWN ON PLAN MAY RECEIVE RUNOFF FROM CONSTRUCTION ACTIVITIES. INSTALL INLET SEDIMENT PROTECTION PER DETAILS 4/C500.0, 5/C500.0, AND 6/C500.0 ON ALL STORM INLETS THAT MAY RECEIVE RUNOFF.

RETAINING WALL NOTES: 1. ALL TOP AND BOTTOM ELEVATIONS CORRESPOND TO THE RESTORED GRADE ELEVATIONS ON EACH SIDE OF THE WALL. 2. THE BOTTOM ELEVATION IS THE ELEVATION OF THE LOW-GRADE SIDE OF THE WALL, NOT THE TOP ELEVATION OF THE BURIED BLOCK COURSE. 3. ALL RETAINING WALLS SHALL HAVE PROTECTIVE FENCING AT THE TOP WHERE THE VERTICAL HEIGHT EXCEEDS 30 INCHES. REFER TO ARCHITECTURAL AND LANDSCAPE PLANS AND SPECIFICATIONS. 4. MODULAR BLOCK RETAINING WALL SHALL BE DESIGNED AND CERTIFIED BY A LICENSED PROFESSIONAL ENGINEER. DESIGN CALCULATIONS AND SHOP DRAWINGS SHALL BE SUBMITTED TO THE OWNER AND ARCHITECT AT LEAST THREE WEEKS PRIOR TO CONSTRUCTION OF WALL.

WALKWAY NOTES: 1. GRADING CONTRACTOR IS TO COORDINATE WITH PAVING CONTRACTOR SO THAT ALL STEPS AND LANDINGS ARE SLOPED PER CODE. 2. ALL SIDEWALK LONGITUDINAL AND TRANSVERSE SLOPES ARE TO BE PER CODE.

KEYED NOTES: 1. INSTALL ROCK CONSTRUCTION ENTRANCE. REFER TO DETAIL 1/C500.0. 2. INSTALL PERIMETER EROSION CONTROL. REFER TO DETAILS 2/C500.0 AND 3/C500.0. 3. INSTALL INLET SEDIMENT PROTECTION. REFER TO DETAILS 4/C500.0, 5/C500.0, AND 6/C500.0. 4. APPROXIMATE LOCATION OF TEMPORARY CONTAINED CONCRETE WASH OUT BIN. REFER TO THE MINNESOTA'S MNDOT/SDS GENERAL STORMWATER PERMIT FOR CONSTRUCTION ACTIVITY FOR MORE DETAILS. SELF CONTAINED CONCRETE WASHOUTS ON CONCRETE DELIVERY TRUCKS IS AN ACCEPTABLE ALTERNATIVE TO ON-SITE CONTAINMENT. 5. RAIN GARDEN IS TO BE CONSTRUCTED AT THE END OF GRADING OPERATIONS ON THE TRIBUTARY AREA'S FINAL STABILIZATION HAS BEEN INSTALLED. REFER TO DETAIL 8/C500.0 FOR RAIN GARDEN CROSS SECTION. CONSTRUCTION TRAFFIC IN RAIN GARDEN AREA IS NOT ALLOWED AFTER AREA HAS BEEN EXCAVATED. PRIOR TO FINAL STABILIZATION, LOOSEN SOIL WITH MECHANICAL TILLER. RAIN GARDEN AREA IS NOT APPROVED BORROW SITE AND IS NOT TO BE USED FOR TEMPORARY SEDIMENT BASIN ONCE BASIN SUBGRADE ELEVATION HAS BEEN EXCAVATED. CONTRACTOR SHALL ENSURE THAT BASIN INFILTRATES AT A MINIMUM RATE OF 0.45-INCHES PER HOUR USING A DOUBLE RING INFILTRMETER TEST BEFORE FINAL ACCEPTANCE. DOUBLE RING INFILTRMETER TEST SHALL BE SIGNED BY A REGISTERED GEOTECHNICAL ENGINEER AND SUBMITTED TO THE CITY AND ENGINEER FOR REVIEW BEFORE FINAL APPROVAL. 6. RAIN GARDEN IS TO BE CONSTRUCTED AT THE END OF GRADING OPERATIONS ONCE THE TRIBUTARY AREA'S FINAL STABILIZATION HAS BEEN INSTALLED. REFER TO DETAIL 9/C500.0 FOR RAIN GARDEN CROSS SECTION. CONSTRUCTION TRAFFIC IN RAIN GARDEN AREA IS NOT ALLOWED AFTER AREA HAS BEEN EXCAVATED. PRIOR TO FINAL STABILIZATION, LOOSEN SOIL WITH MECHANICAL TILLER. RAIN GARDEN AREA IS NOT APPROVED BORROW SITE AND IS NOT TO BE USED FOR TEMPORARY SEDIMENT BASIN ONCE BASIN SUBGRADE ELEVATION HAS BEEN EXCAVATED. CONTRACTOR SHALL ENSURE THAT BASIN INFILTRATES AT A MINIMUM RATE OF 0.45-INCHES PER HOUR USING A DOUBLE RING INFILTRMETER TEST BEFORE FINAL ACCEPTANCE. DOUBLE RING INFILTRMETER TEST SHALL BE SIGNED BY A REGISTERED GEOTECHNICAL ENGINEER AND SUBMITTED TO THE CITY AND ENGINEER FOR REVIEW BEFORE FINAL APPROVAL.

EROSION CONTROL NOTES: 1. ALL EROSION CONTROL FACILITIES SHALL BE INSTALLED PRIOR TO ANY SITE GRADING OPERATIONS... 2. ANY EROSION CONTROL FACILITIES DEEMED NECESSARY BY THE CITY AND NINE MILE CREEK WATERSHED DISTRICT... 3. NO DEVIATIONS SHALL BE MADE FROM THE ELEVATIONS SHOWN ON THE APPROVED GRADING PLAN WITHOUT PRIOR APPROVAL FROM THE CIVIL ENGINEER... 4. FOR SITES GREATER THAN 1.0 ACRE, AS REQUIRED BY THE MPCA PERMIT REQUIREMENTS, THE PERMIT APPLICANT MUST KEEP AN EROSION CONTROL INSPECTION LOG... 5. FLOWS FROM DIVERSION CHANNELS OR PIPES (TEMPORARY OR PERMANENT) SHALL BE ROUTED TO SEDIMENTATION BASINS... 6. SITE ACCESS ROADS SHALL BE GRADED OR OTHERWISE PROTECTED WITH SILT FENCES, DIVERSION CHANNELS, OR DIKES... 7. SOILS TRACKED FROM THE SITE BY MOTOR VEHICLES OR EQUIPMENT SHALL BE CLEANED DAILY FROM PAVED ROADWAY SURFACES... 8. DUST CONTROL MEASURES SHALL BE PERFORMED PERIODICALLY WHEN CONDITIONS REQUIRE AND/OR AS DIRECTED BY THE CITY AND NINE MILE CREEK WATERSHED DISTRICT... 9. ALL EROSION CONTROL MEASURES SHALL BE USED AND MAINTAINED FOR THE DURATION OF SITE CONSTRUCTION... 10. ALL AREAS DISTURBED DURING CONSTRUCTION SHALL BE RESTORED AS SOON AS POSSIBLE...

GRADING, DRAINAGE, AND EROSION CONTROL PLAN 1/C200.0 1" = 20'

IF THE GRADED AREA IS ANTICIPATED TO BE RE-DISTURBED/DEVELOPED WITHIN SIX MONTHS, PROVIDE A TEMPORARY VEGETATIVE COVER CONSISTING OF MINNESOTA DEPARTMENT OF TRANSPORTATION (MNDOT) SEED MIXTURE 21-111 (GRASS), OR 21-112 (WINTER WHEAT), AT A RATE OF 100 POUNDS PER ACRE.

IF GRADED AREA WILL NOT BE DEVELOPED FOR A PERIOD GREATER THAN SIX MONTHS, PROVIDE A SEMI-PERMANENT VEGETATIVE COVER OF SEED MIXTURE MNDOT 22-112 AT A RATE OF 40 POUNDS PER ACRE.

GRADING BONDS OR THE EQUIVALENT SECURITIES SHALL BE RETAINED UNTIL TURF HAS GERMINATED AND SURVIVED A 60-DAY GROWING PERIOD.

ALL AREAS THAT WILL NOT BE MOWED OR MAINTAINED AS PART OF THE ULTIMATE DESIGN WILL BE PERMANENTLY RESTORED USING SEED MIXTURE MNDOT 25-141 AT A RATE OF 59 POUNDS PER ACRE.

UNLESS SPECIFIED ELSEWHERE WITHIN THE CONSTRUCTION DOCUMENTS (I.E. ARCHITECTURAL SITE PLAN OR LANDSCAPE PLAN), PERMANENT TURF RESTORATION SHALL CONSIST OF 500.

WHENEVER OTHER EROSION AND SEDIMENT CONTROL PRACTICES ARE INADEQUATE, TEMPORARY ON-SITE SEDIMENT BASINS THAT CONFORM TO THE CRITERIA FOR ON-SITE DETENTION BASINS SHALL BE PROVIDED.

MULCH, HYDROMULCH, AND TACKIFIERS MAY NOT BE USED FOR STABILIZATION IN SWALES OR DRAINAGE DITCHES UNLESS THE LONGITUDINAL SLOPE IS LESS THAN 2 PERCENT.

RUNOFF SHALL BE PREVENTED FROM ENTERING ALL STORM SEWER CATCH BASINS PROVIDING THEY ARE NOT NEEDED DURING CONSTRUCTION. WHERE STORM SEWER CATCH BASINS ARE NECESSARY FOR SITE DRAINAGE DURING CONSTRUCTION, SEDIMENT PROTECTION DEVICES AS DETAILED SHALL BE INSTALLED AND MAINTAINED AROUND ALL CATCH BASINS UNTIL THE TRIBUTARY AREA TO THE CATCH BASIN IS RESTORED.

GRADING ACTIVITIES PROPOSED TO BEGIN AFTER OCTOBER 15 WILL REQUIRE AN APPROVED PHASING SCHEDULE. THE AREA OF LAND THAT THE CITY WILL ALLOW TO BE DISTURBED AT THIS TIME OF YEAR WILL BE SEVERELY LIMITED. THE CITY WILL ALSO REQUIRE ADDITIONAL EROSION CONTROL DEVICES, I.E., TEMPORARY SEDIMENT BASINS, DOMANT SEEDING AND HIGH RATES OF APPLICATION OF BOTH SEED AND MULCH.

TO MINIMIZE EROSION, ALL 3:1 SLOPES SHALL BE COVERED WITH A MN/DOT 3885 CATEGORY 20 STRAW EROSION CONTROL BLANKETS OR SIMILAR 500.

ACCUMULATION OF ALL SEDIMENT OCCURRING IN STORM SEWERS, AND DITCHES SHALL BE REMOVED PRIOR TO, DURING, AND AFTER COMPLETION OF GRADING ACTIVITIES.

EROSION CONTROL ITEMS AND DEVICES SHALL BE REMOVED ONLY AFTER THE AREA HAS RECEIVED FINAL STABILIZATION OR AS DIRECTED BY THE CITY AND NINE MILE CREEK WATERSHED DISTRICT.

GRADING NOTES: 1. THE CONTRACTOR SHALL VISIT THE SITE, REVIEW ALL CONSTRUCTION DOCUMENTS, AND FIELD VERIFY THE EXISTING CONDITIONS PRIOR TO BIDDING. NO ADDITIONAL COMPENSATION WILL BE GIVEN FOR WORK THAT COULD HAVE BEEN IDENTIFIED BY A SITE VISIT OR CONSTRUCTION DOCUMENT REVIEW. 2. THE BACKGROUND INFORMATION WAS PREPARED BY STATEC (612) 712-2000. 3. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ASCERTAIN THE LOCATION OF ALL EXISTING UTILITIES. THE CONTRACTOR SHALL VERIFY THE LOCATION AND ELEVATION AND MARK ALL EXISTING UTILITIES 48 HOURS BEFORE CONSTRUCTION STARTS. THE ENGINEER, ARCHITECT, OR OWNER DOES NOT GUARANTEE THAT ALL UTILITIES ARE MAPPED, OR, IF MAPPED, ARE SHOWN CORRECTLY. CONTACT GOPHER STATE ONE CALL AT 651-454-0002 FOR FIELD LOCATING EXISTING UTILITIES. CONTACT UTILITY OWNER IF DAMAGE OCCURS DUE TO CONSTRUCTION. 4. PROTECT ALL EXISTING STRUCTURES AND UTILITIES WHICH ARE NOT SCHEDULED FOR REMOVAL. 5. NOTIFY CITY BUILDING INSPECTOR BEFORE TRENCHING AND EXCAVATION WORK COMMENCES. THE CONTRACTOR SHALL OBTAIN ALL APPLICABLE PERMITS PRIOR TO START OF CONSTRUCTION. 6. ALL SPOT ELEVATIONS SHOWN AS 54.50, FOR EXAMPLE, ARE TO BE UNDERSTOOD TO MEAN 54.50. 7. ALL SPOT ELEVATIONS ALONG THE CURB-LINE INDICATE THE ELEVATION OF THE CUTTER UNLESS NOTED OTHERWISE. 8. NO LANDSCAPED SLOPES ARE TO EXCEED 3:1 (3 FEET HORIZONTAL TO 1 FOOT VERTICAL) UNLESS NOTED OTHERWISE. 9. ACCESSIBLE PARKING AREAS SHALL HAVE SLOPES IN ANY DIRECTION THAT EXCEED 2%. 10. PROVIDE POSITIVE DRAINAGE FROM BUILDINGS AT ALL TIMES. 11. UPON COMPLETION OF THE GRADING AND UTILITY WORK, THE CONTRACTOR SHALL CERTIFY THAT ALL GRADING AND UTILITY WORK WAS PERFORMED IN ACCORDANCE WITH THE APPROVED GRADING AND UTILITY PERMITS. AN AS-BUILT GRADING AND UTILITY PLAN SHALL BE PERFORMED BY A REGISTERED LAND SURVEYOR HIRED BY THE CONTRACTOR. SURVEY SHALL BE PROVIDED TO CIVIL ENGINEER. 12. PRIOR TO ISSUANCE OF BUILDING PERMITS, ALL NECESSARY EROSION CONTROL DEVICES MUST BE IN PLACE AND FUNCTIONING. THE CITY AND NINE MILE CREEK WATERSHED DISTRICT WILL INSPECT THE SITE TO DETERMINE ITS SUITABILITY FOR BUILDING ACTIVITIES. IF THE PUBLIC UTILITIES HAVE NOT BEEN INSTALLED AT THIS POINT, IT MAY BE NECESSARY TO WITHHOLD BUILDING PERMITS FOR VARIOUS LOTS TO ALLOW THE CONTRACTOR ADEQUATE SPACE TO PERFORM THIS WORK. 13. ALL DEBRIS CREATED IN THE PROCESS OF CLEARING AND GRADING THE SITE SHALL BE REMOVED FROM THE SITE. THIS INCLUDES TREES AND SHRUBS. UNDER NO CIRCUMSTANCES SHALL THIS TYPE OF MATERIAL BE BURIED OR BURNED ON THE SITE. 14. THE CONTRACTOR MAY STRIP AND SALVAGE TOPSOIL FOR POTENTIAL RE-SPREADING ON THE SITE. IF APPROVED BY THE LANDSCAPE ARCHITECT AND/OR SPECIFICATIONS, SIX INCHES OF TOPSOIL - AFTER COMPACTION - SHALL BE RE-SPREAD PRIOR TO SEEDING AND MULCHING. EXCESS TOPSOIL MAY BE REMOVED FROM THE SITE PROVIDED THERE IS ADEQUATE TOPSOIL REMAINING TO PROPERLY FINISH THE SITE AS NOTED ABOVE. THE TOPSOIL, STRIPPING, STOCKPILING, AND RE-SPREADING SHALL BE DONE IN ACCORDANCE WITH, AND NOTED ON, THE APPROVED GRADING PLAN AND SPECIFICATIONS. THE CONTRACTOR SHALL REFER TO THE LANDSCAPE DRAWINGS AND SPECIFICATIONS FOR ANY SPECIAL TOPSOIL OR PLANTING REQUIREMENTS.

15. ALL GRADING OPERATIONS SHALL BE CONDUCTED IN A MANNER TO MINIMIZE THE POTENTIAL FOR SOIL EROSION. EROSION CONTROL MEASURES SHALL BE INSTALLED TO PREVENT SEDIMENT FROM RUNNING OFF ONTO ADJACENT PROPERTIES. ANY DAMAGE TO ADJACENT PROPERTIES MUST BE CORRECTED AND RESTORED AS SOON AS PERMISSION IS GRANTED FROM THE ADJACENT PROPERTY OWNERS. 16. IF CONSTRUCTION OF THE SITE WORK PROCEEDS THROUGH THE WINTER MONTHS, ANY DISTURBED AREAS OUTSIDE THE BUILDING FOOTPRINTS ARE TO BE MINIMALLY STABILIZED PRIOR TO MARCH 1 AS FOLLOWS: AREAS PLANNED TO RECEIVE PAVEMENTS ARE TO HAVE CLASS 5 BASE INSTALLED; ALL OTHER DISTURBED AREAS ARE TO BE SEED, STRAW MULCH PLACED, AND DISC-ANCHORED. 17. WINTER MULCHING: 17.A. SNOW MULCHING SHALL BE DEFINED AS MULCH MATERIAL SPREAD OVER THE TOP OF SNOW SO THAT THE MULCH MELTS THROUGH THE SNOW AND STICKS TO THE EXPOSED SOILS. 17.B. FROZEN GROUND MULCHING SHALL BE DEFINED AS MULCH MATERIAL SPREAD OVER FROZEN GROUND. MULCH MATERIALS THAT DO NOT REQUIRE DISC-ANCHORING INTO THE SOIL MAY BE PLACED WITHOUT MODIFICATION. MULCH MATERIALS THAT REQUIRE DISC-ANCHORING INTO THE SOIL MAY BE ANCHORED WITH HYDRAULIC SOIL STABILIZERS OR MAY BE FROZEN TO THE SOIL BY APPLYING WATER AT A RATE OF 2000 GALLONS PER ACRE OVER THE MULCH AS A SUBSTITUTION FOR DISC-ANCHORING. 18. RETAINING WALLS AND APPROPRIATE SAFETY FENCING ALONG THE TOP OF WALLS ARE TO BE DESIGNED AND CERTIFIED BY A REGISTERED PROFESSIONAL ENGINEER. SUBMIT RETAINING WALL SHOP DRAWINGS TO PROJECT TEAM PRIOR TO CONSTRUCTION. 19. THE CONTRACTOR SHALL LIMIT THE DISTURBED AREA AS MUCH AS POSSIBLE.

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BKM Job No. 23421.00

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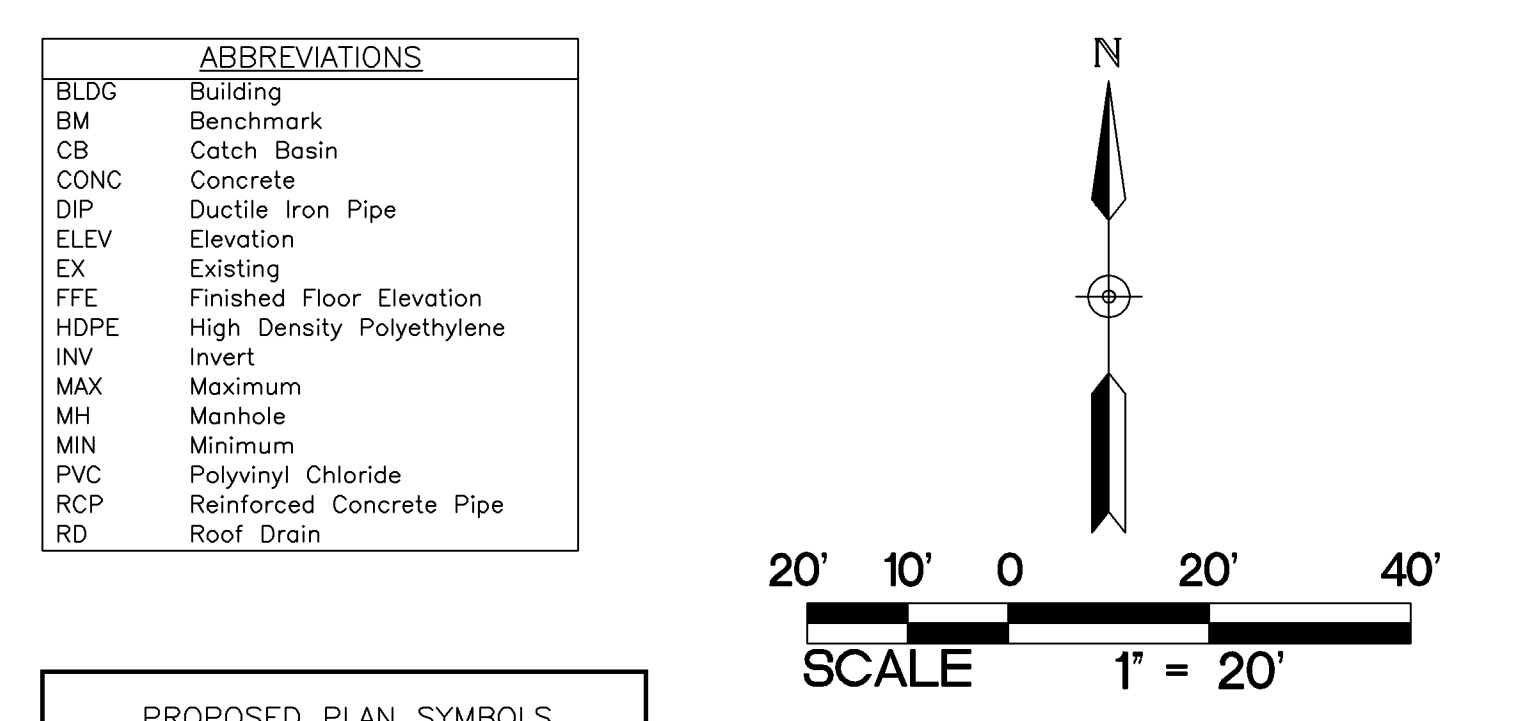
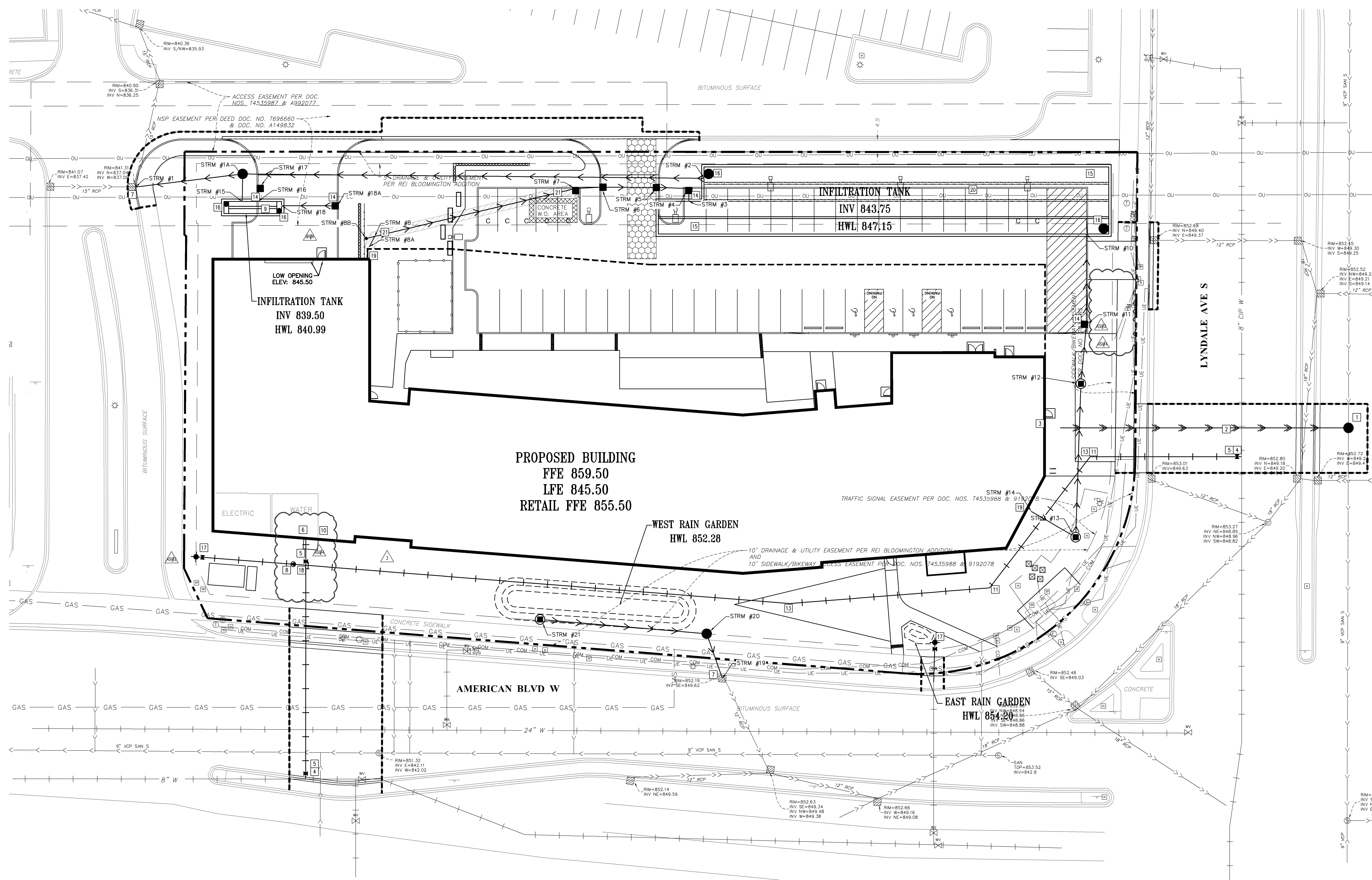
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the state of Minnesota

Keith A. Matt
SIGNED: Keith A. Matt
DATE: 4.11.2024
LICENSE #: 49674

PERMIT SET 4.11.2024

REVISIONS	DATE
PERMIT	2024-05-20
COMMENTS 1	2024-07-10
ASI #01	2024-07-10
ASI #02	2024-09-19
ASI #04	2024-10-28

GRADING, DRAINAGE, AND EROSION CONTROL PLAN
ENGINEERING DIVISION
Approved By: Julie Long, PE
10/29/2024 1:48:19 PM
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NOTE:
AN AS-BUILT SURVEY OF ALL STORMWATER BMPs (INFILTRATION TANK, OUTLET STRUCTURES, CLEAN OUTS, SUMP CATCH BASINS, ETC.) SHALL BE SUBMITTED TO NINE MILE CREEK WATERSHED DISTRICT PRIOR TO PROJECT CLOSEOUT. THE AS-BUILT SURVEY SHALL INCLUDE THE INFILTRATION TANK LAYOUT FOR VERIFICATION THAT THE SYSTEM WAS INSTALLED PROPERLY.

NOTE:
UTILITY AS-BUILT DRAWINGS MUST BE PROVIDED TO THE CITY OF BLOOMINGTON PRIOR TO THE ISSUANCE OF CERTIFICATE OF OCCUPANCY.

UTILITY NOTES FOR WORK IN PUBLIC RIGHT-OF-WAY:

- FOLLOW ALL CITY OF BLOOMINGTON AND HENNEPIN STANDARDS AND SPECIFICATIONS.
- PRIOR TO CONSTRUCTION, CONTRACTORS ARE TO COORDINATE ALL WORK WITHIN RIGHT-OF-WAY AND OBTAIN ALL APPLICABLE PERMITS.

*NOTE: CONSTRUCTION LIMITS ARE ANTICIPATED TO BE PROPERTY LINE UNLESS OTHERWISE SHOWN.

KEYED NOTES

KEYED NOTES ARE DENOTED BY [] ON PLAN.

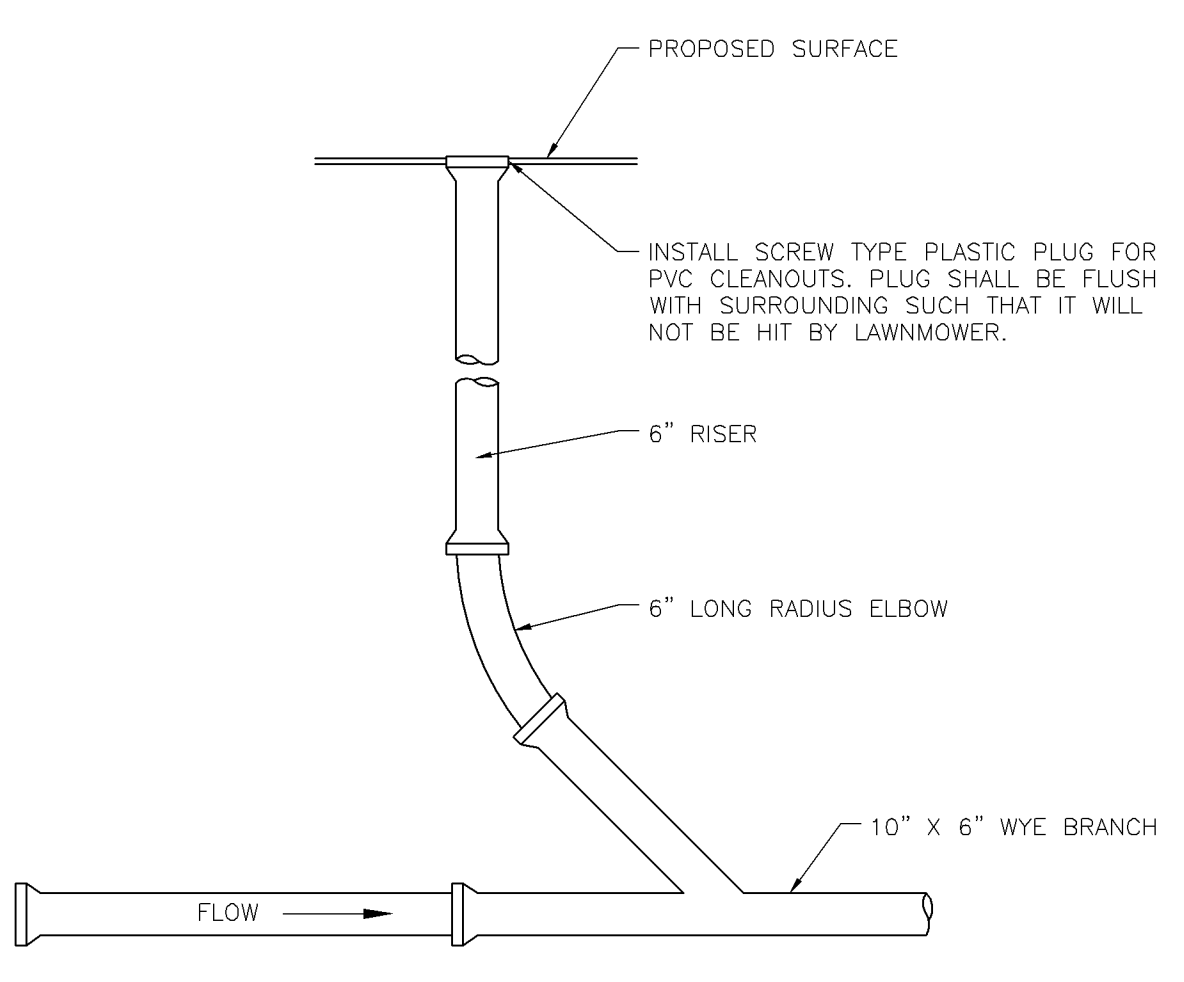
- CONTRACTOR SHALL INSTALL MANHOLE IN LINE WITH EXISTING 9-INCH VCP PIPE. APPROXIMATE INVERT OF EXISTING PIPE IS 838.45. PRIOR TO INSTALLATION OF MANHOLE, CONTRACTOR SHALL CONTACT CIVIL ENGINEER WITH EXACT INVERT ELEVATION. REFER TO DETAILS 11/C500.0 AND 14/C500.0. MANHOLE TO INCLUDE CHIMNEY SEAL AND SEALED COVER.
- INSTALL 20'-FEET OF 8-INCH PVC PIPE AT 2% TO 1% TO 10'-INCH DIA. 20'-INCH DIA. TO 10'-INCH DIA. WITH 3'-FEET OF PROPOSED BUILDING. COORDINATE EXACT LOCATION AND INVERT ELEVATION WITH MECHANICAL CONTRACTOR PRIOR TO THE START OF CONSTRUCTION.
- LOCATION OF PROPOSED SANITARY SEWER SERVICE. COORDINATE EXACT LOCATION AND INVERT ELEVATION WITH MECHANICAL CONTRACTOR PRIOR TO THE START OF CONSTRUCTION.
- INSTALL 8-INCH WET TAP. TAPS OF LIVE WATER MAINS SHALL BE PERFORMED BY THE CITY OF BLOOMINGTON AND PAID FOR AND COORDINATED WITH THE CONTRACTOR.
- INSTALL 8-INCH GATE VALVE.
- STUB 8-INCH COMBINED FIRE PROTECTION/DOMESTIC WATER SERVICE TO WITHIN 5'-FEET OF THE PROPOSED BUILDING. TOP OF WATER SERVICE SHALL BE 7'-FEET BELOW FINISHED GRADE AT THE PROPOSED CONNECTION POINT. COORDINATE EXACT LOCATION WITH MECHANICAL AND STRUCTURAL PLANS PRIOR TO THE START OF CONSTRUCTION.
- CORE DRILL EXISTING MANHOLE FOR PROPOSED PIPE CONNECTION. GROUT SEAL AROUND OPENING.
- INSTALL 8-INCH BY 6-INCH REDUCER.
- INSTALL INFILTRATION SYSTEM PER DETAIL 7/C500.1. INFILTRATION SYSTEM SHALL HAVE AN INFILTRATION VOLUME OF 172 CUBIC FEET, A TOTAL VOLUME OF 376 CUBIC FEET, AND MEET THE RATE CONTROL REQUIREMENTS INDICATED ON SHEET C600.0. SYSTEM FOOTPRINT IS BASED ON CMP PIPE DESIGN. ANY ALTERNATE DESIGNS MUST BE APPROVED BY CIVIL ENGINEER PRIOR TO CONSTRUCTION.
- INSTALL FIRE DEPARTMENT CONNECTION. REFER TO MECHANICAL PLANS.
- INSTALL 8-INCH 45-DEGREE BEND WITH THRUST BLOCKING.
- INSTALL 8-INCH 22.5-DEGREE BEND WITH THRUST BLOCKING.
- INSTALL 8-INCH 11.25-DEGREE BEND WITH THRUST BLOCKING.
- INSTALL SUMP CATCH BASIN WITH SMOOT, ENVIROHOOD, OR APPROVED EQUAL. REFER TO DETAIL 4/C500.1.
- INSTALL INFILTRATION SYSTEM PER DETAIL 10/C500.1. INFILTRATION SYSTEM SHALL HAVE AN INFILTRATION VOLUME OF 6,802 CUBIC FEET, A TOTAL VOLUME OF 14,244 CUBIC FEET, AND MEET THE RATE CONTROL REQUIREMENTS INDICATED ON SHEET C600.0. SYSTEM FOOTPRINT IS BASED ON ADS STORMWATER MC-3500 CHAMBER DESIGN. ANY ALTERNATE DESIGNS MUST BE APPROVED BY CIVIL ENGINEER PRIOR TO CONSTRUCTION.
- INSTALL ACCESS RISER PER MANUFACTURER'S RECOMMENDATIONS.
- INSTALL FIRE HYDRANT AND 6-INCH GATE VALVE.
- INSTALL 8-INCH BY 6-INCH CROSS.
- LOCATION OF PROPOSED ROOF DRAIN LEAD. REFER TO STORM SEWER TABLE FOR INVERT ELEVATIONS AND PIPE SIZES. INTENT IS FOR ENTIRE ROOF AREA TO DRAIN TO THE EAST INFILTRATION TANK. NO ALTERNATE DESIGNS WILL BE ALLOWED. COORDINATE EXACT LOCATION AND INVERT ELEVATION WITH MECHANICAL CONTRACTOR PRIOR TO THE START OF CONSTRUCTION.
- INFILTRATION TANK SYSTEM SHALL HAVE A 5'-FOOT GAP TO ALLOW FOR INSTALLATION OF LIGHT POLE. COORDINATE WITH ELECTRICAL FOR EXACT LOCATION.
- INSTALL PIPE INSULATION. REFER TO DETAIL 15/C500.

1 UTILITY PLAN
C300.0 1" = 20'

NOTE:
HOPE PIPE CONNECTIONS INTO ALL CONCRETE STRUCTURES MUST BE MADE WITH WATER TIGHT MATERIALS UTILIZING AN A-LOK OR WATERSTOP CASSETT OR BOOT, CAST-IN-PLACE RUBBER BOOT, OR APPROVED EQUAL, WHERE THE ALIGNMENT PRECLUDES THE USE OF THE ABOVE APPROVED WATER TIGHT METHODS, CONSEAL 231 WATERSTOP SEALANT, OR APPROVED EQUAL WILL ONLY BE ALLOWED AS APPROVED BY THE ENGINEER.

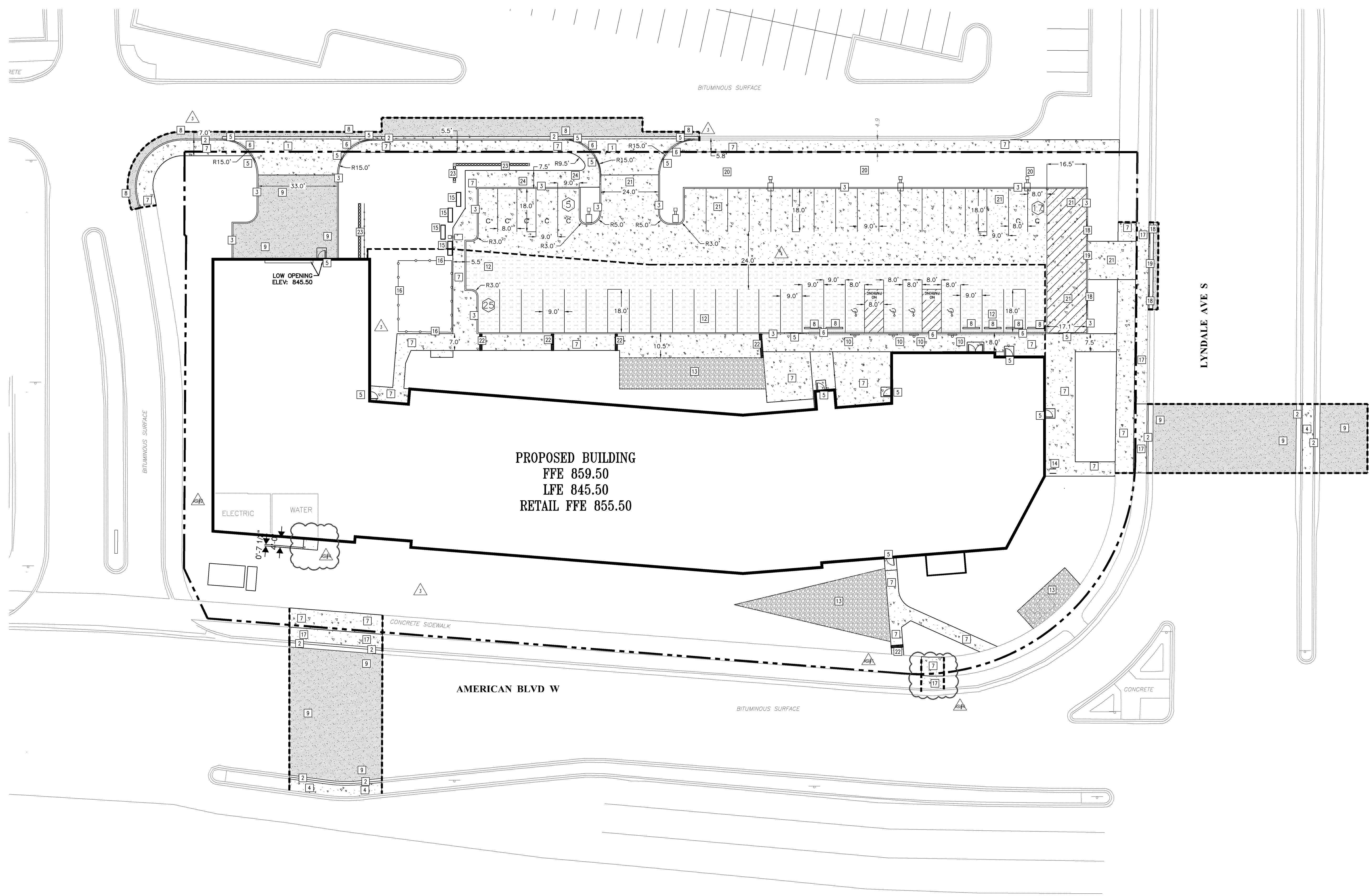
STRUCTURE ID	STRUCTURE DIMENSION (INCHES)	NEENAH CASTING TYPE	RIM ELEVATION	INVERT ELEVATION(S)	PIPE LENGTH, DIAMETER, SLOPE & NEXT UPSTREAM STRUCTURE
STRM #1	EX MH	NA	N = 837.04 W = 837.09 E = 837.61	-----	45 L.F. OF 12" RCP @ 3.39%, STRM #1A
STRM #1A	48" MH	R-1733	844.03	W = 839.13 E = 839.13 S = 840.16	192 L.F. OF 8" PVC @ 2.95%, STRM #2
STRM #2	TANK CONNECTION	NA	844.80	-----	12 L.F. OF 6" RCP @ 2.78%, STRM #15
STRM #3	TANK CONNECTION	NA	847.81	-----	5 L.F. OF 12" RCP @ 0.50%, STRM #4
STRM #4	48" SUMP CB MH	R-3067	851.52	W = 847.83 E = 847.83 S = 847.89	13 L.F. OF 12" RCP @ 0.50%, STRM #5
STRM #5	48" CB MH	R-3067	851.24	W = 847.89 E = 847.89	24 L.F. OF 12" RCP @ 0.50%, STRM #6
STRM #6	48" CB MH	R-3067	850.44	W = 848.01 E = 848.06 S = 848.19	10 L.F. OF 12" RCP @ 0.50%, STRM #7
STRM #7	48" CB MH	R-3067	851.41	W = 848.06 E = 848.19	86 L.F. OF 12" PVC @ 1.13%, STRM #8
STRM #8	10-INCH X 10-INCH PVC WYE	NA	849.16 849.16 849.16	-----	5 L.F. OF 10" PVC @ 1.10%, STRM #8A 4 L.F. OF 10" PVC @ 1.10%, STRM #8B
STRM #8A	BUILDING CONNECTION AND 10-INCH PVC 22.5 DEGREE BEND	NA	849.22	NE = 849.22	-----
STRM #8B	6" CO	NA	849.20	-----	-----
STRM #10	TANK CONNECTION	NA	848.56	-----	38 L.F. OF 15" RCP @ 1.00%, STRM #11
STRM #11	48" SUMP CB MH	R-3067	854.17	N = 848.94 W = 848.94	25 L.F. OF 12" RCP @ 1.00%, STRM #12

STRUCTURE ID	STRUCTURE DIMENSION (INCHES)	NEENAH CASTING TYPE	RIM ELEVATION	INVERT ELEVATION(S)	PIPE LENGTH, DIAMETER, SLOPE & NEXT UPSTREAM STRUCTURE
STRM #12	48" CB MH	R-2390	855.04	N = 849.19 S = 849.19	64 L.F. OF 12" PVC @ 1.00%, STRM #13
STRM #13	48" CB MH	R-2390	852.96	N = 849.83 NW = 850.00	21 L.F. OF 8" PVC @ 1.00%, STRM #14
STRM #14	BUILDING CONNECTION	NA	850.21	SE = 850.21	-----
STRM #15	TANK CONNECTION	NA	840.50	-----	-----
STRM #16	TANK CONNECTION	NA	840.80	-----	5 L.F. OF 10" PVC @ 1.00%, STRM #17
STRM #17	48" SUMP CB MH	R-3067	843.76	S = 840.65	-----
STRM #18	TANK CONNECTION	NA	841.00	E = 841.00	23 L.F. OF 10" PVC @ 1.00%, STRM #18A
STRM #18A	48" SUMP CB MH	R-3067	844.83	W = 841.23	-----
STRM #19	EX. CB	R-1733	852.00	N = 849.70 W = 849.80	20 L.F. OF 6" PVC @ 0.50%, STRM #20
STRM #20	48" MH	R-1733	852.76	S = 849.80 W = 849.80	70 L.F. OF 6" PVC @ 0.50%, STRM #21
STRM #21	48" OVERFLOW STRUCTURE	R-2390	852.25	E = 850.15	-----



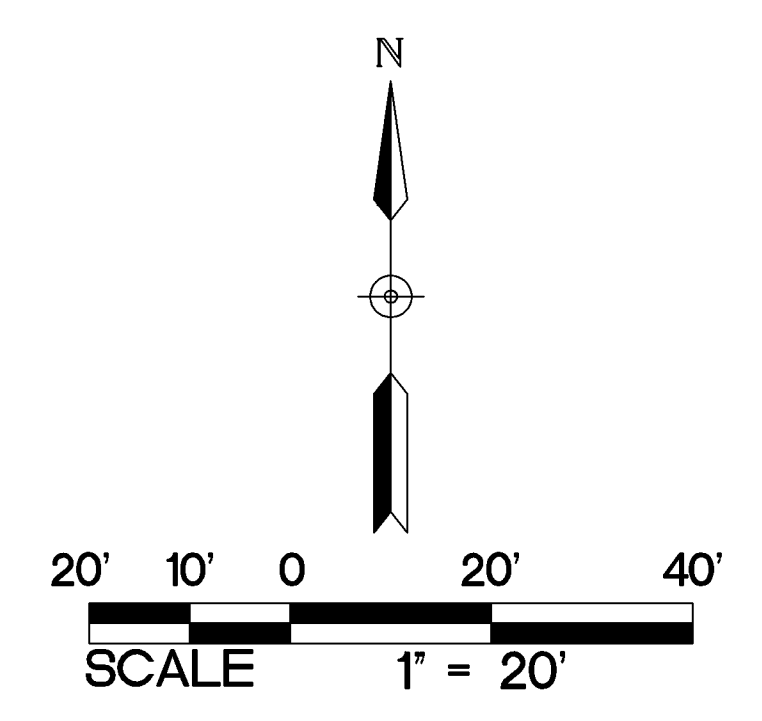
2 SEWER CLEANOUT IN PERVIOUS AREA
C300.0 NOT TO SCALE

ENGINEERING DIVISION
Approved By: Julie Long, PE
10/29/2024 1:48:31 PM



ABBREVIATIONS

BELC	Building
BM	Benchmark
CONC	Concrete
ELEV	Elevation
EX	Existing
FFE	Finished Floor Elevation
LFE	Lower Floor Elevation
MAX	Maximum
MIN	Minimum
R	Radius
TYP	Typical
MN MUTCD	Minnesota Manual on Uniform Traffic Control Devices



PROPOSED PLAN SYMBOLS

CONSTRUCTION LIMITS	---
PROPERTY LINE	---
SAWCUT LINE (APPROX.)	---
RETAINING WALL	---
HEAVY DUTY BITUMINOUS PAVEMENT	---
CONCRETE PAVEMENT/SIDEWALK	---
FLAT CURB AND GUTTER	---
CONCRETE CRUSHED STONE	---
ACCESSIBLE PARKING SYMBOL	---
SIGN	---
PARKING STALL COUNT	---
BUILDING TOPPING SLAB BY OTHERS	---

*NOTE: CONSTRUCTION LIMITS ARE ANTICIPATED TO BE PROPERTY LINE UNLESS OTHERWISE SHOWN.

KEYED NOTES

- KEYED NOTES ARE DENOTED BY [] ON PLAN.
- INSTALL CONCRETE DRIVE ENTRANCE. REFER TO DETAIL 1/C500.2.
 - INSTALL B618 CONCRETE CURB AND GUTTER. REFER TO DETAIL 2/C500.2.
 - INSTALL B612 CONCRETE CURB AND GUTTER. REFER TO DETAIL 5/C500.2.
 - INSTALL CONCRETE MEDIAN. REFER TO DETAIL 3/C500.2.
 - INSTALL NOSE-DOWN CURB SECTION. REFER TO DETAIL 7/C500.2.
 - INSTALL FLAT CONCRETE CURB. REFER TO DETAIL 6/C500.2.
 - INSTALL CONCRETE WALK. REFER TO DETAIL 14/C500.2.
 - INSTALL PRECAST CONCRETE WHEEL STOP. REFER TO DETAIL 13/C500.0.
 - INSTALL HEAVY-DUTY BITUMINOUS PAVEMENT. REFER TO DETAIL 9/C500.2.
 - INSTALL ACCESSIBLE PARKING SIGN. REFER TO DETAIL 12/C500.2.
 - STOOP. REFER TO STRUCTURAL PLANS AND DETAILS.
 - REFER TO STRUCTURAL AND ARCHITECTURAL DRAWINGS FOR CONCRETE TOPPING SLAB OVER BUILDING STRUCTURE.
 - INSTALL CRUSHED STONE. REFER TO LANDSCAPE PLANS AND SPECIFICATIONS.
 - INSTALL BIKE RACKS. REFER TO LANDSCAPE PLANS AND SPECIFICATIONS.
 - INSTALL GARDEN PLANTERS. REFER TO LANDSCAPE PLANS AND SPECIFICATIONS.
 - INSTALL FENCING. REFER TO LANDSCAPE PLANS AND SPECIFICATIONS.
 - INSTALL BRICK STAMPED CONCRETE. INTENT IS TO MATCH EXISTING CONDITIONS. REFER TO DETAIL 10/C500.2.
 - PROVIDE 10-FOOT TRANSITION BETWEEN CURB TYPES.
 - INSTALL MOUNTABLE CONCRETE CURB AND GUTTER. REFER TO DETAIL 11/C500.2.
 - SNOW STORAGE AREA.
 - INSTALL CONCRETE PAVEMENT. REFER TO DETAIL 13/C500.2.
 - INSTALL SIDEWALK CHASE. REFER TO DETAIL 8/C500.2. REFER TO DETAIL C200.0 FOR ELEVATIONS.
 - INSTALL MODULAR BLOCK RETAINING WALL. REFER TO RETAINING WALL NOTES ON SHEET C200.0.
 - TOP OF SIDEWALK SHALL BE INSTALLED BELOW TOP OF ADJACENT CURB AND GUTTER. REFER TO DETAIL 11/C500.1.
 - INSTALL 6"x4"x4" CONCRETE PAD PER DETAIL 14/C500.0. INTENT IS FOR PAD TO BE CENTERED ON FDC. SLOPE PAD AWAY FROM BUILDING AT 2% MAXIMUM SLOPE.

PAVING NOTES:

- CONTRACTOR SHALL FOLLOW ALL CITY OF BLOOMINGTON STANDARDS AND SPECIFICATIONS.
- ALL DIMENSIONS ARE TO FACE OF CURB UNLESS NOTED OTHERWISE.
- ALL CURB AND GUTTER IS TO BE B612 CONCRETE CURB AND GUTTER UNLESS NOTED OTHERWISE.
- NO SIDEWALK IS TO HAVE MORE THAN A 2% CROSS SLOPE OR MORE THAN A 5% LONGITUDINAL SLOPE.
- REFER TO ARCHITECTURAL PLANS FOR PROPOSED BUILDING LAYOUT.
- FOLLOW ALL CITY OF BLOOMINGTON RULES, REGULATIONS, AND SPECIFICATIONS WHEN WORKING IN PUBLIC RIGHT OF WAY.
- STRIPED PARKING LOT AS SHOWN. ALL PARKING STALLS ARE TO BE 9 FEET WIDE BY 18 FEET LONG, UNLESS NOTED OTHERWISE.
- ACCESSIBLE AISLES SHALL BE STRIPED PER MN CODE (SECTION 502). WHERE "NO PARKING" SIGNAGE WOULD OBSTRUCT A CURB RAMP OR ACCESSIBLE ROUTE, "NO PARKING" SHALL BE PRINTED ON THE SURFACE OF THE ACCESS AISLE.
- THE CONTRACTOR IS TO CONTACT THE CITY OF BLOOMINGTON FIRE MARSHALL FOR THE EXACT PLACEMENT OF FIRE LANES, YELLOW-PAINTED CURBING, AND NO PARKING AREAS FOR FIRE PROTECTION PURPOSES.
- INSTALL APPROPRIATE EXPANSION MATERIAL WHERE CONCRETE IS ADJACENT TO BUILDING FACE.
- ALL EXPANSION AND ISOLATION JOINTS SHALL BE SEALED PER SPECIFICATIONS.
- MATCH NEW PAVEMENT, CURB AND GUTTER, AND SIDEWALK INTO EXISTING. NO ABRUPT GRADE TRANSITIONS OR PONDING OF WATER WILL BE ALLOWED.
- SAWCUT EXISTING PAVEMENT, SIDEWALK, AND CURB AND GUTTER TO NEAREST JOINT. COORDINATE REMOVAL LIMITS WITH SITE DEMOLITION CONTRACTOR AND CONSTRUCTION MANAGER.
- INSTALL DRIVE ENTRANCE PER CITY OF BLOOMINGTON STANDARDS AND SPECIFICATIONS. FOLLOW ALL CITY OF BLOOMINGTON REQUIREMENTS FOR TRAFFIC CONTROL.
- REFER TO SPECIFICATIONS FOR GRADE VERIFICATION SURVEY REQUIREMENTS PRIOR TO PLACEMENT OF SUB-BASE MATERIAL, BASE MATERIAL, AND PAVEMENTS/SIDEWALKS.
- CONTRACTOR SHALL OBTAIN A PUBLIC WORKS PERMIT FOR OBSTRUCTIONS AND CONCRETE WORK WITHIN THE RIGHT-OF-WAY. PERMIT IS REQUIRED PRIOR TO REMOVALS OR INSTALLATION. CONTACT SEAN JENKINS (952-563-4545, SJENKINS@BLOOMINGTONMN.GOV) FOR PERMIT INFORMATION.

PROPOSED BUILDING
FFE 859.50
LFE 845.50
RETAIL FFE 855.50

1 PAVING AND GEOMETRIC PLAN
C400.0 1" = 20'

700 American
700 W AMERICAN BLVD • BLOOMINGTON, MN
961 NORTH THIRD STREET, SUITE 145, MINNEAPOLIS, MN 55401

URBANWORKS

CONSULTANT
BKBM
2024-06-01
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BKBM Job No. 23421.50

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.
Keith A. Matto
SIGNED: Keith A. Matto
DATE: 4/11/2024
LICENSE #: 49674

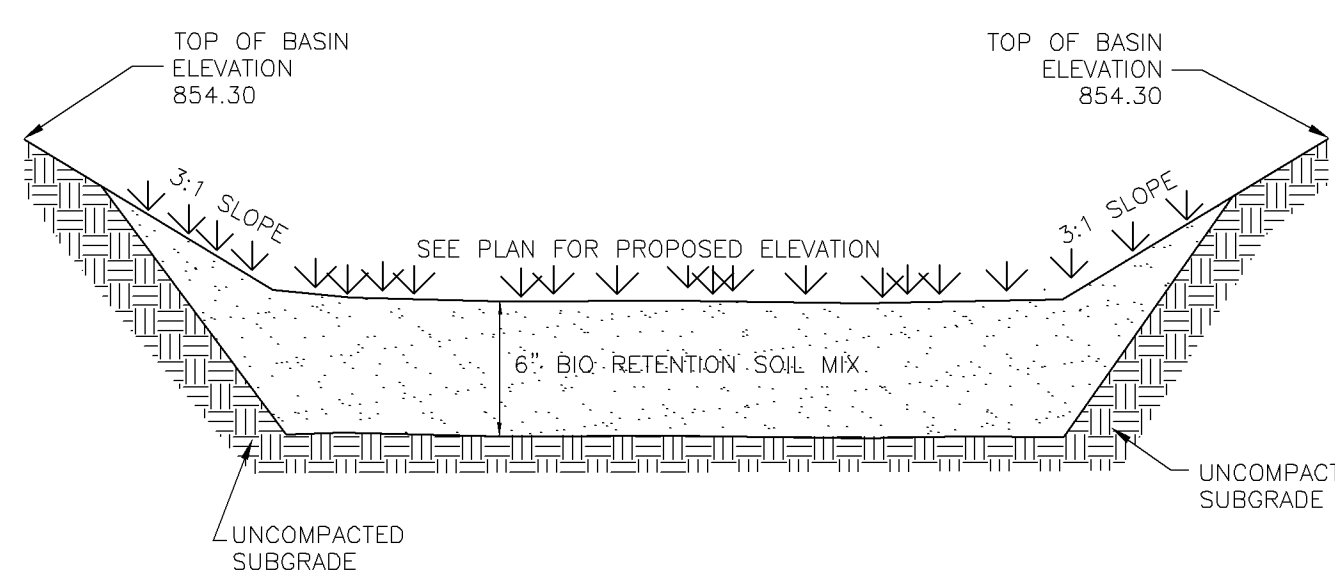
PERMIT SET
4/11/2024

REVISIONS	PERMIT	DATE
COMMENTS 1	2024-05-20	
COMMENTS 2	2024-05-30	
ASI #01	2024-07-10	
ASI #02	2024-09-19	
ASI #04	2024-10-28	

DATE: 4/11/2024
PROJECT #: 23-0001
PHASE: PERMIT SET
DRAWN BY: WH
CHECKED BY: STD

ENGINEERING DIVISION
Approved By: Julie Long, PE
10/29/2024 1:49:26 PM

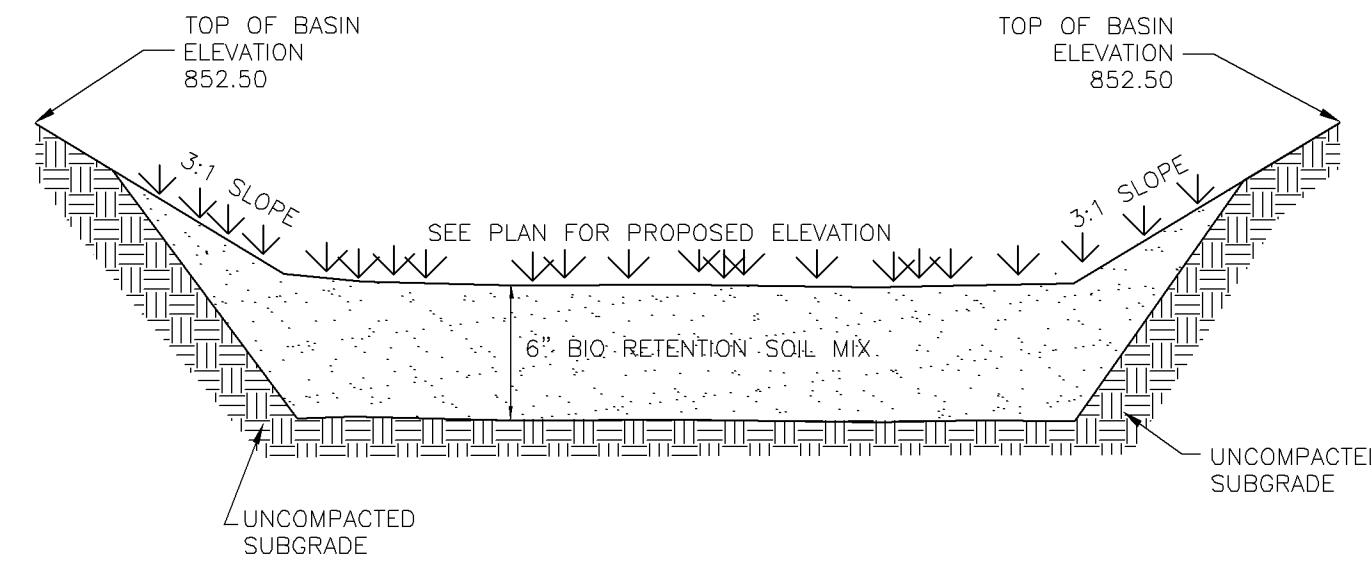
C400.0



- BIORETENTION SOIL MIX:**
- 85-88% SAND BY VOLUME (ASTM C33)
 - 8-12% FINES BY VOLUME (SILT AND CLAY, MAX CLAY CONTENT 5%)
 - 3-5% MN/DOT 3850 GRADE 2 COMPOST BY VOLUME

- NOTES:**
- SUBMIT MIX DESIGN SHOP DRAWING FOR APPROVAL.
 - CONSTRUCTION TRAFFIC IN BASIN IS NOT ALLOWED AFTER AREA HAS BEEN EXCAVATED. PRIOR TO FINAL STABILIZATION, LOOSEN SOIL WITH MECHANICAL TILLER. BASINS ARE NOT APPROVED BORROW SITES AND ARE NOT TO BE USED AS TEMPORARY SEDIMENT BASIN ONCE BASIN SUBGRADE ELEVATION HAS BEEN EXCAVATED. CONTRACTOR SHALL ENSURE THAT BASIN INFILTRATES AT A MINIMUM RATE AS INDICATED ON PLAN USING A DOUBLE RING INFILTROMETER TEST BEFORE FINAL ACCEPTANCE. DOUBLE RING INFILTROMETER TEST SHALL BE SIGNED BY A REGISTERED GEOTECHNICAL ENGINEER AND SUBMITTED TO THE CITY AND ENGINEER FOR REVIEW BEFORE FINAL APPROVAL.
 - APPLY MN/DOT 3S-221 SEED MIX, ON SIDE SLOPES, AND 33-261 SEED MIX, ON BASIN BOTTOM, AT A RATE OF 35 LB PER ACRE. ADD AN ADDITIONAL 10 LB PER ACRE OF MN/DOT 21-111 CATS TO BOTH MIXES.

9 EAST RAIN GARDEN SECTION
(C500.1) NOT TO SCALE



- BIORETENTION SOIL MIX:**
- 85-88% SAND BY VOLUME (ASTM C33)
 - 8-12% FINES BY VOLUME (SILT AND CLAY, MAX CLAY CONTENT 5%)
 - 3-5% MN/DOT 3850 GRADE 2 COMPOST BY VOLUME

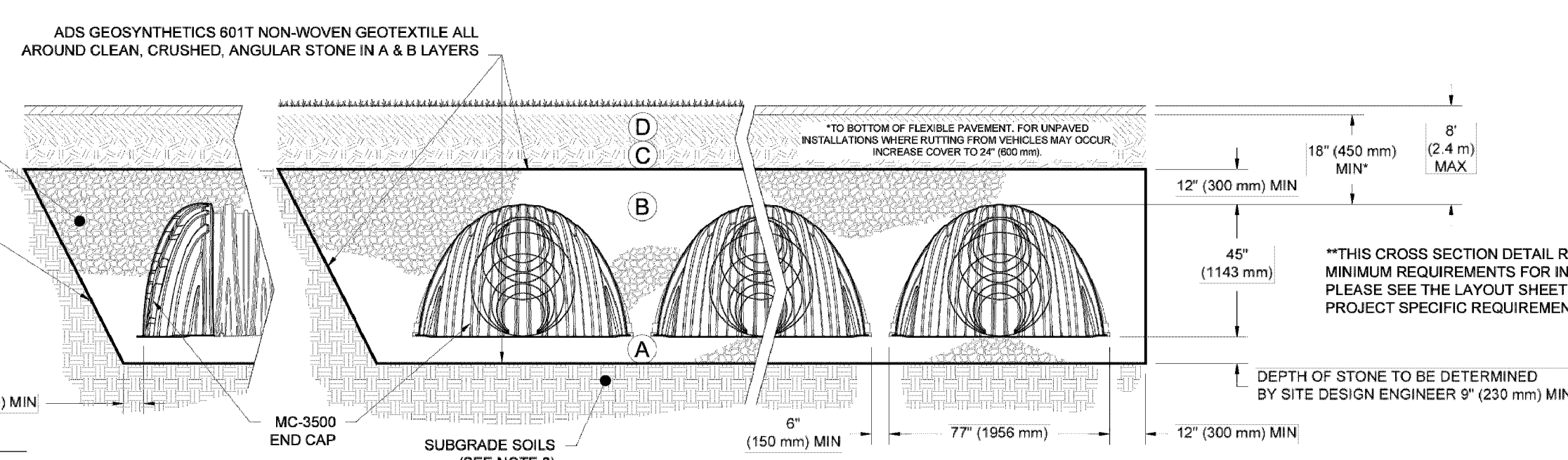
- NOTES:**
- SUBMIT MIX DESIGN SHOP DRAWING FOR APPROVAL.
 - CONSTRUCTION TRAFFIC IN BASIN IS NOT ALLOWED AFTER AREA HAS BEEN EXCAVATED. PRIOR TO FINAL STABILIZATION, LOOSEN SOIL WITH MECHANICAL TILLER. BASINS ARE NOT APPROVED BORROW SITES AND ARE NOT TO BE USED AS TEMPORARY SEDIMENT BASIN ONCE BASIN SUBGRADE ELEVATION HAS BEEN EXCAVATED. CONTRACTOR SHALL ENSURE THAT BASIN INFILTRATES AT A MINIMUM RATE AS INDICATED ON PLAN USING A DOUBLE RING INFILTROMETER TEST BEFORE FINAL ACCEPTANCE. DOUBLE RING INFILTROMETER TEST SHALL BE SIGNED BY A REGISTERED GEOTECHNICAL ENGINEER AND SUBMITTED TO THE CITY AND ENGINEER FOR REVIEW BEFORE FINAL APPROVAL.
 - APPLY MN/DOT 3S-221 SEED MIX, ON SIDE SLOPES, AND 33-261 SEED MIX, ON BASIN BOTTOM, AT A RATE OF 35 LB PER ACRE. ADD AN ADDITIONAL 10 LB PER ACRE OF MN/DOT 21-111 CATS TO BOTH MIXES.

8 WEST RAIN GARDEN SECTION
(C500.1) NOT TO SCALE

ACCEPTABLE FILL MATERIALS: STORMTECH MC-3500 CHAMBER SYSTEMS

MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	FINAL FILL: FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEEBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	INITIAL FILL: FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDED STONE (IF LAYER) TO 18" (450 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'C' LAYER.	AASHTO M40 ¹ A-1.6-A.4.3 OR AASHTO M43 ¹ 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 18" (450 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 12" (300 mm) MAX LIFTS TO A MIN. 90% PROCTOR DENSITY FOR WELL GRADED MATERIAL, AND 90% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS.
B	EMBEDDED STONE: FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE (A LAYER) TO THE 'C' LAYER ABOVE.	AASHTO M43 ¹ 3, 357, 4, 467, 5, 56, 57	NO COMPACTION REQUIRED.
A	FOUNDATION STONE: FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	AASHTO M43 ¹ 3, 357, 4, 467, 5, 56, 57	FLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE. ^{1,2}

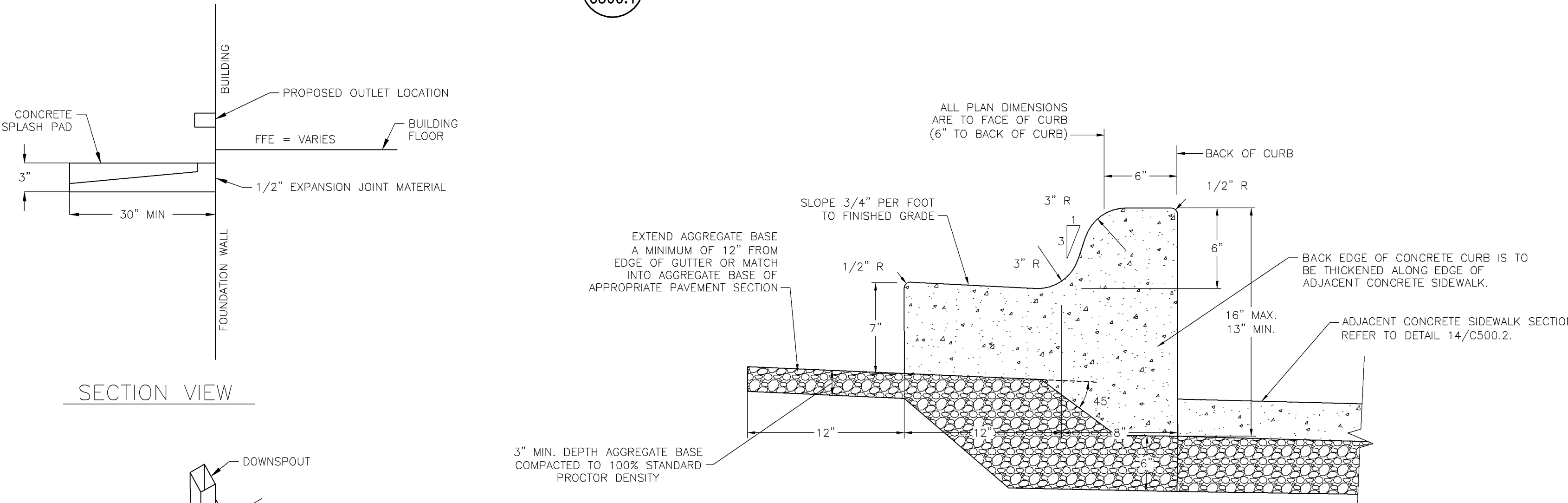
- PLEASE NOTE:**
- THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
 - STORMTECH COMPACTION REQUIREMENTS ARE MET FOR VARIOUS LOCATION MATERIALS WHEN COMPACTED IN 12" (300 mm) MAX LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
 - WHERE INFILTRATION REQUIREMENTS MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAMMING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.
 - ONCE LAYER 'C' IS PLACED, ANY SOIL MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.
 - WHERE RECYCLED CONCRETE AGGREGATE IS USED IN LAYERS 'A' OR 'B' THE MATERIAL SHOULD ALSO MEET THE ACCEPTABILITY CRITERIA OUTLINED IN TECHNICAL NOTE 5.20 "RECYCLED CONCRETE STRUCTURAL BACKFILL".



- NOTES:**
- CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2414, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS" CHAMBER CLASSIFICATION 45/9 DESIGNATION S6.
 - MC-3500 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
 - THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
 - PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
 - REQUIREMENTS FOR HANDLING AND INSTALLATION:
 - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
 - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 3".
 - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 8.2.8 OF ASTM F2414 SHALL BE GREATER THAN OR EQUAL TO 500 LBS/FT². AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (AVERAGE 70°F / 21°C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.

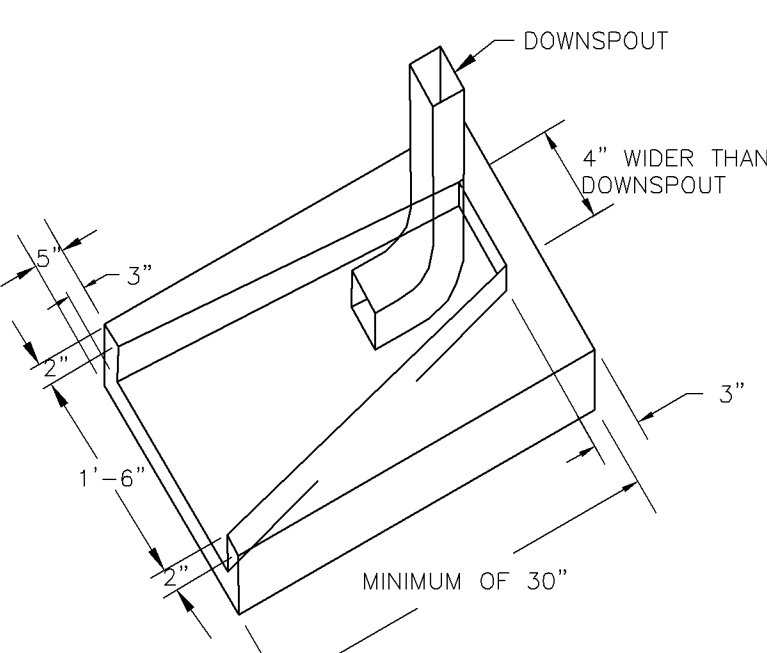
- ALL CONNECTION POINTS ARE TO BE SOIL PROOF.
- ACCESS RISERS AND CONCRETE COLLARS SHALL BE DESIGNED TO WITHSTAND H2525 LOADING.
- PIPE SHALL BE FURNISHED WITH PERFORATIONS 3/8" IN DIAMETER AND PERFORATED FOR THE FULL 360 DEGREE CIRCUMFERENCE OF THE PIPE. MINIMUM OPEN AREA SHALL BE 2.3% OR GREATER.
- CONSTRUCTION TRAFFIC IN TANK BASIN IS NOT ALLOWED AFTER AREA HAS BEEN EXCAVATED. PRIOR TO FINAL STABILIZATION, LOOSEN SOIL WITH MECHANICAL TILLER. TANK BASINS ARE NOT APPROVED BORROW SITES AND ARE NOT TO BE USED AS TEMPORARY SEDIMENT BASIN ONCE BASIN SUBGRADE ELEVATION HAS BEEN EXCAVATED. CONTRACTOR SHALL ENSURE THAT BASIN INFILTRATES AT A MINIMUM RATE AS INDICATED ON PLAN USING A DOUBLE RING INFILTROMETER TEST BEFORE FINAL ACCEPTANCE. DOUBLE RING INFILTROMETER TEST SHALL BE SIGNED BY A REGISTERED GEOTECHNICAL ENGINEER AND SUBMITTED TO THE CITY AND ENGINEER FOR REVIEW BEFORE FINAL APPROVAL.

10 EAST INFILTRATION TANK
(C500.1) NOT TO SCALE

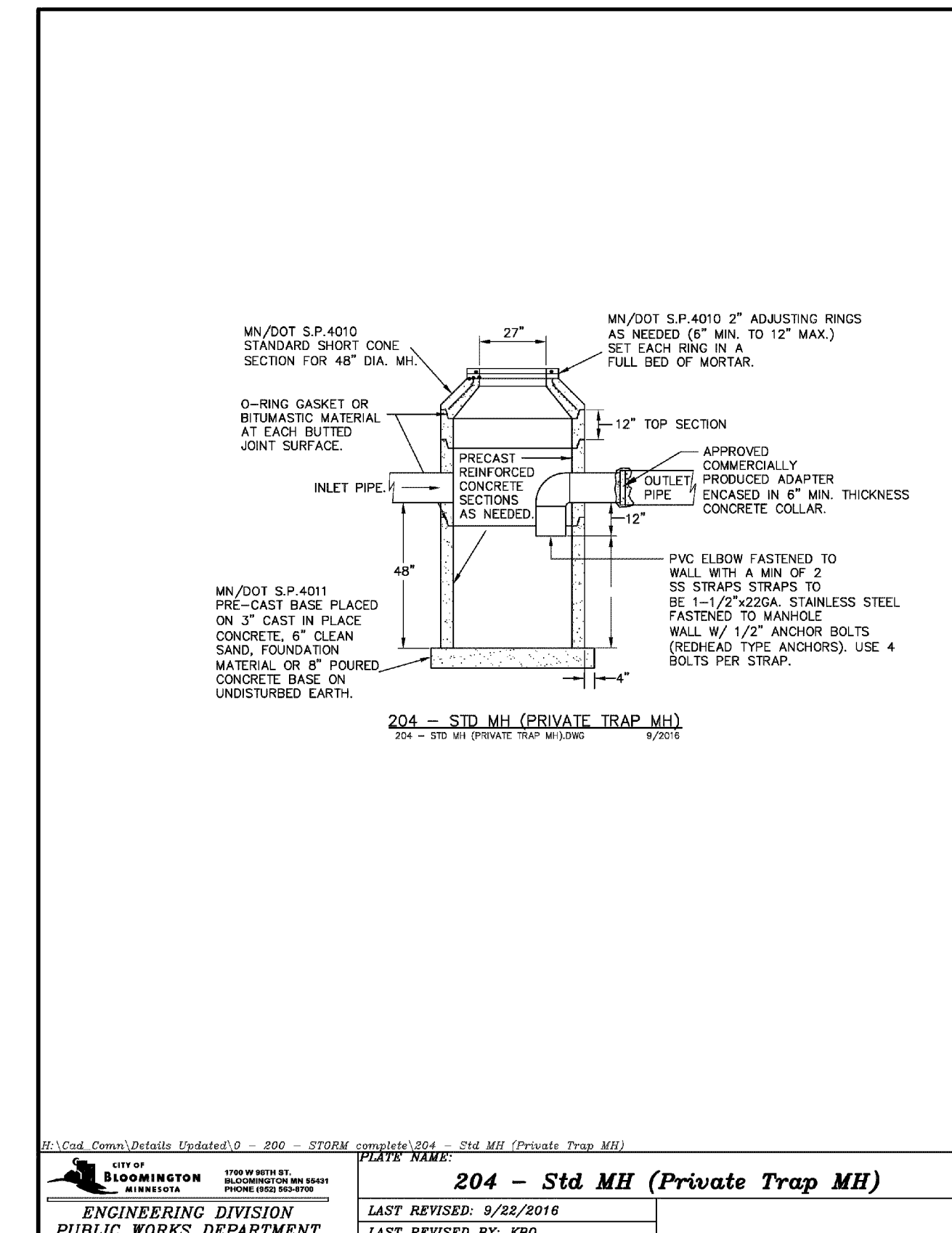


- NOTES:**
- DIRECTION OF TRANSVERSE GUTTER SLOPE TO MATCH DIRECTION OF ADJACENT PAVEMENT SLOPE.
 - CONSTRUCT CURB AND GUTTER IN ACCORDANCE WITH MN/DOT STANDARD 2531.

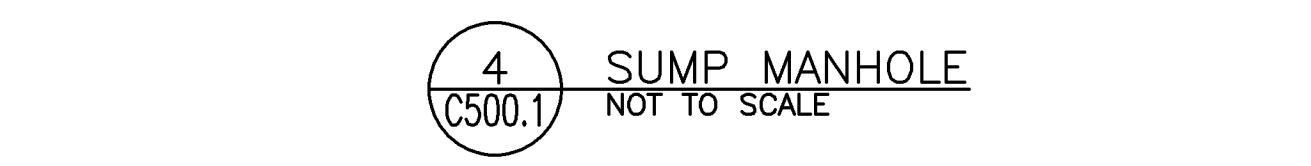
11 B612 CONCRETE CURB AND GUTTER WITH THICKENED BACK EDGE
(C500.1) NOT TO SCALE



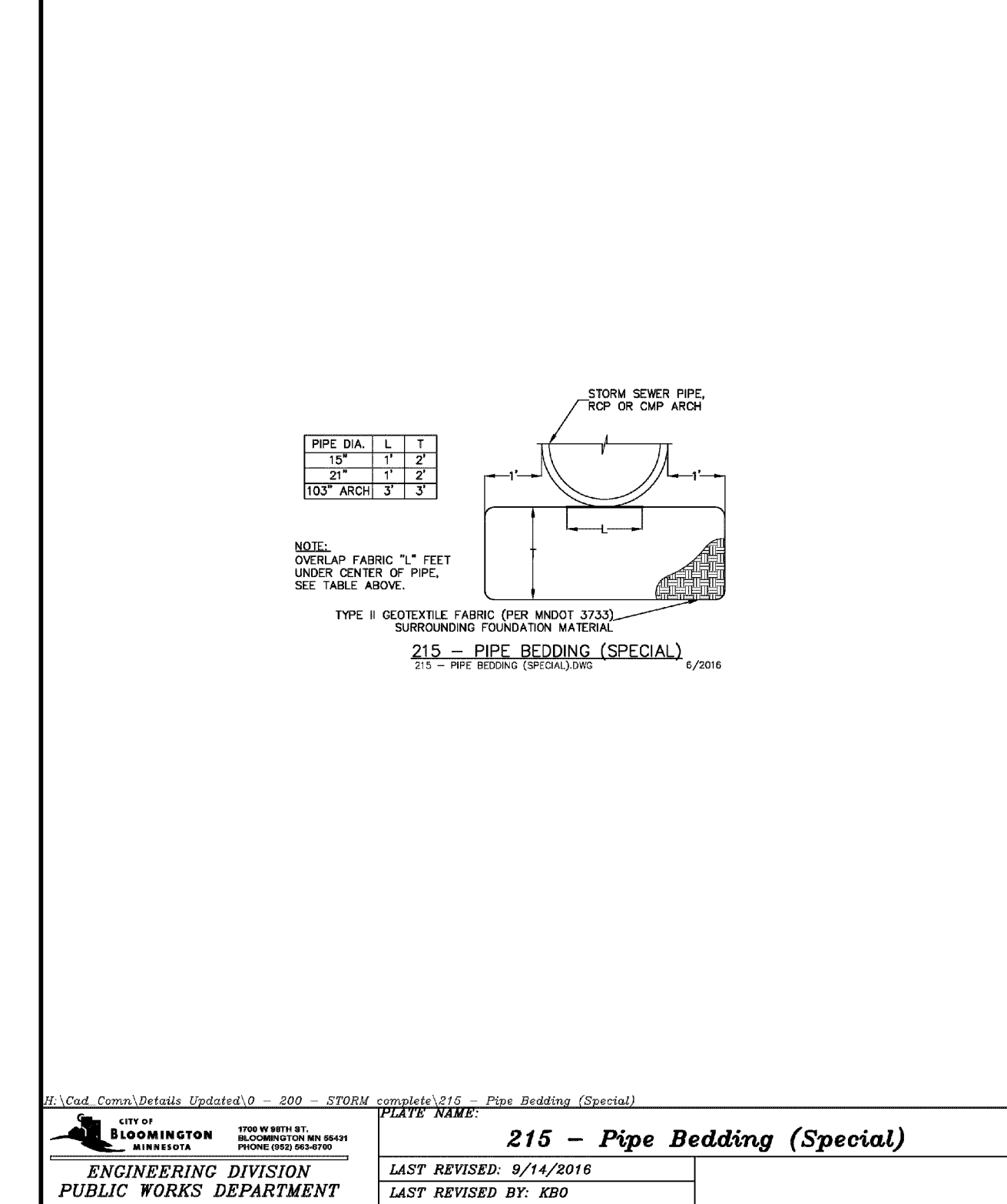
12 PRECAST CONCRETE SPLASH BLOCK
(C500.1) NOT TO SCALE



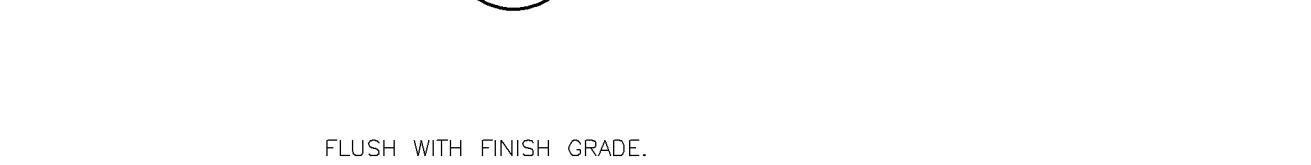
204 - Std MH (Private Trap MH)
(C500.1) NOT TO SCALE



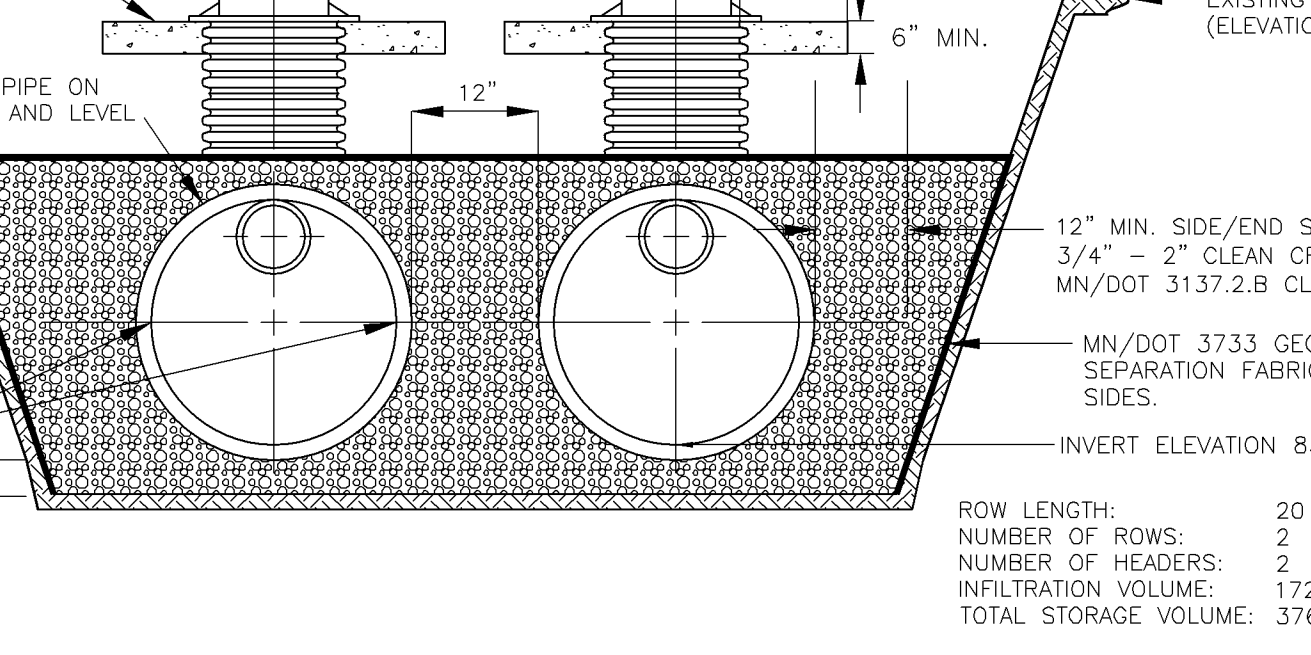
4 SUMP MANHOLE
(C500.1) NOT TO SCALE



215 - Pipe Bedding (Special)
(C500.1) NOT TO SCALE

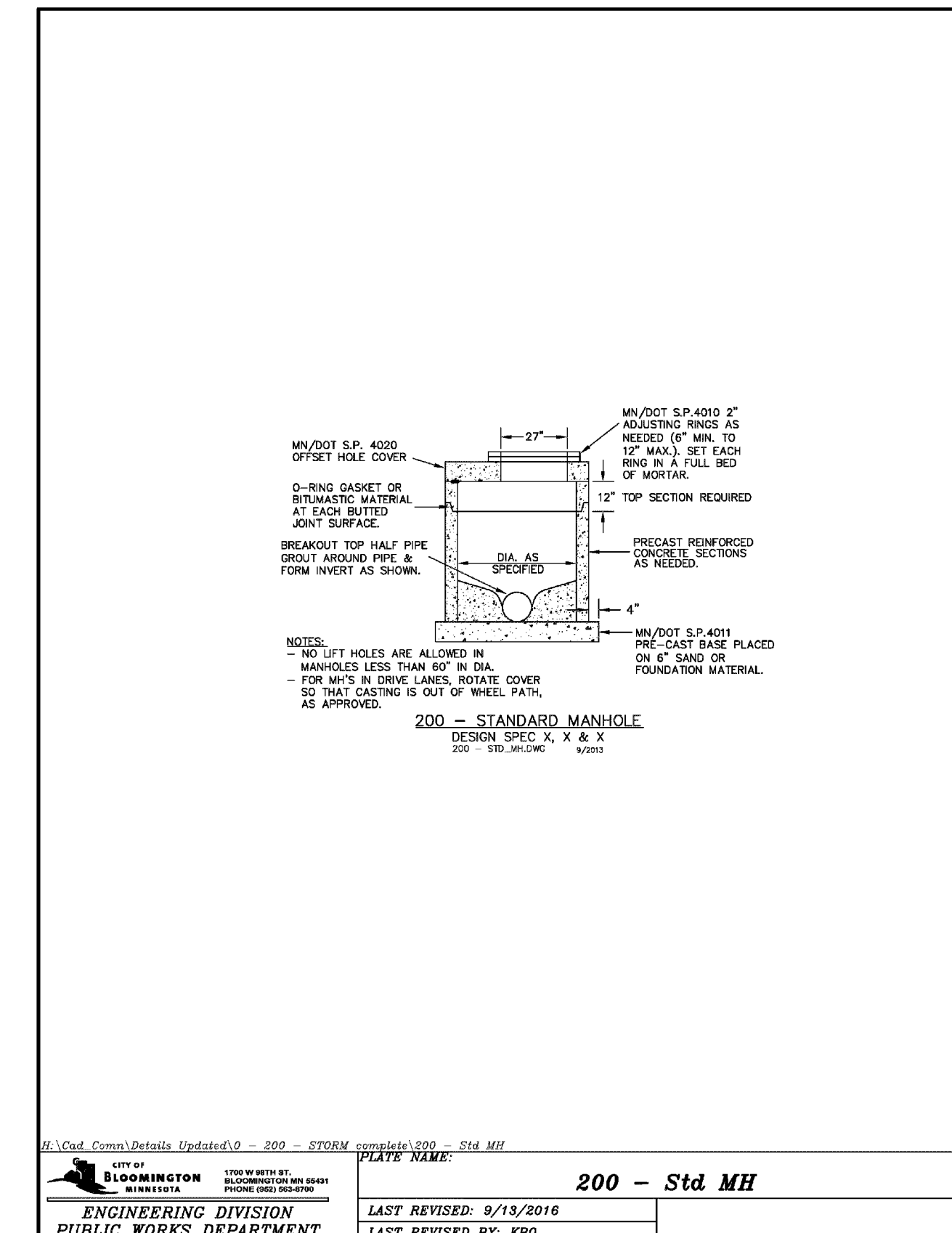


201 - Std MH (2x3 Cov)
(C500.1) NOT TO SCALE

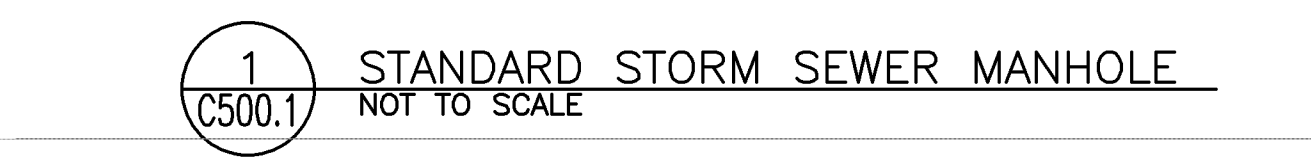


- CONTRACTOR HAS OPTION TO USE CMP OR HORE PIPE. SYSTEM LAYOUT IS DESIGNED BASED ON CMP PIPE. ANY ALTERNATE DESIGNS MUST BE APPROVED BY CIVIL ENGINEER PRIOR TO CONSTRUCTION.
- UTILIZE CARE WHEN LOWERING UNIT INTO THE TRENCH. HANDLE USING NYLON SLINGS AND TWO PICK POINTS.
- PLACE BACKFILL AROUND THE UNIT IN UNIFORM 8"-12" LIFTS, COMPACTED TO 95% SPD.
- WHEN THE UNIT CONSISTS OF 2 SECTIONS, PLACE THE DOWNSTREAM SECTION FIRST. CONNECT AND HOME THE REMAINING SECTIONS.
- ALL CONNECTION POINTS ARE TO BE SOIL PROOF.
- ACCESS RISERS AND CONCRETE COLLARS SHALL BE DESIGNED TO WITHSTAND H2525 LOADING.
- PIPE SHALL BE FURNISHED WITH PERFORATIONS 3/8" IN DIAMETER AND PERFORATED FOR THE FULL 360 DEGREE CIRCUMFERENCE OF THE PIPE. MINIMUM OPEN AREA SHALL BE 2.3% OR GREATER.
- CONSTRUCTION TRAFFIC IN TANK BASIN IS NOT ALLOWED AFTER AREA HAS BEEN EXCAVATED. PRIOR TO FINAL STABILIZATION, LOOSEN SOIL WITH MECHANICAL TILLER. TANK BASINS ARE NOT APPROVED BORROW SITES AND ARE NOT TO BE USED AS TEMPORARY SEDIMENT BASIN ONCE BASIN SUBGRADE ELEVATION HAS BEEN EXCAVATED. CONTRACTOR SHALL ENSURE THAT BASIN INFILTRATES AT A MINIMUM RATE AS INDICATED ON PLAN USING A DOUBLE RING INFILTROMETER TEST BEFORE FINAL ACCEPTANCE. DOUBLE RING INFILTROMETER TEST SHALL BE SIGNED BY A REGISTERED GEOTECHNICAL ENGINEER AND SUBMITTED TO THE CITY AND ENGINEER FOR REVIEW BEFORE FINAL APPROVAL.

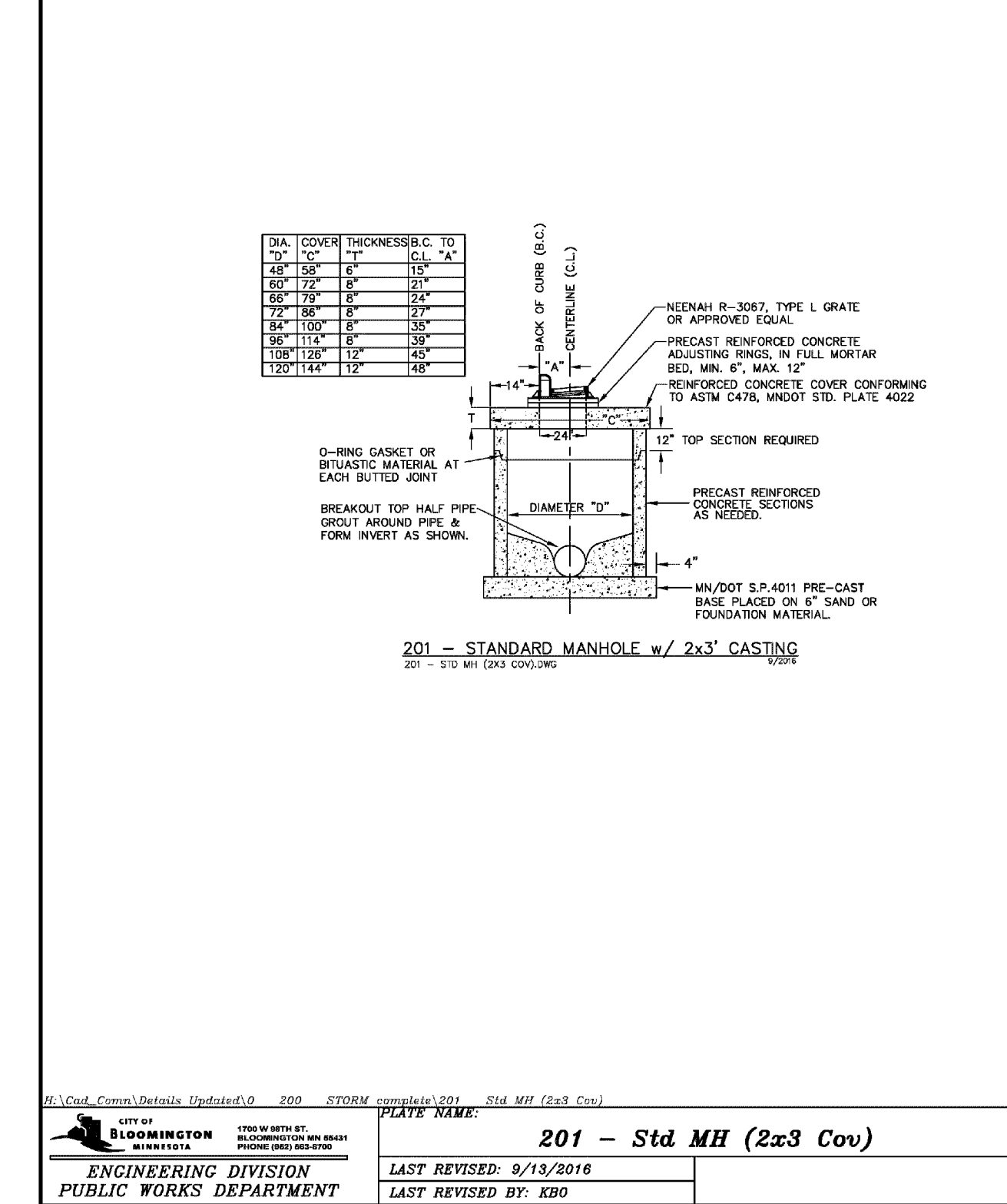
7 WEST INFILTRATION TANK DETAIL
(C500.1) NOT TO SCALE



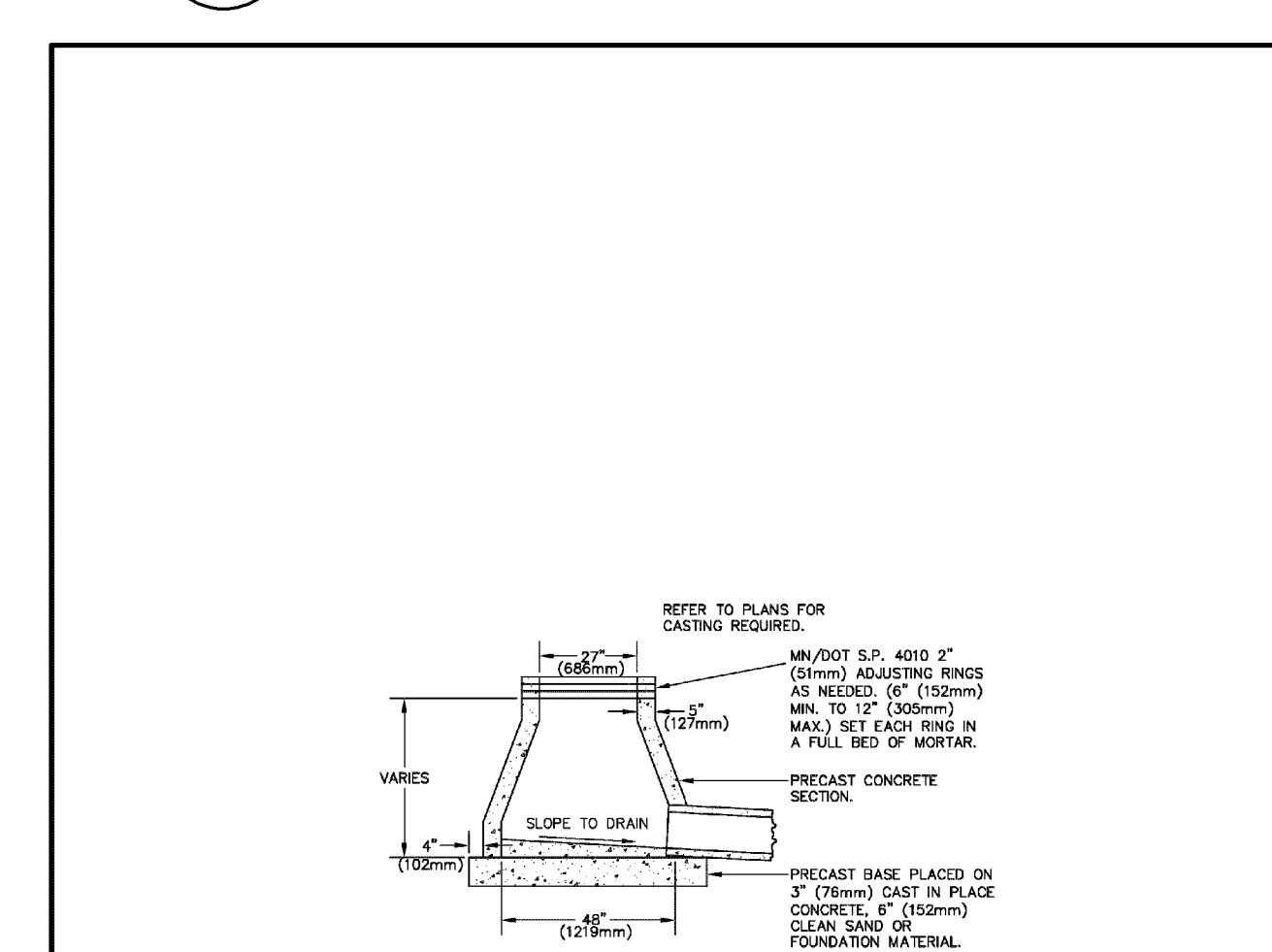
200 - Std MH
(C500.1) NOT TO SCALE



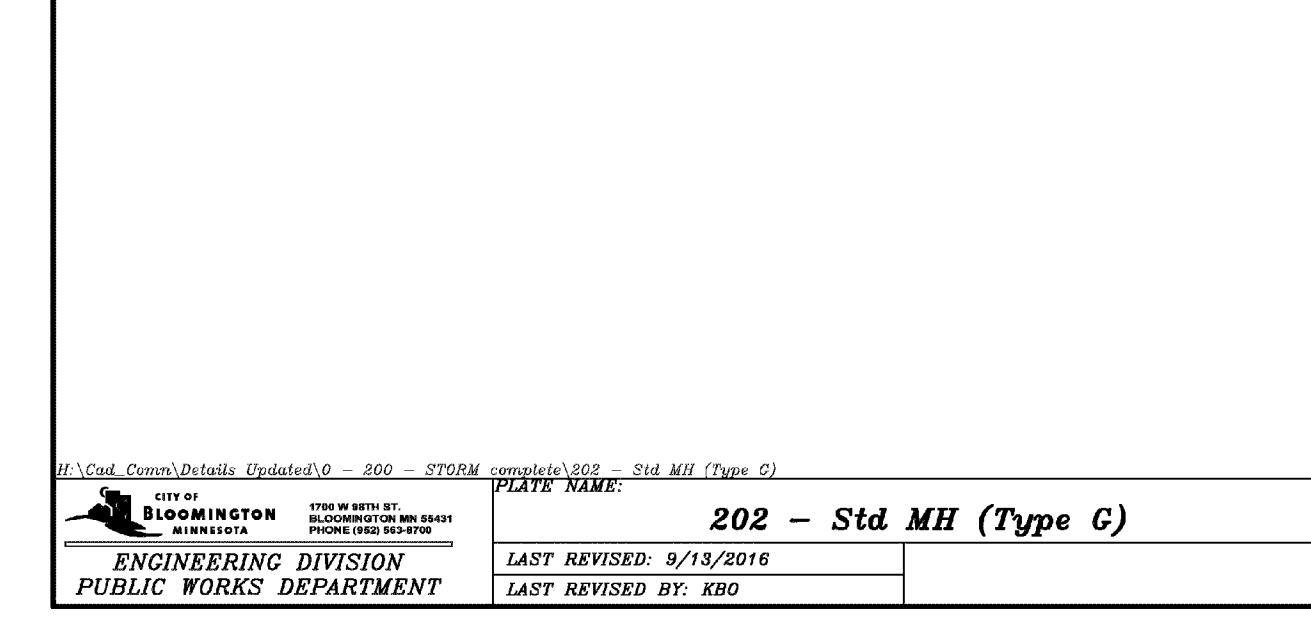
201 - Std MH (2x3 Cov)
(C500.1) NOT TO SCALE



201 - Std MH (2x3 Cov)
(C500.1) NOT TO SCALE



202 - Std MH (Type G)
(C500.1) NOT TO SCALE



202 - Std MH (Type G)
(C500.1) NOT TO SCALE

PL202300178
PL2023-178

700 American
700 W AMERICAN BLVD - BLOOMINGTON, MN

URBANWORKS
URBANWORKS ARCHITECTURE LLC, 2019
981 NORTH THIRD STREET, SUITE 145, MINNEAPOLIS, MN 55401

CONSULTANT
BKBK
1101 East Brown Drive, Suite 100
Minneapolis, MN 55410
Phone: (763) 843-0421
www.bkbk.com

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.
Keith A. Matta
SIGNED: Keith A. Matta
DATE: 4/11/2024
LICENSE #: 40674

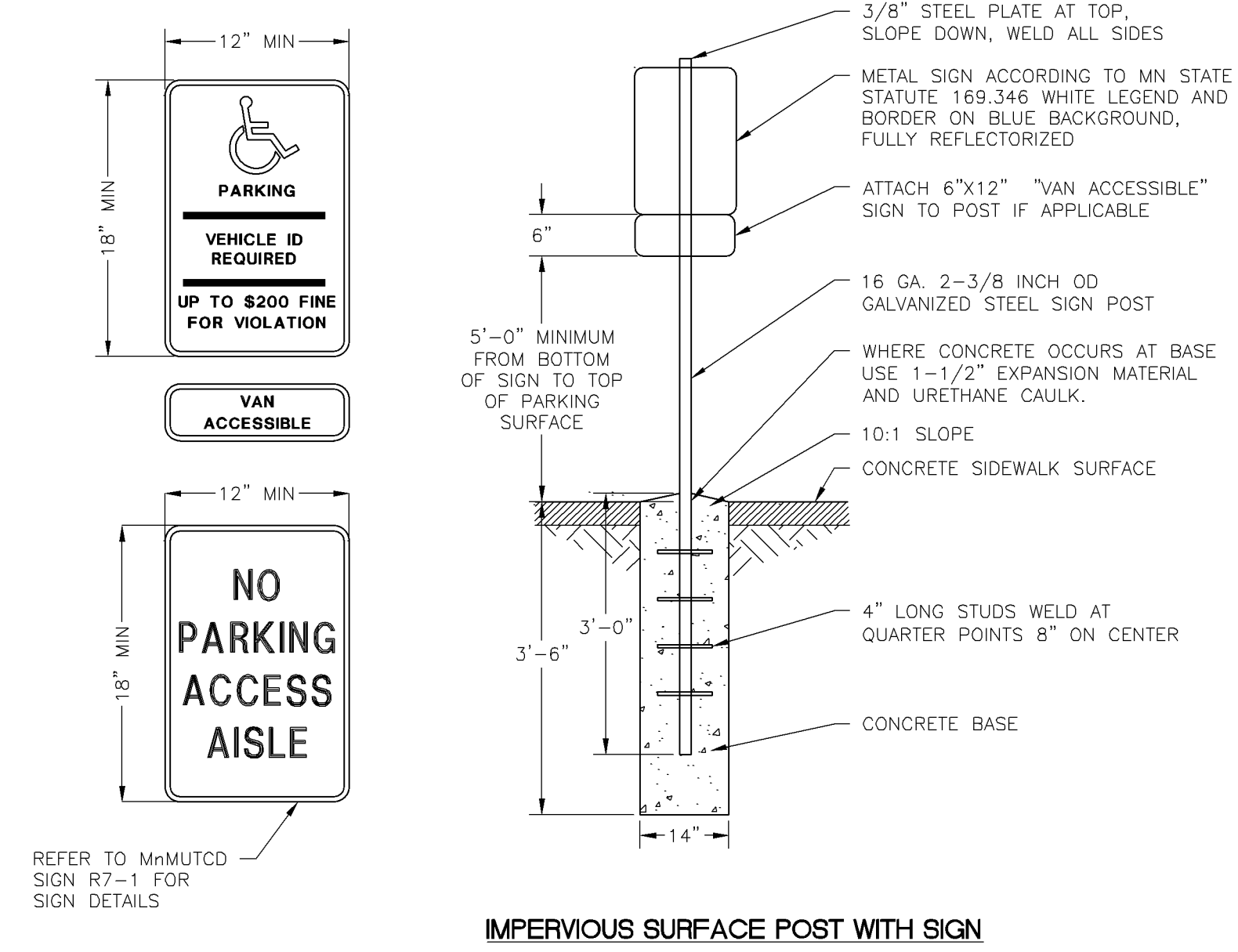
PERMIT SET
4.11.2024

REVISIONS

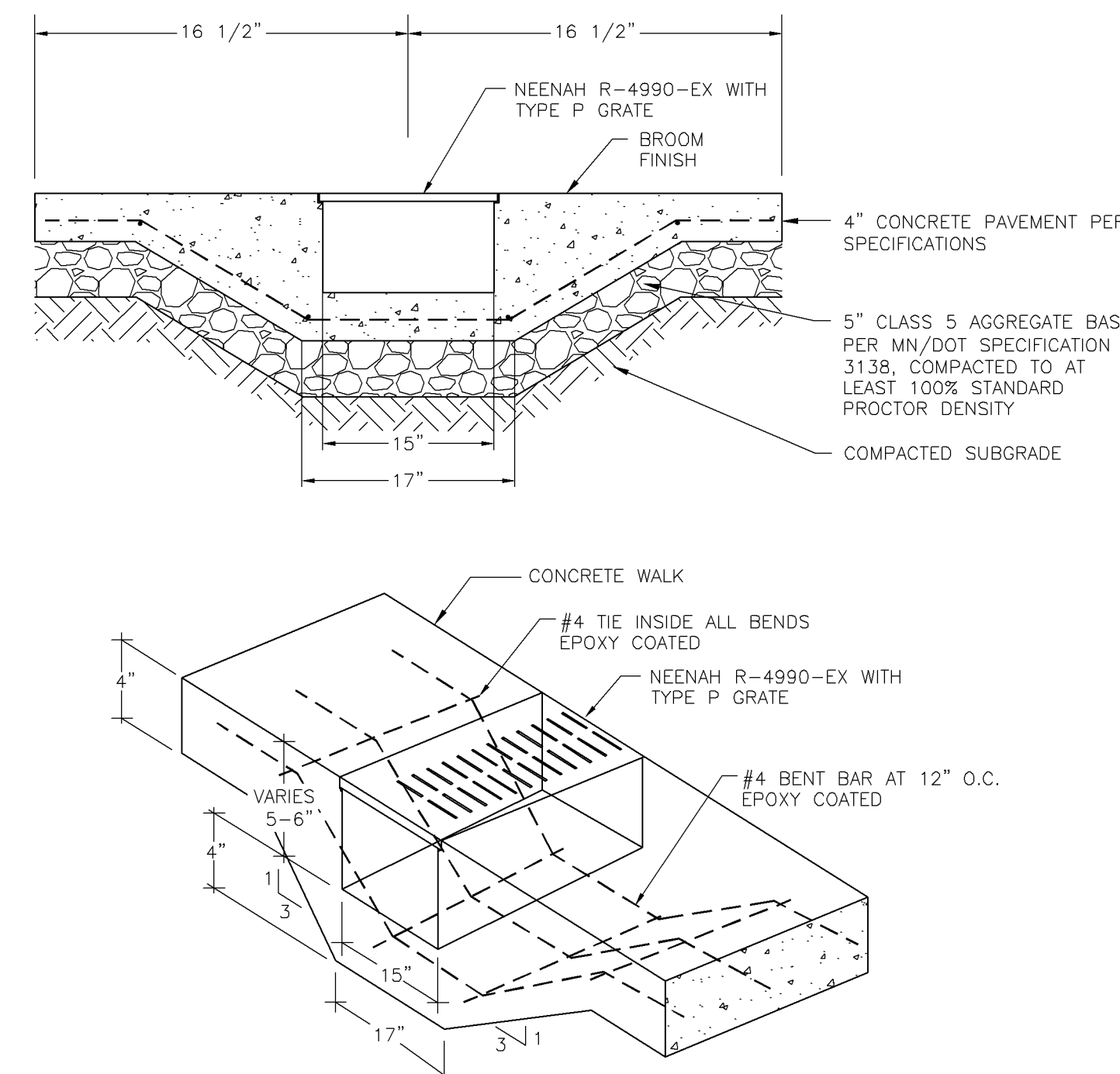
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PROJECT #: 23-0001
PHASE: PERMIT SET
DRAWN BY: WH
CHECKED BY: STD

CIVIL DETAILS

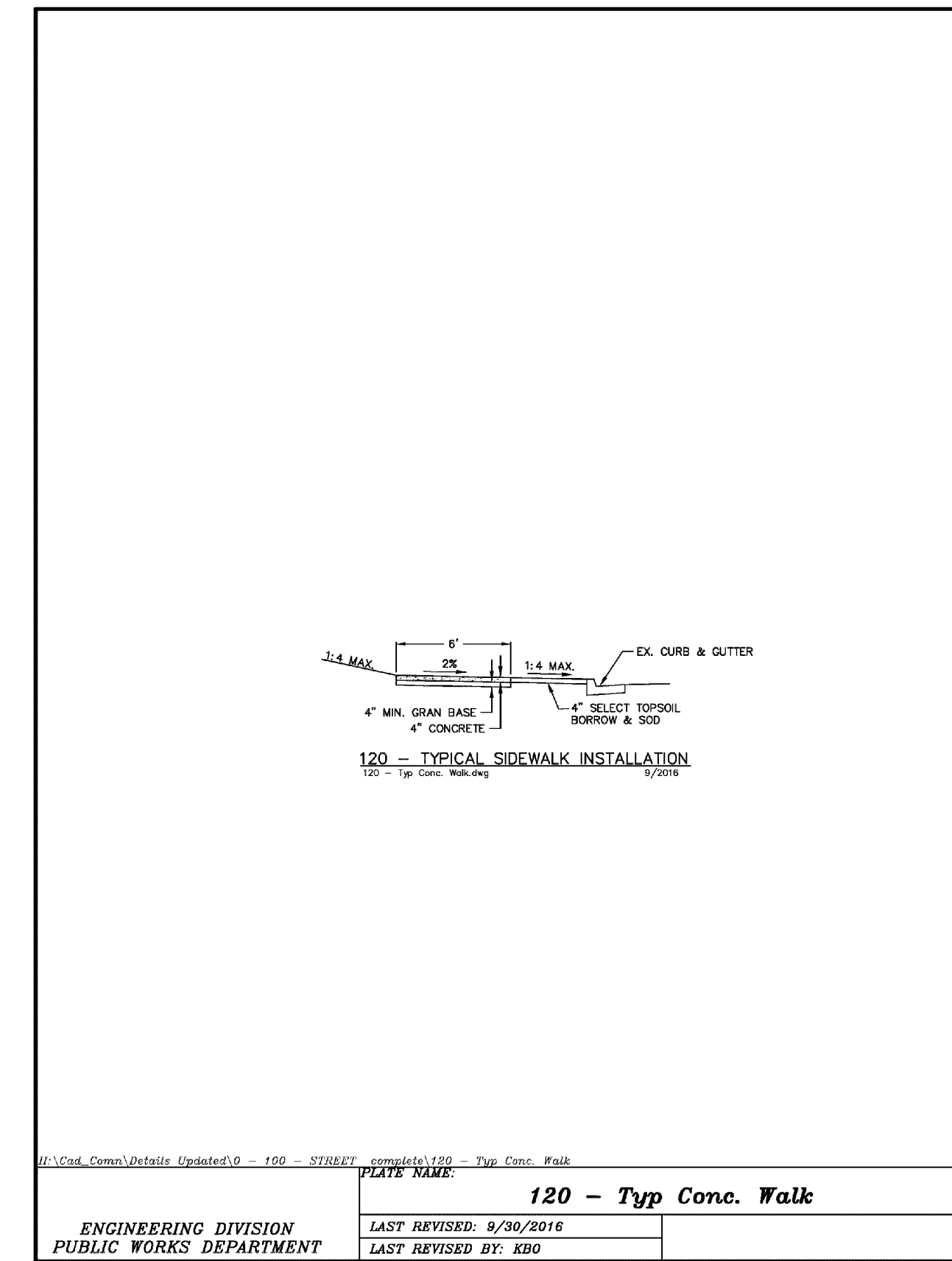
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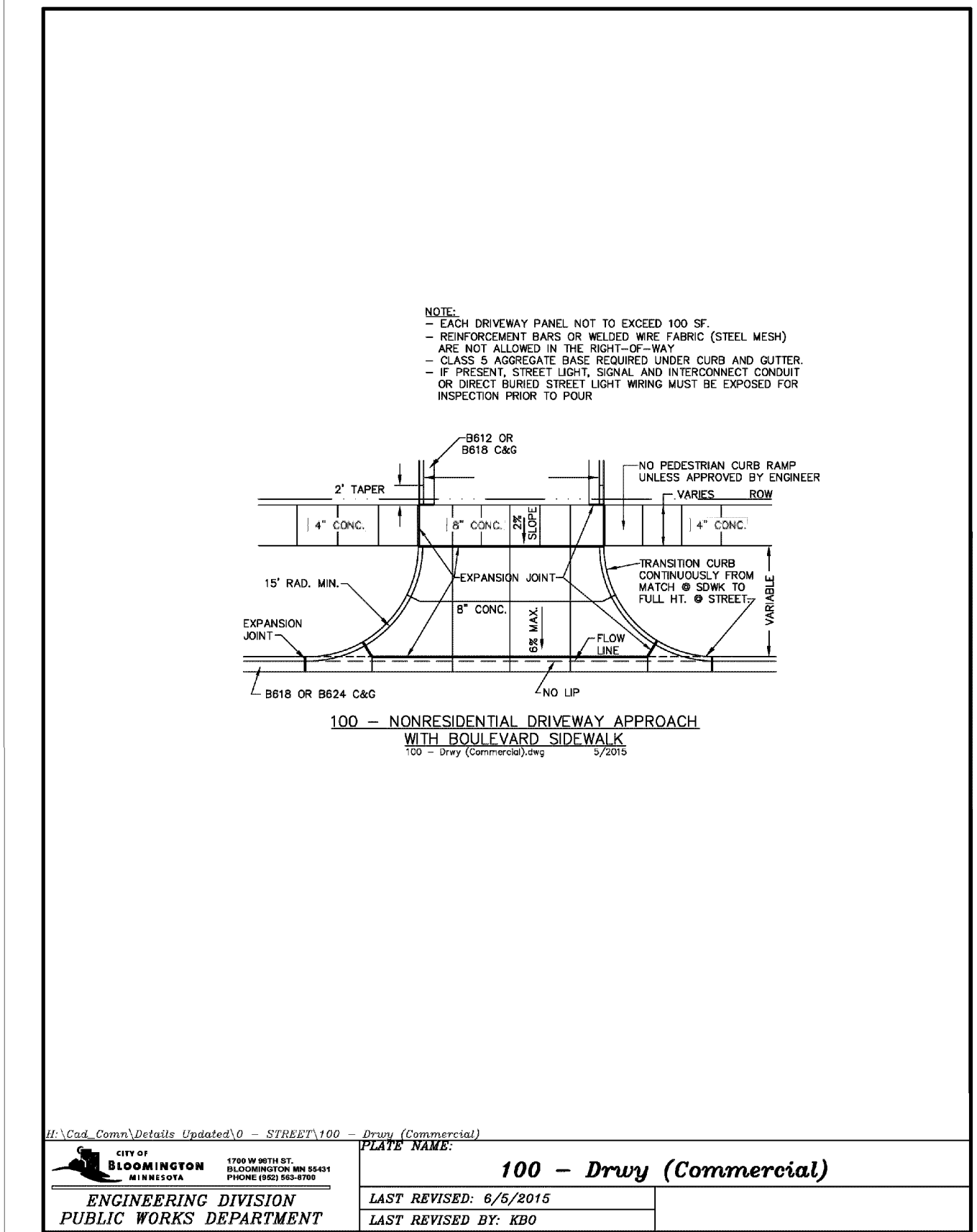
12 SIGN AND POST
C500.2 NOT TO SCALE



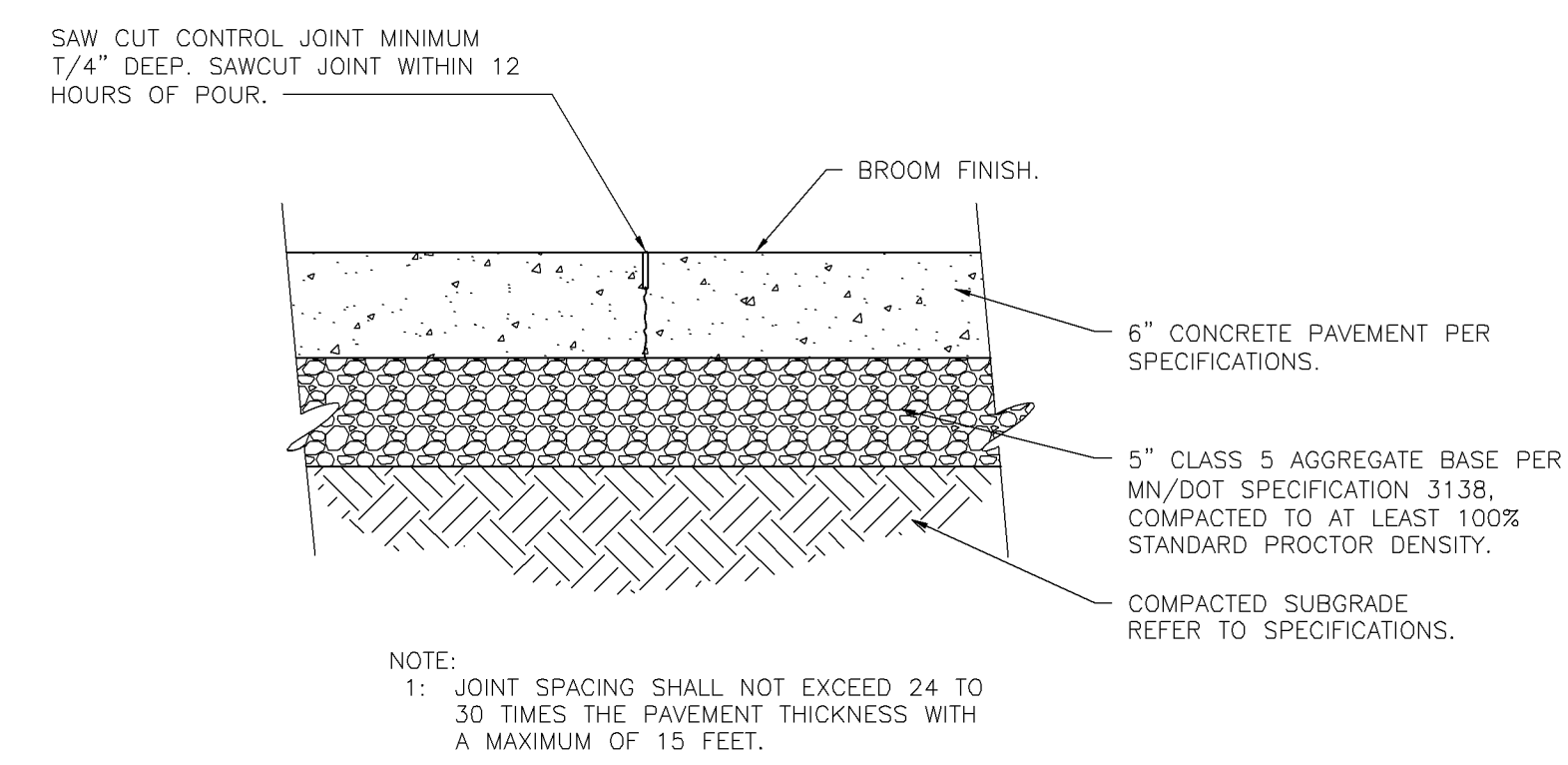
8 SIDEWALK CHASE
C500.2 NOT TO SCALE



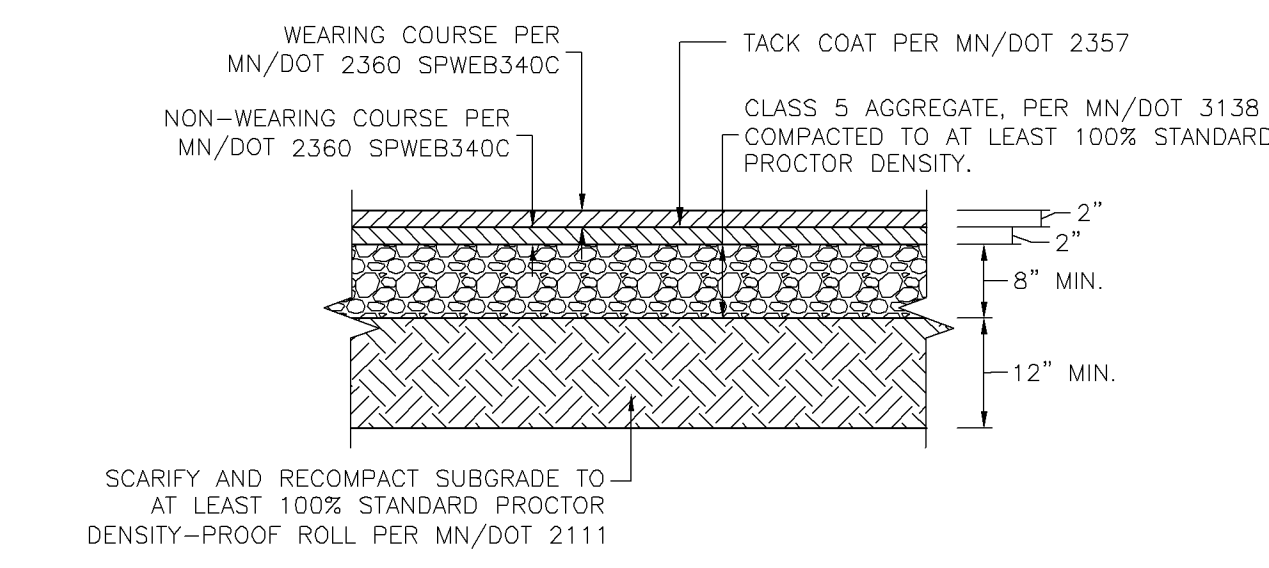
4 SIDEWALK INSTALLATION
C500.2 NOT TO SCALE



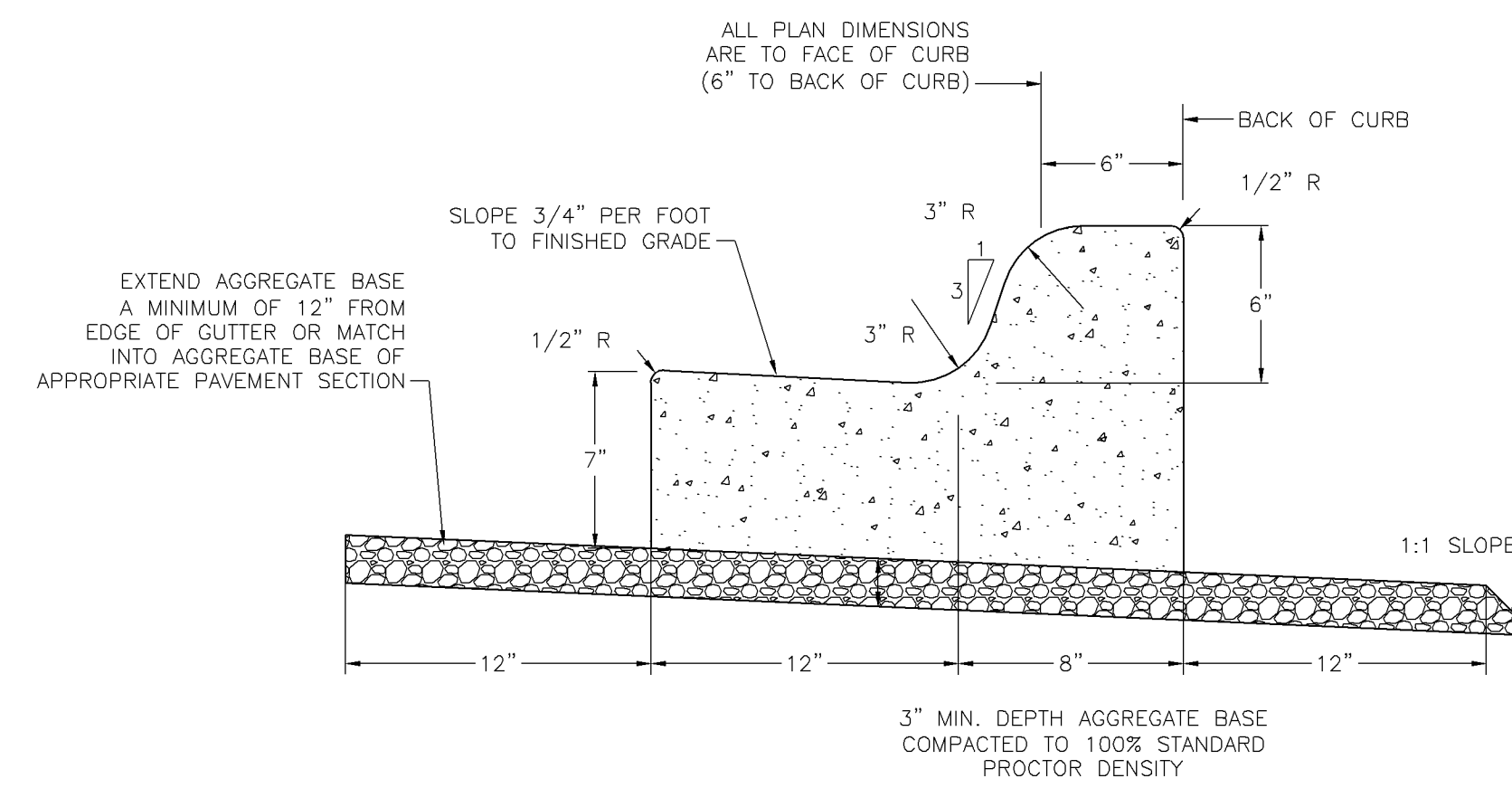
1 DRIVEWAY ENTRANCE
C500.2 NOT TO SCALE



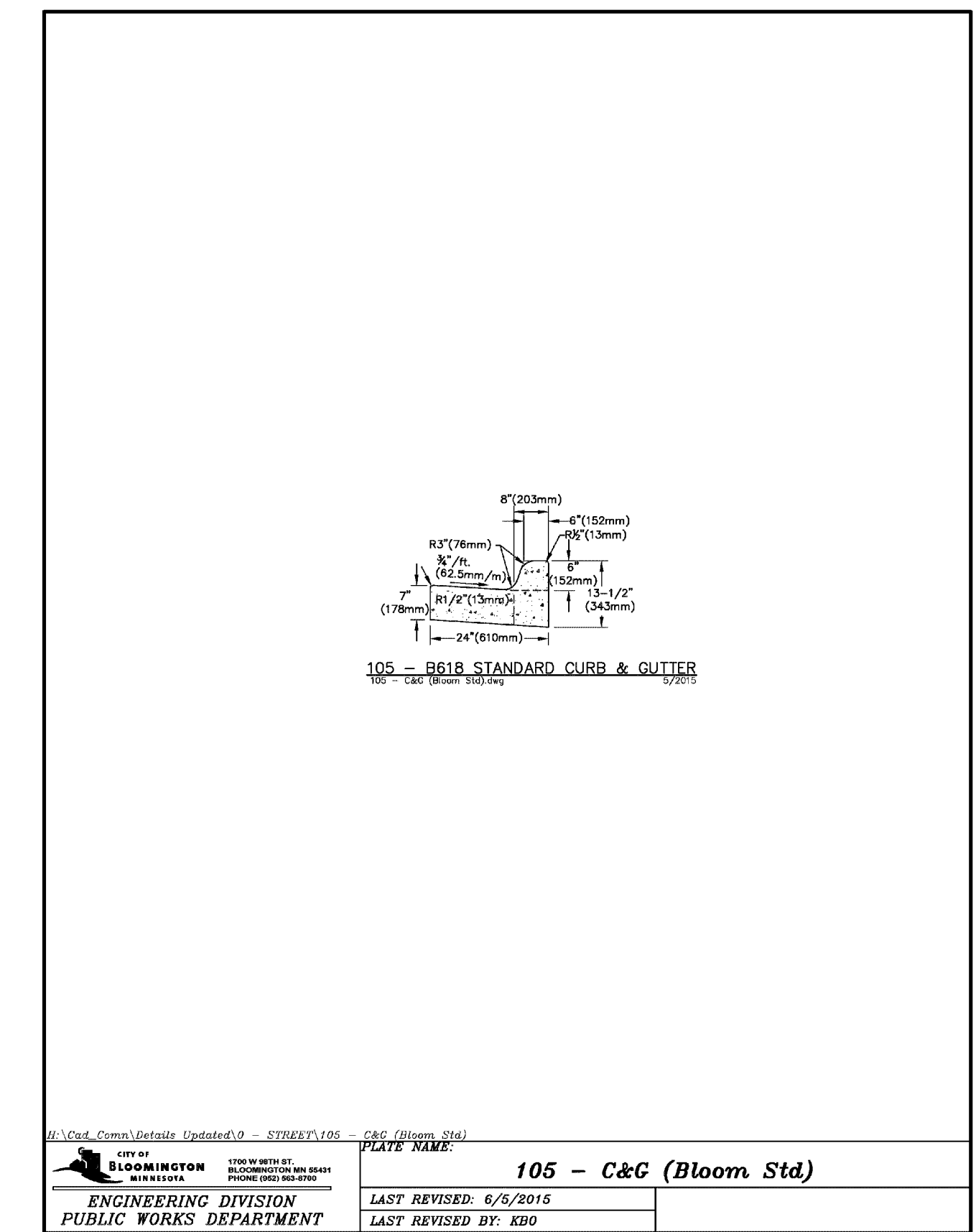
13 CONCRETE PAVEMENT
C500.2 NOT TO SCALE



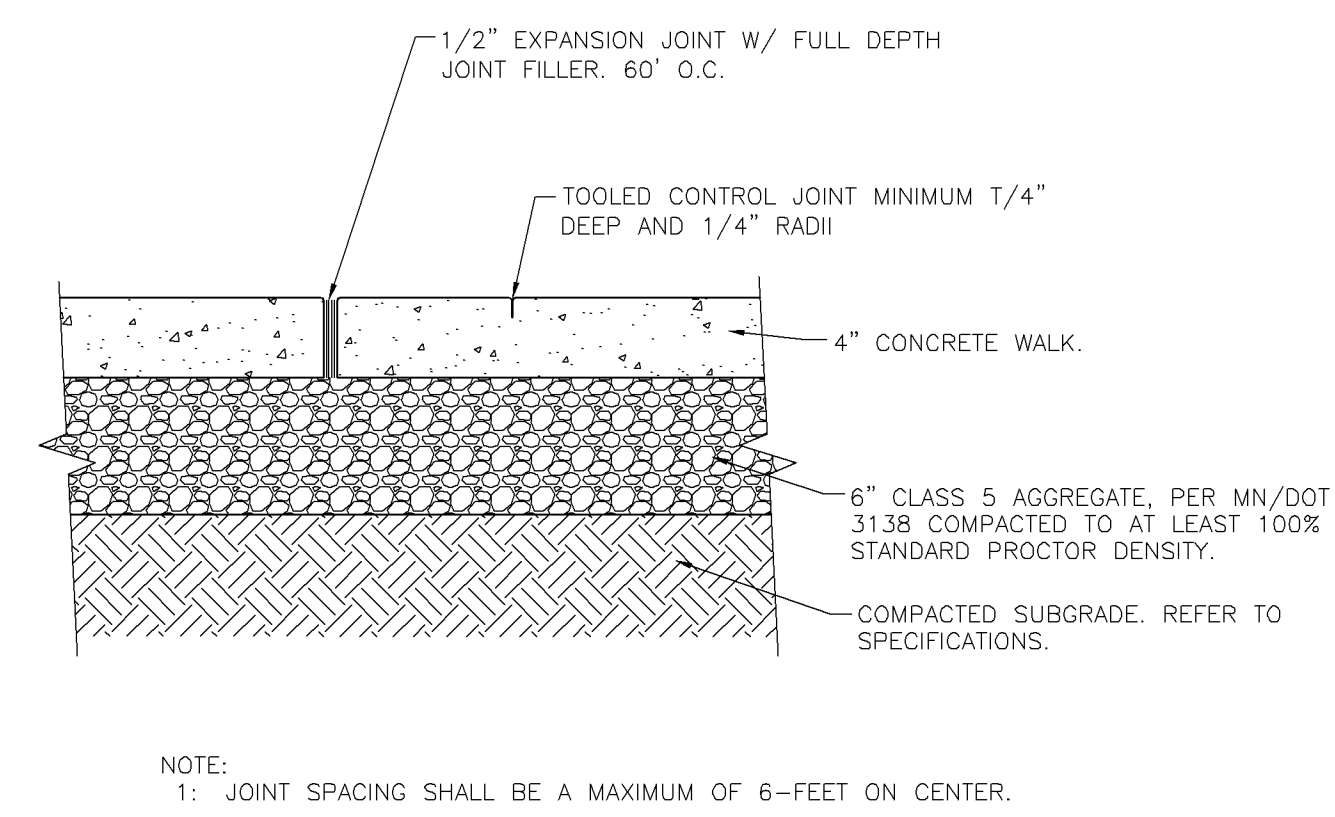
9 HEAVY-DUTY BITUMINOUS PAVEMENT
C500.2 NOT TO SCALE



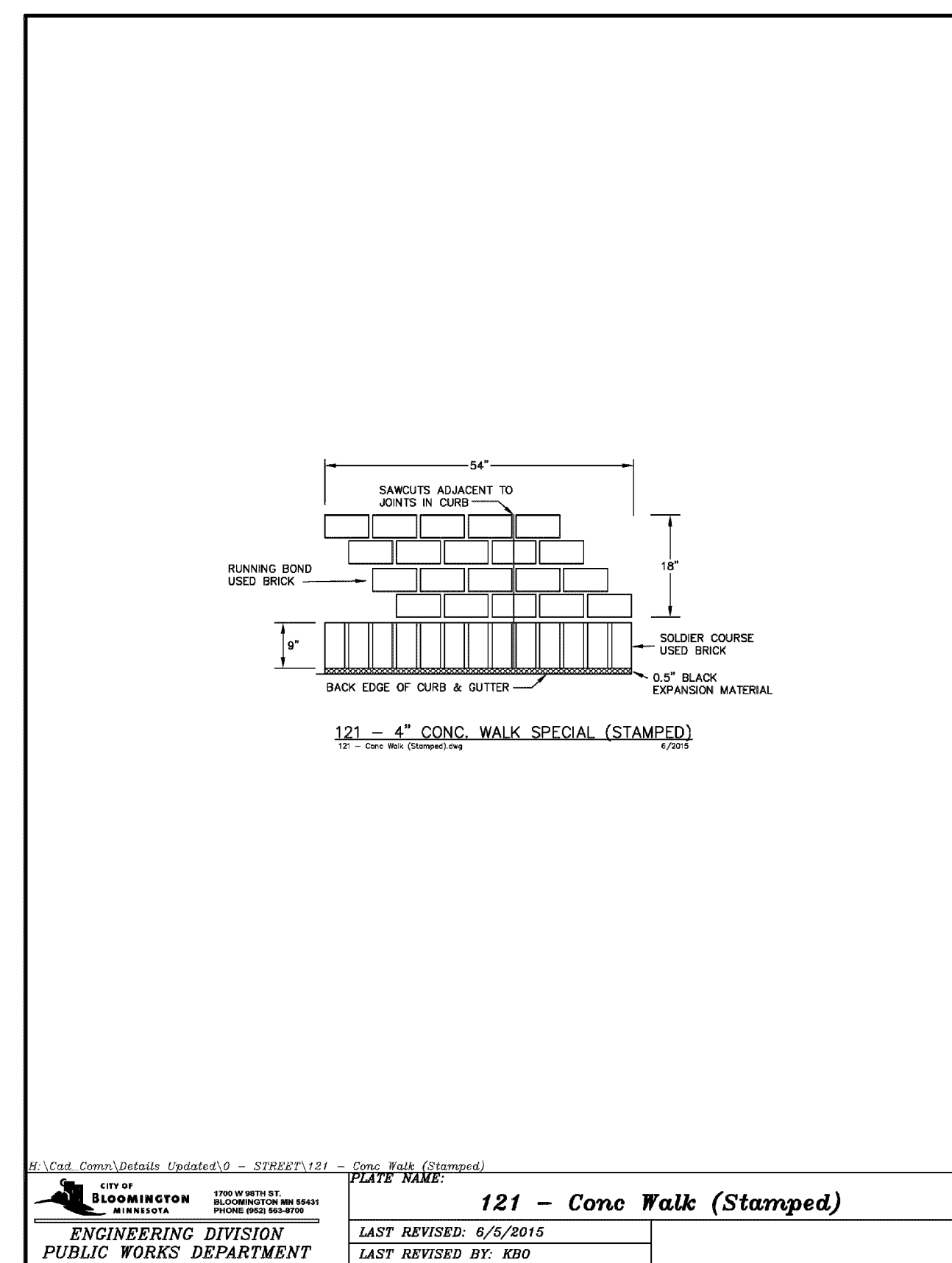
5 B612 CONCRETE CURB AND GUTTER
C500.2 NOT TO SCALE



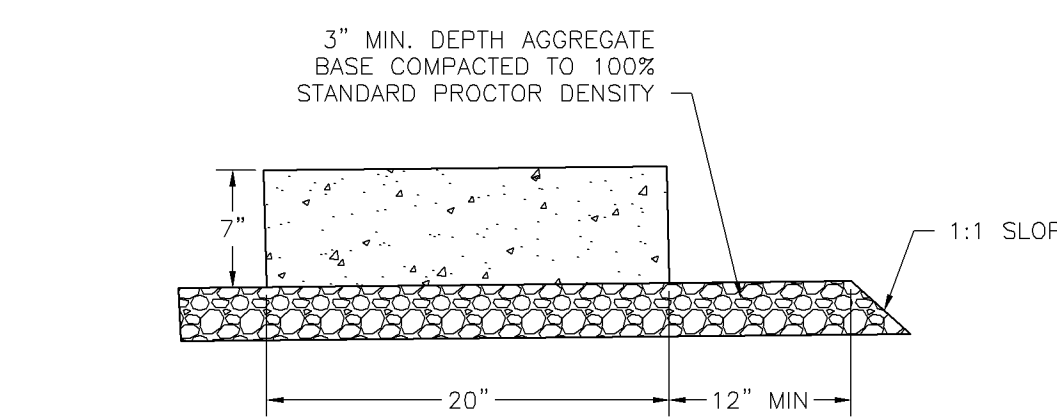
2 B618 CURB AND GUTTER
C500.2 NOT TO SCALE



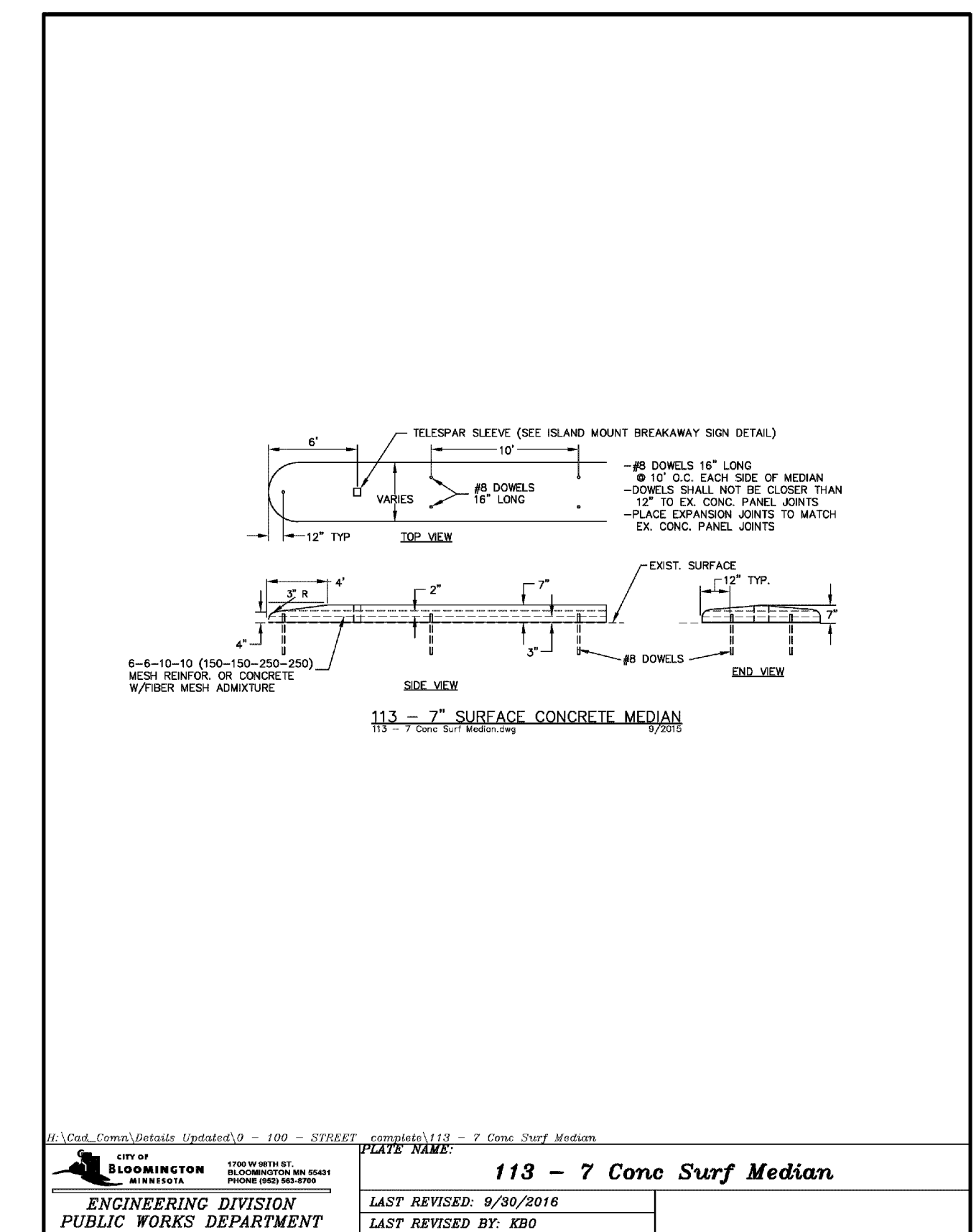
14 CONCRETE SIDEWALK (TYP.)
C500.2 NOT TO SCALE



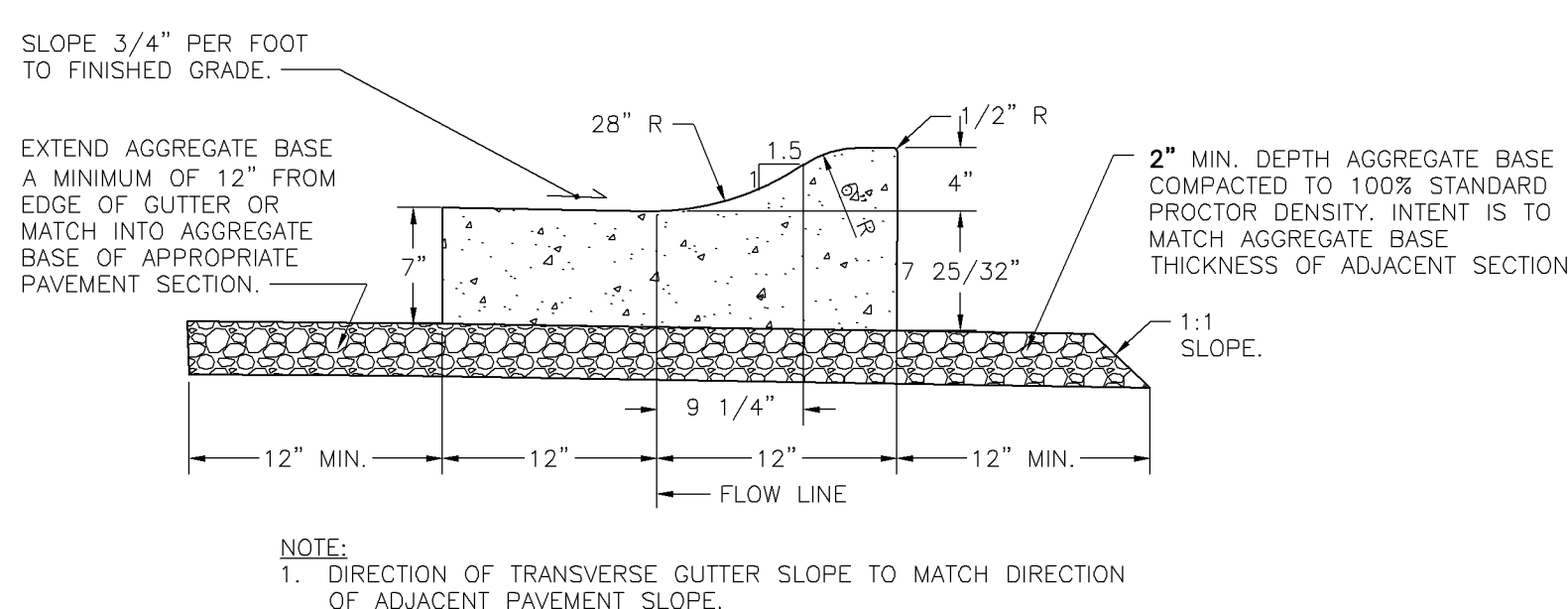
10 COLORED CONCRETE SIDEWALK
C500.2 NOT TO SCALE



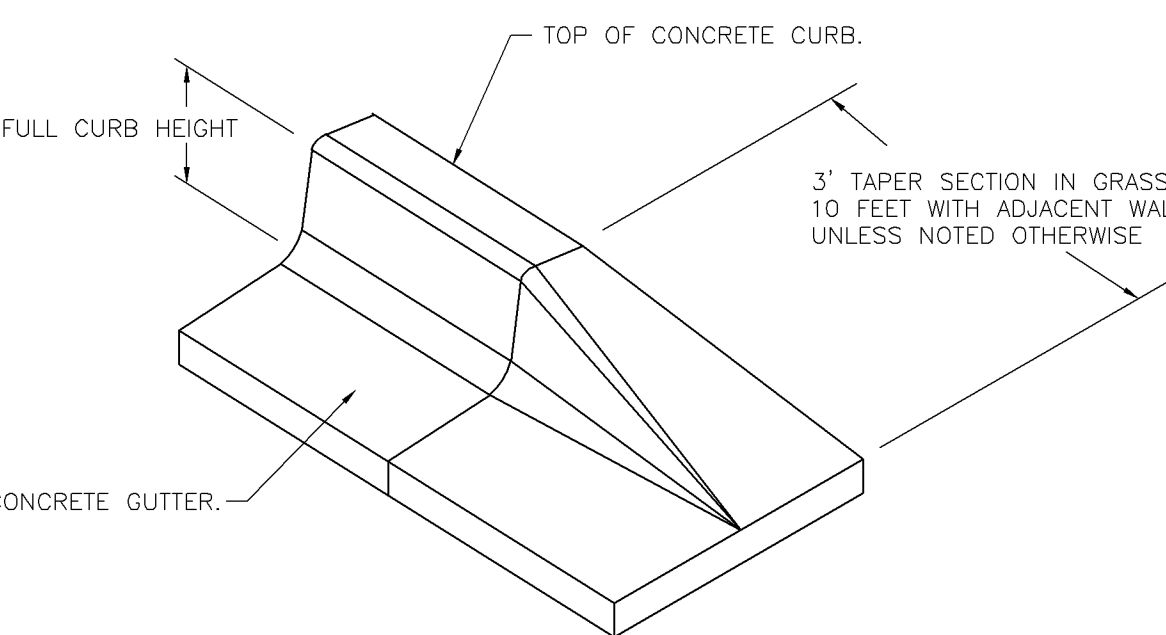
6 FLAT CURB/CONCRETE EDGER
C500.2 NOT TO SCALE



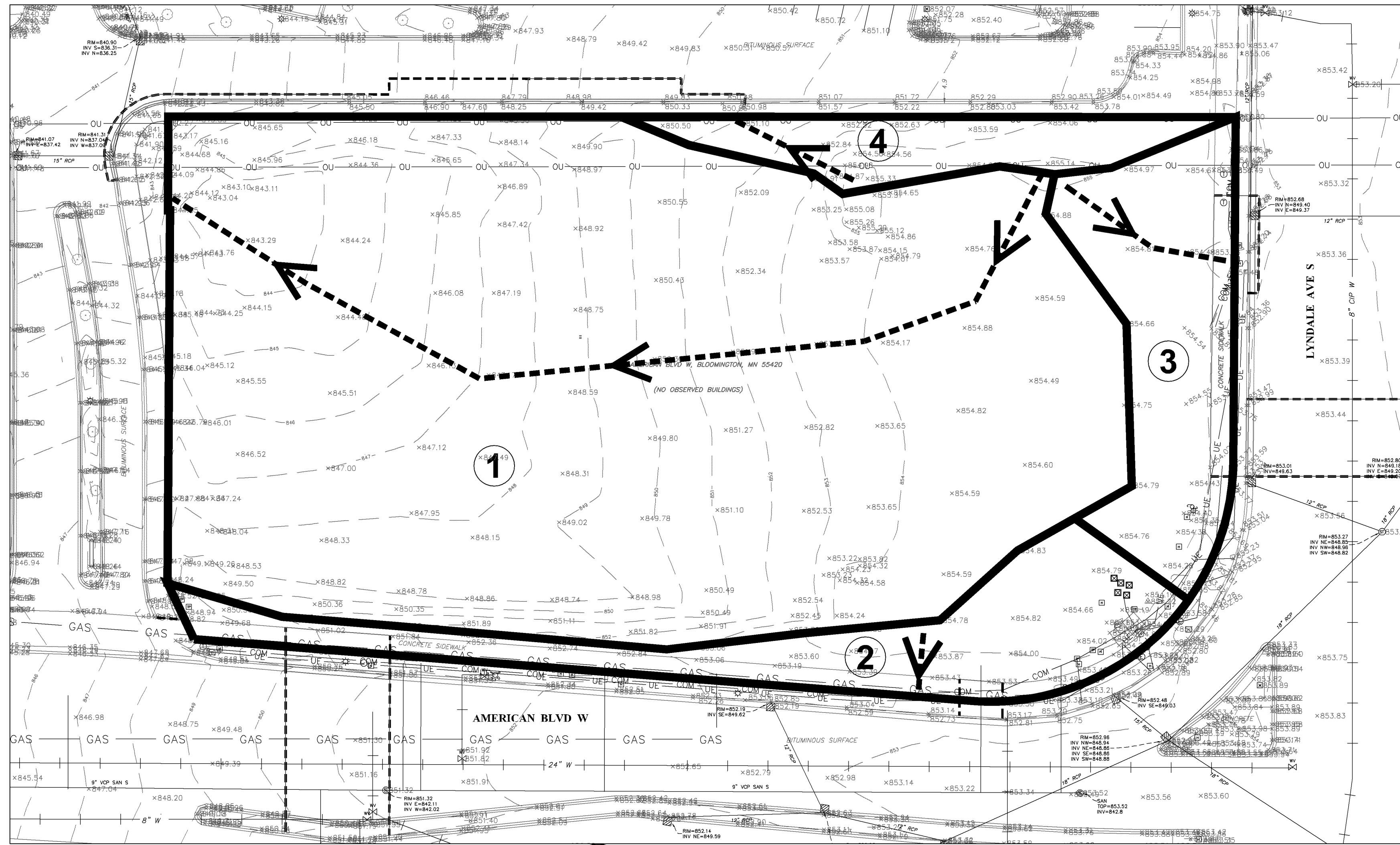
3 CONCRETE MEDIAN
C500.2 NOT TO SCALE



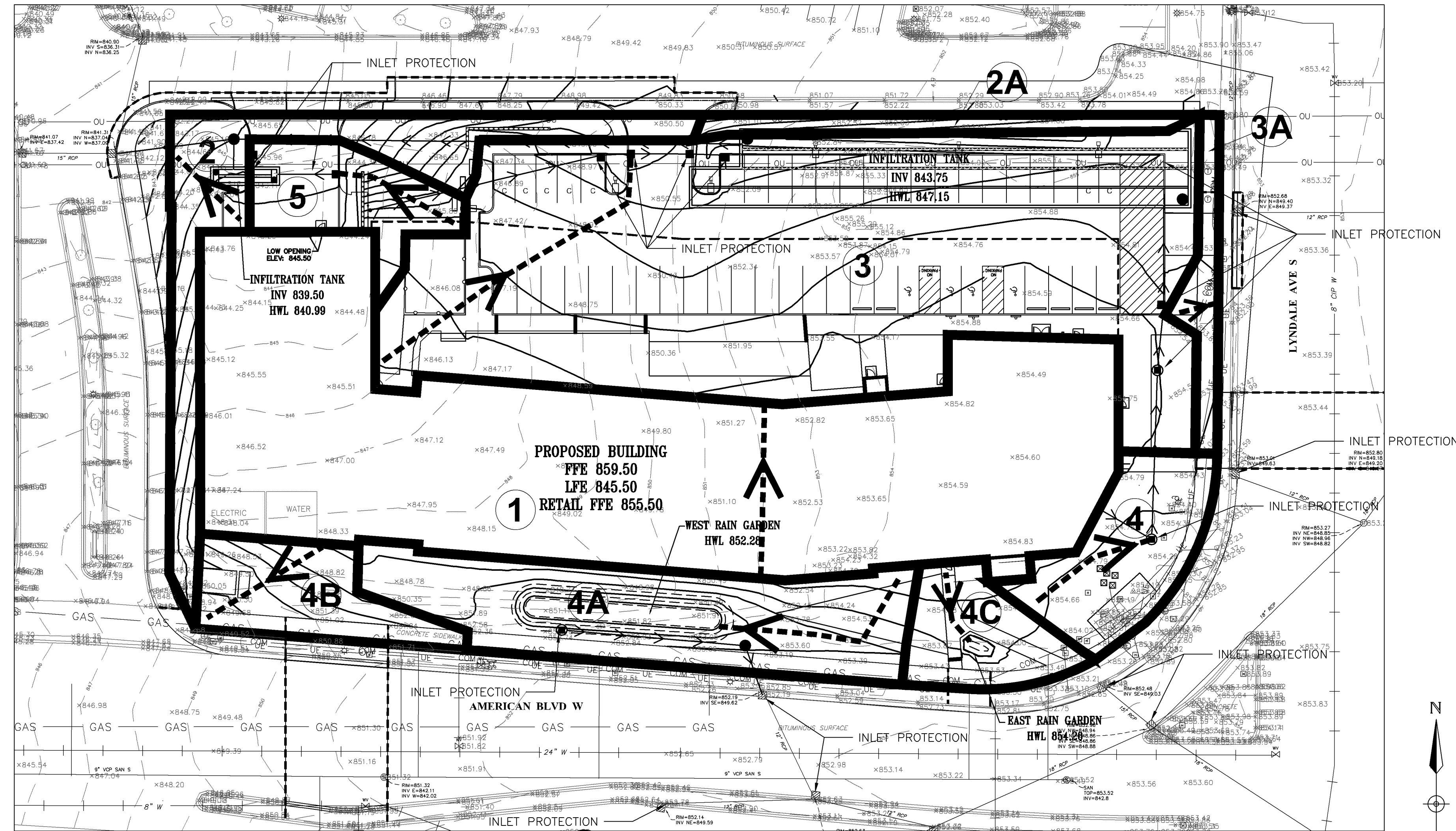
11 MN/DOT R412 CURB AND GUTTER
C500.2 NOT TO SCALE



7 NOSE-DOWN CURB SECTION
C500.2 NOT TO SCALE



1 EXISTING CONDITIONS
1" = 30'



2 PROPOSED CONDITIONS
1" = 30'

DRAINAGE AREA	EXISTING DRAINAGE AREAS			O OUT (CFS) STORM EVENT			ROUTING
	IMPERVIOUS AREA (ACRES)	PERVIOUS AREA (ACRES)	TOTAL AREA (ACRES)	2-YEAR (2.84")	10-YEAR (4.25")	100-YEAR (7.49")	
1	0.00	1.41	1.41	0.33	1.56	5.71	SHEET FLOWS TO EX. NW STORM SEWER
2	0.06	0.13	0.19	0.29	0.58	1.38	SHEET FLOWS SOUTH TO AMERICAN BLVD
3	0.03	0.14	0.18	0.18	0.43	1.17	SHEET FLOWS NORTH TO LYNDALE AVE
4	0.00	0.09	0.09	0.03	0.14	0.50	SHEET FLOWS NORTH TO EX. PARKING LOT
TOTAL	0.09	1.76	1.85	0.83	2.71	8.76	

	STORMWATER RUNOFF SUMMARY		
	2-YR STORM (2.84") RUNOFF (CFS)	10-YR STORM (4.25") RUNOFF (CFS)	100-YR STORM (7.49") RUNOFF (CFS)
EXISTING SITE LYNDALE AVE SEWER	0.18	0.43	1.17
EXISTING SITE NW STORM SEWER	0.33	0.58	1.38
EXISTING SITE AMERICAN BLVD	0.29	0.58	1.38
EXISTING SITE NORTH PARKING LOT	0.03	0.14	0.50
EXISTING SITE TOTAL	0.83	2.71	8.76
PROPOSED SITE LYNDALE AVE	0.10	0.26	0.31
PROPOSED SITE NW STORM SEWER	0.13	1.15	3.61
PROPOSED SITE AMERICAN BLVD	0.20	0.39	0.97
PROPOSED SITE NORTH PARKING LOT	0.01	0.05	0.17
PROPOSED SITE TOTAL	0.44	1.75	5.06

	STORMWATER RUNOFF SUMMARY (BY REACH)		
	2-YR STORM (2.84") RUNOFF (CFS)	10-YR STORM (4.25") RUNOFF (CFS)	100-YR STORM (7.49") RUNOFF (CFS)
EXISTING SITE LYNDALE AVE	0.18	0.43	1.17
EXISTING SITE NW STORM SEWER	0.33	1.56	5.71
EXISTING SITE AMERICAN BLVD	0.29	0.58	1.38
EXISTING SITE NORTH PARKING LOT	0.03	0.14	0.50
EXISTING SITE TOTAL	0.83	2.71	8.76
PROPOSED SITE LYNDALE AVE	0.10	0.16	0.31
PROPOSED SITE NW STORM SEWER	0.11	0.82	3.27
PROPOSED SITE AMERICAN BLVD	0.21	0.39	0.89
PROPOSED SITE NORTH PARKING LOT	0.01	0.05	0.17
PROPOSED SITE TOTAL	0.43	1.42	4.64

DRAINAGE AREA	PROPOSED DRAINAGE AREAS			O OUT (CFS) STORM EVENT			ROUTING
	IMPERVIOUS AREA (ACRES)	PERVIOUS AREA (ACRES)	TOTAL AREA (ACRES)	2-YEAR (2.84")	10-YEAR (4.25")	100-YEAR (7.49")	
1	0.62	0.00	0.62	-	-	-	EAST INFILTRATION TANK
2	0.02	0.10	0.12	0.11	0.27	0.76	SHEET FLOWS TO EX. NW STORM SEWER
2A	0.00	0.03	0.03	0.01	0.05	0.17	SHEET FLOWS NORTH TO EX. PARKING LOT
3	0.51	0.13	0.64	-	-	-	EAST INFILTRATION TANK
3A	0.02	0.00	0.03	0.10	0.16	0.31	SHEET FLOWS EAST TO LYNDALE AVE
4	0.04	0.06	0.08	-	-	-	INFILTRATION TANK
4A	0.02	0.12	0.17	-	-	-	RAIN GARDEN
4B	0.02	0.05	0.08	0.08	0.18	0.45	SHEET FLOWS SOUTH TO AMERICAN BLVD
4C	0.03	0.02	0.05	-	-	-	EAST RAIN GARDEN
4D	0.03	0.02	0.05	-	-	-	EAST RAIN GARDEN
EAST INFILTRATION TANK	-	-	-	0.02	0.73	2.39	EXISTING NW STORM SEWER
WEST INFILTRATION TANK	-	-	-	0.00	0.15	0.46	EXISTING NW STORM SEWER
WEST RAIN GARDEN	-	-	-	0.00	0.00	0.07	AMERICAN BLVD
EAST RAIN GARDEN	-	-	-	0.12	0.21	0.45	AMERICAN BLVD
TOTAL	1.31	0.54	1.85	0.44	1.75	5.06	

DRAINAGE AREA	PROPOSED DRAINAGE AREAS			O OUT (CFS) STORM EVENT			ROUTING
	IMPERVIOUS AREA (ACRES)	PERVIOUS AREA (ACRES)	TOTAL AREA (ACRES)	2-YEAR (2.84")	10-YEAR (4.25")	100-YEAR (7.49")	
1	0.62	0.00	0.62	-	-	-	EAST INFILTRATION TANK
2	0.02	0.10	0.12	0.11	0.27	0.76	SHEET FLOWS TO EX. NW STORM SEWER
2A	0.00	0.03	0.03	0.01	0.05	0.17	SHEET FLOWS NORTH TO EX. PARKING LOT
3	0.51	0.13	0.64	-	-	-	EAST INFILTRATION TANK
3A	0.02	0.00	0.03	0.10	0.16	0.31	SHEET FLOWS EAST TO LYNDALE AVE
4	0.04	0.06	0.08	-	-	-	INFILTRATION TANK
4A	0.02	0.12	0.17	-	-	-	RAIN GARDEN
4B	0.02	0.05	0.08	0.08	0.18	0.45	SHEET FLOWS SOUTH TO AMERICAN BLVD
4C	0.03	0.02	0.05	-	-	-	EAST RAIN GARDEN
4D	0.03	0.02	0.05	-	-	-	EAST RAIN GARDEN
EAST INFILTRATION TANK	-	-	-	0.02	0.73	2.39	EXISTING NW STORM SEWER
WEST INFILTRATION TANK	-	-	-	0.00	0.15	0.46	EXISTING NW STORM SEWER
WEST RAIN GARDEN	-	-	-	0.00	0.00	0.07	AMERICAN BLVD
EAST RAIN GARDEN	-	-	-	0.12	0.21	0.45	AMERICAN BLVD
TOTAL	1.31	0.54	1.85	0.44	1.75	5.06	

DRAINAGE AREA	PROPOSED DRAINAGE AREAS			O OUT (CFS) STORM EVENT			ROUTING
	IMPERVIOUS AREA (ACRES)	PERVIOUS AREA (ACRES)	TOTAL AREA (ACRES)	2-YEAR (2.84")	10-YEAR (4.25")	100-YEAR (7.49")	
1	0.62	0.00	0.62	-	-	-	EAST INFILTRATION TANK
2	0.02	0.10	0.12	0.11	0.27	0.76	SHEET FLOWS TO EX. NW STORM SEWER
2A	0.00	0.03	0.03	0.01	0.05	0.17	SHEET FLOWS NORTH TO EX. PARKING LOT
3	0.51	0.13	0.64	-	-	-	EAST INFILTRATION TANK
3A	0.02	0.00	0.03	0.10	0.16	0.31	SHEET FLOWS EAST TO LYNDALE AVE
4	0.04	0.06	0.08	-	-	-	INFILTRATION TANK
4A	0.02	0.12	0.17	-	-	-	RAIN GARDEN
4B	0.02	0.05	0.08	0.08	0.18	0.45	SHEET FLOWS SOUTH TO AMERICAN BLVD
4C	0.03	0.02	0.05	-	-	-	EAST RAIN GARDEN
4D	0.03	0.02	0.05	-	-	-	EAST RAIN GARDEN
EAST INFILTRATION TANK	-	-	-	0.02	0.73	2.39	EXISTING NW STORM SEWER
WEST INFILTRATION TANK	-	-	-	0.00	0.15	0.46	EXISTING NW STORM SEWER
WEST RAIN GARDEN	-	-	-	0.00	0.00	0.07	AMERICAN BLVD
EAST RAIN GARDEN	-	-	-	0.12	0.21	0.45	AMERICAN BLVD
TOTAL	1.31	0.54	1.85	0.44	1.75	5.06	

INSPECTIONS
EXPOSED SOIL AREAS: ONCE EVERY 7 DAYS AND WITHIN 24 HOURS FOLLOWING A 1/2 INCH OVER 24 HOURS RAIN EVENT.
STABILIZED AREAS: ONCE EVERY 30 DAYS.
FROZEN GROUND: AS SOON AS RUNOFF OCCURS OR PRIOR TO RESUMING CONSTRUCTION.
RECORDS: A COPY OF THE GRADING, DRAINAGE EROSION CONTROL PLAN AND WATERSHED DATA & SWPPP PLANS AS WELL AS THE INSPECTIONS/MAINTENANCE LOGS ARE TO BE KEPT EITHER IN THE FIELD OFFICE, INSPECTOR'S VEHICLE, OR CONTRACTOR'S VEHICLE.

FINAL STABILIZATION
STABILIZATION BY UNIFORM PERENNIAL VEGETATIVE COVER (70% DENSITY)
DRAINAGE DITCHES STABILIZED.
ALL TEMPORARY SYNTHETIC AND STRUCTURAL BMP'S REMOVED.
CLEAN OUT SEDIMENT FROM CONVEYANCES AND SEDIMENTATION BASINS (RETURN TO DESIGN CAPACITY).

GRADING & SOILS
BASED ON SOIL BORINGS(S) PROVIDED BY BRAUN INTEREC SOILS TYPICALLY FOUND ON THIS PROJECT ARE: FILL SP, AND SP-SM
REFER TO THE GEOTECHNICAL REPORT FOR ADDITIONAL INFORMATION.

SPECIAL AND IMPAIRED WATERS
THESE SPECIAL AND IMPAIRED WATERS ARE LOCATED WITHIN ONE MILE (AERIAL RADIUS) OF THE PROJECT LIMITS AND RECEIVE RUNOFF FROM THE PROJECT SITE. DUE TO THE PROXIMITY OF THESE SPECIAL AND IMPAIRED WATERS, THE BMP'S DESCRIBED IN SECTION 23 OF THE NPDES PERMIT WILL APPLY TO ALL AREAS OF THE SITE.

WATERBODY	IMPAIRMENT(S)
PENN LAKE	NUTRIENTS

MINIMUM ESTIMATED QUANTITIES FOR EROSION CONTROL		
ITEM DESCRIPTION	ESTIMATED QUANTITY	UNIT
DRAINAGE STRUCT. INLET FILTER	13	EACH
ROCK CONSTRUCTION ENTRANCE	1	EACH
CONCRETE WASHOUT	1	EACH
BO LOG	1216	LF

NOTE: QUANTITIES SHOWN ARE THE MINIMUM REQUIRED. ADDITIONAL QUANTITIES MAY BE NEEDED IF REQUIRED BY THE MPCA WATERSHED DISTRICT OR CITY. CONTRACTOR IS RESPONSIBLE FOR FINAL DETERMINATION OF QUANTITIES PRIOR TO CONSTRUCTION.

INLET PROTECTION
REFER TO SHEETS C100.0 AND C200.0 FOR PROPOSED INLET PROTECTION LOCATIONS.

CONSTRUCTION ACTIVITY EROSION PREVENTION PRACTICES
CONTRACTOR SHALL STABILIZE ALL EXPOSED SOIL AREAS (INCLUDING STOCKPILES). STABILIZATION MUST BE INITIATED IMMEDIATELY TO LIMIT SOIL EROSION WHENEVER ANY CONSTRUCTION ACTIVITY HAS PERMANENTLY OR TEMPORARILY CEASED ON ANY PORTION OF THE SITE AND WILL NOT RESUME FOR A PERIOD EXCEEDING 7 CALENDAR DAYS. STABILIZATION MUST BE COMPLETED NO LATER THAN 7 CALENDAR DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED.
FOR PUBLIC WATER THAT THE DNR HAS PROMULGATED "WORK IN WATER RESTRICTIONS" DURING SPECIFIED FISH SPAWNING TIME FRAMES, ALL EXPOSED SOIL AREAS THAT ARE WITHIN 200 FEET OF THE WATER'S EDGE, AND DRAIN TO THESE WATERS MUST COMPLETE THE STABILIZATION ACTIVITIES WITHIN 24 HOURS DURING THE RESTRICTION PERIOD.
PIPE OUTLETS MUST BE PROVIDED WITH TEMPORARY OR PERMANENT ENERGY DISSIPATION WITHIN 24-HOURS AFTER CONNECTION TO A SURFACE WATER.
SEDIMENT CONTROL MEASURES MUST BE INSTALLED ON ALL DOWN GRADIENT PERIMETERS BEFORE ANY UPGRADE/LAND DISTURBING ACTIVITIES BEGIN.

PORTABLE TOILET NOTES:
1. PORTABLE TOILETS POSE AN ENVIRONMENTAL HAZARD WHEN PLACED IN THE VICINITY OF STORM DRAINS OR BODIES OF WATER. PORTABLE TOILET CLEANING ACTIVITIES CAN ALSO GENERATE POLLUTANTS THAT CAN DEGRADE WATER QUALITY.
2. PORTABLE TOILET PLACEMENT:
2.1. PLACE PORTABLE TOILETS ON FLAT STABLE GROUND WITH CLEAR ACCESS TO THE UNITS.
2.2. LOCATE TOILETS A MINIMUM OF 20 FEET FROM ANY WATER BODY AND 10 FEET FROM ANY CURB AND CUTTER. IF UNFURNISHED AN EARthen BERM OR SAND BAG BERM SHALL BE PLACED AROUND THE UNIT FOR SPILL AND LEAK CONTAINMENT.
2.3. AVOID PLACING TOILETS ON IMPERVIOUS SURFACES THAT WILL QUICKLY DRAIN TO STORM SEWERS.
2.4. LOCATE TOILETS SO THAT EXPOSURE TO TRAFFIC AND MOVING EQUIPMENT IS MINIMIZED.
2.5. SECURE TOILETS TO THE GROUND WITH STAKES OR CABLES.
2.6. RINSE WATER FROM CLEANING ACTIVITIES SHALL NOT BE DISPOSED ON SITE.
3. REGULARLY CHECK TOILETS FOR DAMAGE, LEAKS AND SPILLS AS PART OF THE WEEKLY STORMWATER SITE INSPECTION.
4. OWNER IDENTIFICATION AND CONTACT INFORMATION SHALL BE DISPLAYED IN A PROMINENT LOCATION ON EACH UNIT.

HANDLING AND STORAGE OF HAZARDOUS MATERIALS
IF THE CONTRACTOR INTENDS TO USE POLYMERS, FLOCCULANTS, OR OTHER SEDIMENTATION TREATMENT CHEMICALS ON THE PROJECT SITE, THE CONTRACTOR MUST COMPLY WITH THE FOLLOWING MINIMUM REQUIREMENTS:
1. THE CONTRACTOR MUST USE CONVENTIONAL EROSION AND SEDIMENT CONTROLS PRIOR TO CHEMICAL ADDITION TO ENSURE EFFECTIVE TREATMENT. CHEMICALS MAY ONLY BE APPLIED WHERE TREATED STORMWATER IS DIRECTED TO A SEDIMENT CONTROL SYSTEM WHICH ALLOWS FOR FILTRATION OR SETTLEMENT OF THE FLOC PRIOR TO DISCHARGE.
2. CHEMICALS MUST BE SELECTED THAT ARE APPROPRIATELY SUITED TO THE TYPES OF SOILS LIKELY TO BE EXPOSED DURING CONSTRUCTION, AND TO THE EXPECTED TURBIDITY, PH, AND FLOW RATE OF THE CHEMICAL TREATMENT SYSTEM OR AREA.
3. CHEMICALS MUST BE USED IN ACCORDANCE WITH ACCEPTED ENGINEERING PRACTICES, AND WITH DOSING SPECIFICATIONS AND SEDIMENT REMOVAL DESIGN SPECIFICATIONS PROVIDED BY THE MANUFACTURER OR PROVIDER/SUPPLIER OF THE APPLICABLE CHEMICALS.
ON-SITE FUEL TANKS REQUIRE SECONDARY CONTAINMENT AS REQUIRED BY THE PERMIT. PORTABLE FUEL TANKS SHALL HAVE THEIR SPILLS KITS AVAILABLE DURING FUELING. SPILLS GREATER THAN 5 GALLONS MUST BE REPORTED TO THE PROPER AUTHORITIES.

CONTRACTOR SHALL SUPPLY CONSTRUCTION PHASING NARRATIVE, ESTIMATED PRELIMINARY QUANTITIES OF ALL EROSION PREVENTION AND SEDIMENT CONTROL BMP'S ANTICIPATED AT THE START OF THE PROJECT AND FOR THE LIFE OF THE PROJECT, AND LOCATIONS WHERE CONSTRUCTION WILL BE PHASED TO MINIMIZE DURATION OF EXPOSED SOIL AREAS. CONTRACTOR IS TO REVIEW MINNESOTA POLLUTION CONTROL AGENCY'S INSTRUCTIONS FOR THE APPLICATION FOR MINNESOTA'S NPDES/CSO GENERAL STORMWATER PERMIT FOR CONSTRUCTION ACTIVITY PRIOR TO SUBMITTING APPLICATION.

POLLUTION PREVENTION MANAGEMENT MEASURES
SOLID WASTE DISPOSED PROPERLY; COMPLY WITH MPCA REQUIREMENTS.
HAZARDOUS WASTE STORED (SECONDARY CONTAINMENT, RESTRICTED ACCESS) AND DISPOSED IN COMPLIANCE WITH MPCA REQUIREMENTS.
NO EXTERNAL WASHING OF TRUCKS AND OTHER CONSTRUCTION EQUIPMENT ALLOWED ON-SITE.
CONCRETE WASHOUT ON-SITE: ALL LIQUID AND SOLID WASTES GENERATED BY CONCRETE WASHOUT OPERATIONS MUST BE CONTAINED IN LEAK-PROOF CONTAINMENT FACILITY OR IMPERMEABLE LINER. A COMPACTED CLAY LINER THAT DOES NOT ALLOW 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. THE CONCRETE WASHOUT AREA INDICATED ON THE PLANS IS SHOWN IN AN APPROXIMATE LOCATION. PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION IN ACCORDANCE WITH MPCA REQUIREMENTS.
STORAGE HANDLING AND DISPOSAL OF CONSTRUCTION PRODUCTS, MATERIALS, AND WASTES:
BUILDING PRODUCTS THAT HAVE THE POTENTIAL TO LEACH POLLUTANTS MUST BE UNDER COVER. PESTICIDES, HERBICIDES, INSECTICIDES, FERTILIZERS, TREATMENT CHEMICALS, AND LANDSCAPE MATERIALS MUST BE UNDER COVER.
HAZARDOUS MATERIALS, TOXIC WASTE (INCLUDING OIL, DIESEL FUEL, GASOLINE, HYDRAULIC FLUIDS, PAINT SOLVENTS, PETROLEUM-BASED PRODUCTS, WOOD PRESERVATIVES, ADDITIVES, CURING COMPOUNDS, AND ACIDS) MUST BE PROPERLY STORED IN SEALED CONTAINERS TO PREVENT SPILLS, LEAKS, OR OTHER DISCHARGES.

SWPPP IMPLEMENTATION, INSTALLATION, INSPECTION, AND BMP MAINTENANCE SHALL BE PERFORMED BY THE CONTRACTOR.
NAME: _____
CERTIFICATION #: _____
DATE: _____

OTHER NOTES:
1. LONG TERM MAINTENANCE OF THE SITE WILL BE PERFORMED BY THE OWNER, SCHAFER RICHARDSON. INCLUDED MAINTENANCE FOR STORMWATER DEVICES SHALL BE:
1.1. INSPECT SLUMP CATCH BASINS ON A BIENNIAL BASIS, ONCE IN THE SPRING AND ONCE IN THE FALL.
1.2. CLEAN SLUMP CATCH BASINS OF SEDIMENT AND DEBRIS ANNUALLY OR WHEN SEDIMENTS FILL 1/2 OF THE STORAGE VOLUME.
1.3. INSPECT UNDERGROUND TANK SYSTEM ON AN ANNUAL BASIS FOR SEDIMENT BUILD-UP AND/OR STANDING WATER. REMOVE SEDIMENT AS NECESSARY.
1.4. REMOVE TRASH AND DEBRIS FROM RAIN GARDENS AS NECESSARY.
2. THIS SWPPP WAS PREPARED BY PERSONNEL THAT ARE CERTIFIED IN THE DESIGN OF CONSTRUCTION SWPPPS. COPIES OF THE CERTIFICATIONS ARE ON FILE WITH BRBM AND ARE AVAILABLE UPON REQUEST.
3. THIS SWPPP DOCUMENT MUST BE AMENDED AS NECESSARY DURING CONSTRUCTION IN ORDER TO KEEP IT CURRENT WITH THE POLLUTANT CONTROL MEASURES UTILIZED AS THE SITE. THE SITE MAP SHOWING LOCATIONS OF ALL STORM WATER CONTROLS MUST BE POSTED ON THE SITE AND UPDATED TO REFLECT THE PROGRESS OF CONSTRUCTION.

SEDIMENT AND EROSION CONTROL MAINTENANCE
PERIMETER SEDIMENT CONTROL PRACTICES: WHEN SEDIMENT REACHES 1/2 THE HEIGHT OF THE BMP, THE SEDIMENT MUST BE REMOVED WITHIN 24 HOURS. IF PERIMETER SEDIMENT CONTROL HAS BEEN DAMAGED OR IS NOT FUNCTIONING PROPERLY, IT MUST BE REPAIRED AND/OR REPLACED WITHIN 24 HOURS. PERIMETER BMP MEASURES MAY INCLUDE SILT FENCING.
CONSTRUCTION SITE VEHICLE EXIT LOCATIONS: ALL TRACKED SEDIMENT ON PAVED SURFACES MUST BE REMOVED WITHIN 24 HOURS OF DISCOVERY OR MORE FREQUENTLY IF REQUIRED BY CITY OR WATERSHED.
CONSTRUCTION SITE DEWATERING: THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL DEWATERING PERMITS. DISCHARGE FROM ALL DEWATERING OPERATIONS SHALL BE DIRECTED TO ON-SITE DEPRESSURES. NO DISCHARGE FROM DEWATERING OPERATIONS SHALL BE DIRECTED OFF-SITE TOWARDS A WATER OF THE STATE.

TEMPORARY SEDIMENT BASINS:
TEMPORARY SEDIMENT BASINS SHALL BE PROVIDED PER APPENDIX A, SECTION C-1.B OF THE MPCA GENERAL STORMWATER PERMIT.
ENGINEER ANTICIPATES THAT PRIOR TO EXCAVATION FOR INFILTRATION TANK, CONTRACTOR WILL USE PROPOSED INFILTRATION TANK AREA AS TEMPORARY SEDIMENT BASIN. CONTRACTOR SHALL EXCAVATE TEMPORARY BASINS PRIOR TO USE. SURFACE WATER SHALL BE REMOVED BY SKIMMER DEVICE SUCH AS FARTHOLOTTI SKIMMER OR THIRSTY DUCK, OR USING A PUMP WITH FILTER. ALTERNATIVE TEMPORARY SEDIMENT BASINS SHALL BE APPROVED BY ENGINEER PRIOR TO USE.
IN USE OF TEMPORARY SEDIMENT BASINS, THE CONTRACTOR MAY PHASE THEIR CONSTRUCTION SO THAT NOT MORE THAN 5 ACRES OF AREA IS DISTURBED AT ONE TIME. FULL STABILIZATION OF THE DISTURBED AREA IS REQUIRED PRIOR TO DISTURBING ADDITIONAL AREAS. (IMPAIRED ONLY)

PROJECT NARRATIVE
EXISTING SITE DESCRIPTION -- THE EXISTING SITE IS APPROXIMATELY 1.8 ACRES IN SIZE AND IS UNDEVELOPED. STORMWATER RUNOFF GENERALLY SHEET FLOWS FROM EAST TO WEST, WHERE IT ENTERS EXISTING STORM SEWERS IN THE ACCESS DRIVE. THERE IS NO EXISTING STORMWATER MANAGEMENT ON SITE.
PROPOSED SITE DESCRIPTION -- THE PROPOSED DEVELOPMENT WILL CONSIST OF A NEW BUILDING, BITUMINOUS PARKING LOT, CONCRETE SIDEWALK, GREEN SPACE, AND VARIOUS LANDSCAPING ITEMS. THE PROPOSED WORK IS EXPECTED TO ADD 1.22 ACRES OF IMPERVIOUS AREA TO MEET THE STORMWATER MANAGEMENT STANDARDS. A PAIR OF UNDERGROUND INFILTRATION TANKS AND A RAIN GARDEN ARE PROPOSED TO BE INSTALLED. THE MAJORITY OF THE STORMWATER RUNOFF WILL BE COLLECTED BY PROPOSED STORM SEWER IN THE BITUMINOUS PARKING LOT AND PIPED TO THE UNDERGROUND INFILTRATION TANK SYSTEM.

MECHANICAL AND NON STORMWATER DISCHARGES, EXISTING AND PROPOSED
1. WATER LINE FLUSHING
2. LANDSCAPE IRRIGATION
3. DISCHARGE FROM POTABLE WATER SOURCES
4. FOUNDATION DRAINS
5. AIR CONDITIONING CONDENSATION
6. INDIVIDUAL RESIDENT CAR WASHING
7. STREET WASH WATERS
8. RESIDENTIAL BUILDING WASH WATERS WITHOUT DETENTERS.

AGENCY CONTACTS
CITY OF BLOOMINGTON
ENGINEERING DEPARTMENT
PHONE: (952) 563-4870
MINNESOTA POLLUTION CONTROL AGENCY
PHONE: (651) 296-6300
NINE MILE CREEK WATERSHED DISTRICT
PHONE: (952) 835-2078
OWNER
SCHAFER RICHARDSON
900 NORTH THIRD STREET
MINNEAPOLIS, MN 55401
PHONE: (612) 371-3000

NOTES:
THE CONTRACTOR MUST COMPLETE, SIGN, OBTAIN OWNERS SIGNATURE, PAY FEE, AND SEND IN THE NPDES PERMIT APPLICATION. CONTRACTOR SHALL PROVIDE A CERTIFIED EROSION CONTROL SUPERVISOR. SWPPP DOCUMENTATION, INCLUDING INSPECTION REPORTS SHALL BE RETAINED FOR A PERIOD OF THREE (3) YEARS. DESIGN CALCULATIONS ARE ON FILE AT BRBM.
THE OWNER AND CONTRACTOR ARE RESPONSIBLE FOR IMPLEMENTATION OF THE SWPPP AND INSTALLATION, INSPECTION, AND MAINTENANCE OF THE EROSION PREVENTION AND SEDIMENT CONTROL BMP'S, BEFORE, DURING, AND AFTER CONSTRUCTION UNTIL THE NOTICE OF TERMINATION HAS BEEN FILED.

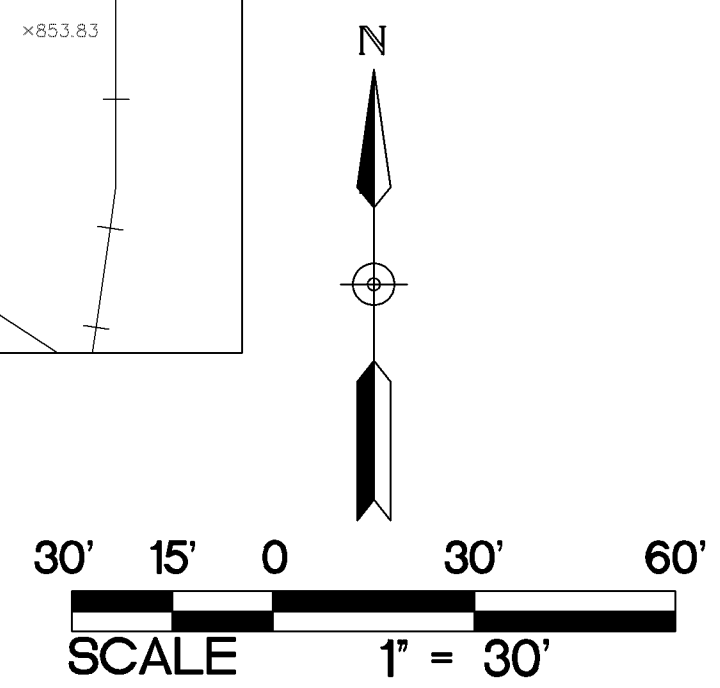
STOCKPILES:
ON-SITE STOCKPILES OF SOIL SHALL HAVE PERIMETER SEDIMENT CONTROL. STOCKPILES SHALL BE STABILIZED WITH BLANKETS, TAPPS, OR HYDRO MULCH IF LEFT ON-SITE FOR MORE THAN 7 DAYS.

REVISIONS
CITY REVIEW 2024-06-20
ASI #01 2024-07-10

DATE 4/11/2024
PROJECT # 23-0001
PHASE PERMIT SET
DRAWN BY WH
CHECKED BY STD



VICINITY MAP
BLOOMINGTON, MINNESOTA



PL202300178
PL2023-178

700 American
700 W AMERICAN BLVD • BLOOMINGTON, MN

URBANWORKS
URBANWORKS ARCHITECTURE, LLC, 2019
981 NORTH THIRD STREET, SUITE 145, MINNEAPOLIS, MN 55401

CONSULTANT
BKBM
1101 Lake River Drive, Suite 100
Minneapolis, MN 55404
Phone: (763) 843-0421
www.bkbm.com
BKBM Job No. 23421.00

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
Keith A. Matto
SIGNED DATE 4/11/2024
DATE 4/11/2024
LICENSE # 40674