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GENERAL CONSTRUCTION NOTES

- THE CONTRACTOR AND SUBCONTRACTORS SHALL OBTAIN A COPY OF THE LATEST EDITION OF THE STANDARD SPECIFICATIONS OF THE LOCAL JURISDICTION AND STATE DEPARTMENT OF TRANSPORTATION AND BECOME FAMILIAR WITH THE CONTENTS PRIOR TO COMMENCING WORK. UNLESS OTHERWISE NOTED, ALL WORK SHALL CONFORM AS APPLICABLE TO THESE STANDARDS AND SPECIFICATIONS.
- PERFORM ALL WORK IN COMPLIANCE WITH APPLICABLE CITY REGULATIONS, STATE CODES, AND O.S.H.A. STANDARDS. THE CONTRACTOR IS RESPONSIBLE FOR FURNISHING THE NECESSARY MATERIALS & LABOR TO CONSTRUCT THE FACILITY AS SHOWN AND DESCRIBED IN THE CONSTRUCTION DOCUMENTS, AND IN ACCORDANCE WITH THE SPECIFICATIONS AND REQUIREMENTS OF THE APPROPRIATE APPROVING AUTHORITIES.
- CONTRACTOR SHALL CLEAR AND GRUB ALL AREAS UNLESS OTHERWISE INDICATED, REMOVING TREES, STUMPS, ROOTS, MUCK, EXISTING PAVEMENT AND ALL OTHER DELETERIOUS MATERIAL.
- THE EXISTING SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS QUALITY LEVEL "D" UNLESS OTHERWISE NOTED. THIS QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CIACSE 3802, ENTITLED STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF SUBSURFACE QUALITY DATA BY THE FHA. EXISTING UTILITIES SHOWN ARE LOCATED ACCORDING TO THE INFORMATION AVAILABLE TO THE ENGINEER AT THE TIME OF THE TOPOGRAPHIC SURVEY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR THE ENGINEER. GUARANTEE IS NOT MADE THAT ALL EXISTING UNDERGROUND UTILITIES ARE SHOWN OR THAT THE LOCATION OF THOSE SHOWN ARE ENTIRELY ACCURATE. FINDING THE ACTUAL LOCATION OF ANY EXISTING UTILITIES IS THE CONTRACTOR'S RESPONSIBILITY AND SHALL BE DONE BEFORE COMMENCING ANY WORK IN THE VICINITY. FURTHERMORE, THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES DUE TO THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES. THE OWNER OR ENGINEER WILL ASSUME NO LIABILITY FOR ANY DAMAGES SUSTAINED OR COST INCURRED BECAUSE OF THE OPERATIONS IN THE VICINITY OF EXISTING UTILITIES OR STRUCTURES, NOR FOR TEMPORARY BRACING AND SHORING OF SAME. IF IT IS NECESSARY TO SHORE, BRACE, SWING OR RELOCATE A UTILITY, THE UTILITY COMPANY OR DEPARTMENT AFFECTED SHALL BE CONTACTED AND THEIR PERMISSION OBTAINED REGARDING THE METHOD TO USE FOR SUCH WORK.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT THE VARIOUS UTILITY COMPANIES WHICH MAY HAVE BURIED OR AERIAL UTILITIES WITHIN OR NEAR THE CONSTRUCTION AREA BEFORE COMMENCING WORK. THE CONTRACTOR SHALL PROVIDE 48 HOURS MINIMUM NOTICE TO ALL UTILITY COMPANIES PRIOR TO BEGINNING CONSTRUCTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL REQUIRED CONSTRUCTION PERMITS AND BONDS IF REQUIRED PRIOR TO CONSTRUCTION.
- THE CONTRACTOR SHALL HAVE AVAILABLE AT THE JOB SITE AT ALL TIMES ONE COPY OF THE CONSTRUCTION DOCUMENTS INCLUDING PLANS, SPECIFICATIONS, GEOTECHNICAL REPORT AND SPECIAL CONDITIONS AND COPIES OF ANY REQUIRED CONSTRUCTION PERMITS.
- ANY DISCREPANCIES ON THE DRAWINGS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE OWNER AND ENGINEER BEFORE COMMENCING WORK. NO FIELD CHANGES OR DEVIATIONS FROM DESIGN ARE TO BE MADE WITHOUT PRIOR APPROVAL OF THE OWNER AND NOTIFICATION TO THE ENGINEER.
- ALL COPIES OF COMPACTION, CONCRETE AND OTHER REQUIRED TEST RESULTS ARE TO BE SENT TO THE OWNER DIRECTLY FROM THE TESTING AGENCY.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR DOCUMENTING AND MAINTAINING AS-BUILT INFORMATION WHICH SHALL BE RECORDED AS CONSTRUCTION PROGRESSES OR AT THE COMPLETION OF APPROPRIATE CONSTRUCTION INTERVALS AND SHALL BE RESPONSIBLE FOR PROVIDING AS-BUILT DRAWINGS TO THE OWNER FOR THE PURPOSE OF CERTIFICATION TO JURISDICTIONAL AGENCIES AS REQUIRED. ALL AS-BUILT DATA SHALL BE COLLECTED BY A STATE PROFESSIONAL LAND SURVEYOR WHOSE SERVICES ARE ENGAGED BY THE CONTRACTOR.
- ANY WELLS DISCOVERED ON SITE THAT WILL HAVE NO USE MUST BE PLUGGED BY A LICENSED WELL DRILLING CONTRACTOR IN A MANNER APPROVED BY ALL JURISDICTIONAL AGENCIES. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ANY WELL ABANDONMENT PERMITS REQUIRED.
- ANY WELL DISCOVERED DURING EARTH MOVING OR EXCAVATION SHALL BE REPORTED TO THE APPROPRIATE JURISDICTIONAL AGENCIES WITHIN 24 HOURS AFTER DISCOVERY IS MADE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THAT THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS DO NOT CONFLICT WITH ANY KNOWN EXISTING OR OTHER PROPOSED IMPROVEMENTS. IF ANY CONFLICTS ARE DISCOVERED, THE CONTRACTOR SHALL NOTIFY THE OWNER PRIOR TO INSTALLATION OF ANY PORTION OF THE SITE WORK THAT WOULD BE AFFECTED. FAILURE TO NOTIFY OWNER OF AN IDENTIFIABLE CONFLICT PRIOR TO PROCEEDING WITH INSTALLATION RELIEVES OWNER OF ANY OBLIGATION TO PAY FOR A RELATED CHANGE ORDER.
- SHOULD CONTRACTOR ENCOUNTER ANY DEBRIS LADEN SOIL, STRUCTURES NOT IDENTIFIED IN THE DOCUMENTS, OR OTHER SOURCE OF POTENTIAL CONTAMINATION, THEY SHALL IMMEDIATELY CONTACT THE ENGINEER AND OWNER.
- CONTRACTOR SHALL NOTIFY OWNER AND/OR ENGINEER 48 HOURS IN ADVANCE OF THE FOLLOWING ACTIVITIES: PRE-CONSTRUCTION MEETING, SUBGRADE PREPARATION, BASE INSTALLATION, ASPHALT INSTALLATION, UNDERGROUND PIPING AND UTILITIES INSTALLATION, INSTALLATION OF STRUCTURES, CHECK VALVES, HYDRANTS, METERS, ETC., SIDEWALK INSTALLATION, CONNECTIONS TO WATER AND SEWER MAINS, TESTS OF UTILITIES.

THIRD PARTY SUPPLEMENTAL INFORMATION

KIMLEY-HORN ASSUMES NO LIABILITY FOR ANY ERRORS, INACCURACIES, OR OMISSIONS CONTAINED WITHIN SUPPLEMENTAL INFORMATION PROVIDED BY THIRD PARTY CONSULTANTS.

- BOUNDARY & TOPOGRAPHIC SURVEY**
PERFORMED BY: ANDERSON ENGINEERING
ADDRESS: 13605 1ST AVE N, SUITE 100 PLYMOUTH, MN 55441
PHONE: 763-412-4000
- CONSTRUCTION TESTING**
TEST REPORTS REQUIRED FOR CLOSE OUT INCLUDE, BUT ARE NOT LIMITED TO:
 - DENSITY TEST REPORTS
 - BACTERIOLOGICAL TESTS OF WATER SYSTEM
 - PRESSURE TEST OF WATERSEWER
 - LEAK TESTS ON SEWER SYSTEM AND GREASE TRAPS
 - ANY OTHER TESTING REQUIRED BY THE AGENCY/MUNICIPALITY

EROSION CONTROL NOTES

- THE STORM WATER POLLUTION PREVENTION PLAN ("SWPPP") IS COMPRISED OF THE EROSION CONTROL PLAN, THE STANDARD DETAILS, THE PLAN NARRATIVE, ATTACHMENTS INCLUDED IN THE SPECIFICATIONS OF THE SWPPP, PLUS THE PERMIT AND ALL SUBSEQUENT REPORTS AND RELATED DOCUMENTS.
- ALL CONTRACTORS AND SUBCONTRACTORS INVOLVED WITH STORM WATER POLLUTION PREVENTION SHALL OBTAIN A COPY OF THE STORM WATER POLLUTION PREVENTION PLAN AND THE STATE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM GENERAL PERMIT (NPDES PERMIT) AND BECOME FAMILIAR WITH THEIR CONTENTS.
- BEST MANAGEMENT PRACTICES (BMP'S) AND CONTROLS SHALL CONFORM TO FEDERAL, STATE, OR LOCAL REQUIREMENTS OR MANUAL OF PRACTICE, AS APPLICABLE. THE CONTRACTOR SHALL IMPLEMENT ADDITIONAL CONTROLS AS DIRECTED BY THE PERMITTING AGENCY OR OWNER.
- THE CONTRACTOR IS SOLELY RESPONSIBLE FOR COMPLYING WITH THE REQUIREMENTS OF THE AUTHORITIES HAVING JURISDICTION, AND SHALL MAINTAIN COMPLIANCE WITH APPLICABLE LAWS AND REGULATIONS FOR THE DURATION OF CONSTRUCTION.
- THE CONTRACTOR SHALL FIELD ADJUST AND/OR PROVIDE ADDITIONAL EROSION CONTROL BMP'S AS NEEDED TO PREVENT EROSION AND OFF-SITE SEDIMENT DISCHARGE FROM THE CONSTRUCTION SITE. LOG AND RECORD ANY ADJUSTMENTS AND DEVIATIONS FROM THE APPROVED EROSION CONTROL PLANS WITHIN THE SWPPP DOCUMENTS STORED IN THE JOB SITE TRAILER.
- BMP'S SHOWN ON THE EROSION AND SEDIMENT CONTROL PLAN, AND IN THE STORM WATER POLLUTION PREVENTION PLAN, SHALL BE MAINTAINED IN FULLY FUNCTIONAL CONDITION AS REQUIRED BY ALL JURISDICTIONS UNTIL NO LONGER REQUIRED FOR A COMPLETED PHASE OF WORK OR FINAL STABILIZATION OF THE SITE. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE CHECKED BY A CERTIFIED PERSON AT LEAST ONCE EVERY 7 CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A 0.5-INCH OR GREATER RAINFALL EVENT.
- EROSION & SEDIMENT CONTROL BMP'S SHALL BE MAINTAINED IN ACCORDANCE WITH THE FOLLOWING:
 - INLET PROTECTION DEVICES AND BARRIERS SHALL BE REPAIRED OR REPLACED IF THEY SHOW SIGNS OF UNDERMINING OR DETERIORATION.
 - ALL SEEDED AREAS SHALL BE CHECKED REGULARLY TO VERIFY THAT A HEALTHY STAND OF VEGETATION IS MAINTAINED. SEEDED AREAS SHOULD BE FERTILIZED, WATERED AND RE-SEEDED AS NEEDED. REFER TO THE LANDSCAPE PLAN AND PROJECT SPECIFICATIONS.
 - SILT FENCES SHALL BE REPAIRED TO THEIR ORIGINAL CONDITIONS IF DAMAGED. SEDIMENT SHALL BE REMOVED FROM THE SILT FENCES WHEN IT REACHES ONE-THIRD THE HEIGHT OF THE SILT FENCE.
 - THE ROCK CONSTRUCTION ENTRANCE(S) SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC ADDITIONS OF ROCK TOP DRESSING AS CONDITIONS DEMAND.
 - THE TEMPORARY PARKING AND STORAGE AREA SHALL BE KEPT IN GOOD CONDITION (SUITABLE FOR PARKING AND STORAGE). THIS MAY REQUIRE PERIODIC ADDITIONS OF TOP DRESSING IF THE TEMPORARY PARKING CONDITIONS DEMAND.
 - PERFORM ALL MAINTENANCE OPERATIONS IN A TIMELY MANNER BUT IN NO CASE LATER THAN 2 CALENDAR DAYS FOLLOWING THE INSPECTION.

PAVING AND STRIPING NOTES

- ALL PAVING, CONSTRUCTION, MATERIALS, AND WORKMANSHIP WITHIN JURISDICTION'S RIGHT-OF-WAY SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE LOCAL CITY OR COUNTY SPECIFICATIONS AND STANDARDS, OR THE STATE DOT SPECIFICATIONS AND STANDARDS IF NOT COVERED BY LOCAL CITY OR COUNTY REGULATIONS.
- ALL SIGNS, PAVEMENT MARKINGS, AND OTHER TRAFFIC CONTROL DEVICES SHALL CONFORM TO MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D) AND CITY STANDARDS.
- CONTRACTOR SHALL FURNISH ALL PAVEMENT MARKINGS FOR FIRE LANES, ROADWAY LANES, PARKING STALLS, ACCESSIBLE PARKING SYMBOLS, ACCESS AISLES, STOP BARS AND SIGNS, AND MISCELLANEOUS STRIPING WITHIN THE PARKING LOT AS SHOWN ON THE PLANS.
- ALL EXPANSION JOINTS SHALL EXTEND THROUGH THE CURB.
- THE MINIMUM LENGTH OF OFFSET JOINTS AT RADIUS POINTS SHALL BE 2 FEET.
- ALL JOINTS, INCLUDING EXPANSION JOINTS WITH REMOVABLE TACK STRIPS, SHALL BE SEALED WITH JOINT SEALANT.
- THE MATERIALS AND PROPERTIES OF ALL CONCRETE SHALL MEET THE APPLICABLE REQUIREMENTS IN THE A.C.I. (AMERICAN CONCRETE INSTITUTE) MANUAL OF CONCRETE PRACTICE.
- CONTRACTOR SHALL APPLY A SECOND COATING OVER ALL PAVEMENT MARKINGS PRIOR TO ACCEPTANCE BY OWNER FOLLOWED BY A COAT OF GLASS BEADS AS APPLICABLE PER THE PROJECT DOCUMENTS.
- ANY EXISTING PAVEMENT, CURBS AND/OR SIDEWALKS DAMAGED OR REMOVED WILL BE REPAIRED BY THE CONTRACTOR AT HIS EXPENSE TO THE SATISFACTION OF THE ENGINEER AND OWNER.
- BEFORE PLACING PAVEMENT, CONTRACTOR SHALL VERIFY SUITABLE ACCESSIBLE ROUTES (PER A.D.A). GRADING FOR ALL SIDEWALKS AND ACCESSIBLE ROUTES INCLUDING CROSSING DRIVEWAYS SHALL CONFORM TO CURRENT ADA STATE/NATIONAL STANDARDS. IN NO CASE SHALL ACCESSIBLE RAMP SLOPES EXCEED 1 VERTICAL TO 12 HORIZONTAL. IN NO CASE SHALL SIDEWALK CROSS SLOPES EXCEED 2%. IN NO CASE SHALL LONGITUDINAL SIDEWALK SLOPES EXCEED 5%. IN NO CASE SHALL ACCESSIBLE PARKING STALLS OR AISLES EXCEED 2% (1.5% TARGET) IN ALL DIRECTIONS. SIDEWALK ACCESS TO EXTERNAL BUILDING DOORS AND GATES SHALL BE ADA COMPLIANT. CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY IF ADA CRITERIA CANNOT BE MET IN ANY LOCATION PRIOR TO PAVING. NO CONTRACTOR CHANGE ORDERS WILL BE ACCEPTED FOR A.D.A COMPLIANCE ISSUES.
- MAXIMUM JOINT SPACING IS TWICE THE DEPTH OF THE CONCRETE PAVEMENT IN FEET.

GRADING AND DRAINAGE NOTES

- GENERAL CONTRACTOR AND ALL SUBCONTRACTORS SHALL VERIFY THE SUITABILITY OF ALL EXISTING AND PROPOSED SITE CONDITIONS INCLUDING GRADES AND DIMENSIONS BEFORE START OF CONSTRUCTION. THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCIES.
- THE CONTRACTOR SHALL GRADE THE SITE TO THE ELEVATIONS INDICATED AND SHALL ADJUST BMP'S AS NECESSARY AND REGRADE WASHOUTS WHERE THEY OCCUR AFTER EVERY RAINFALL UNTIL A GRASS STAND IS WELL ESTABLISHED OR ADEQUATE STABILIZATION OCCURS.
- CONTRACTOR SHALL ENSURE THERE IS POSITIVE DRAINAGE FROM THE PROPOSED BUILDINGS SO THAT SURFACE RUNOFF WILL DRAIN BY GRAVITY TO NEW OR EXISTING DRAINAGE OUTLETS. CONTRACTOR SHALL ENSURE NO PONDING OCCURS IN PAVED AREAS AND SHALL NOTIFY ENGINEER IF ANY GRADING DISCREPANCIES ARE FOUND IN THE EXISTING AND PROPOSED GRADES PRIOR TO PLACEMENT OF PAVEMENT OR UTILITIES.
- CONTRACTOR SHALL PROTECT ALL MANHOLE COVERS, VALVE COVERS, VAULT LIDS, FIRE HYDRANTS, POWER POLES, GUY WIRES, AND TELEPHONE BOXES THAT ARE TO REMAIN IN PLACE AND UNDISTURBED DURING CONSTRUCTION. EXISTING CASTINGS AND STRUCTURES TO REMAIN SHALL BE ADJUSTED TO MATCH THE PROPOSED FINISHED GRADES.
- BACKFILL FOR UTILITY LINES SHALL BE PLACED PER DETAILS, STANDARDS, AND SPECIFICATIONS SO THAT THE UTILITY WILL BE STABLE. WHERE UTILITY LINES CROSS THE PARKING LOT, THE TOP 6 INCHES SHALL BE COMPACTED SIMILARLY TO THE REMAINDER OF THE LOT. UTILITY DITCHES SHALL BE VISUALLY INSPECTED DURING THE EXCAVATION PROCESS TO ENSURE THAT UNDESIRABLE FILL IS NOT USED.
- CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL AND REPLACEMENT OF 4" OF TOPSOIL AT COMPLETION OF WORK. ALL UNPAVED AREAS IN EXISTING RIGHTS-OF-WAY DISTURBED BY CONSTRUCTION SHALL BE REGRADED AND SODDED.
- AFTER PLACEMENT OF SUBGRADE AND PRIOR TO PLACEMENT OF PAVEMENT, CONTRACTOR SHALL TEST AND OBSERVE PAVEMENT AREAS FOR EVIDENCE OF PONDING. ALL AREAS SHALL ADEQUATELY DRAIN TOWARDS THE INTENDED STRUCTURE TO CONVEY STORM RUNOFF. CONTRACTOR SHALL IMMEDIATELY NOTIFY OWNER AND ENGINEER IF ANY DISCREPANCIES ARE DISCOVERED.
- WHERE EXISTING PAVEMENT IS INDICATED TO BE REMOVED AND REPLACED, THE CONTRACTOR SHALL SAW CUT FULL DEPTH FOR A SMOOTH AND STRAIGHT JOINT AND REPLACE THE PAVEMENT WITH THE SAME TYPE AND DEPTH OF MATERIAL AS EXISTING OR AS INDICATED.
- THE CONTRACTOR SHALL INSTALL PROTECTION OVER ALL DRAINAGE STRUCTURES FOR THE DURATION OF CONSTRUCTION AND UNTIL ACCEPTANCE OF THE PROJECT BY THE OWNER. ALL DRAINAGE STRUCTURES SHALL BE CLEANEED OF DEBRIS AS REQUIRED DURING AND AT THE END OF CONSTRUCTION TO PROVIDE POSITIVE DRAINAGE FLOWS.
- IF DEWATERING IS REQUIRED, THE CONTRACTOR SHALL OBTAIN ANY APPLICABLE REQUIRED PERMITS. THE CONTRACTOR IS TO COORDINATE WITH THE OWNER AND THE DESIGN ENGINEER PRIOR TO ANY EXCAVATION.
- FIELD DENSITY TESTS SHALL BE TAKEN AT INTERVALS IN ACCORDANCE WITH THE LOCAL JURISDICTIONAL AGENCY OR TO STATE DOT STANDARDS. IN THE EVENT THAT THE CONTRACT DOCUMENTS AND THE JURISDICTIONAL AGENCY REQUIREMENTS ARE NOT IN AGREEMENT, THE MOST STRINGENT SHALL GOVERN.
- ALL SLOPES AND AREAS DISTURBED BY CONSTRUCTION SHALL BE GRADED AS PER PLANS. THE AREAS SHALL THEN BE SODDED OR SEEDED AS SPECIFIED IN THE PLANS. FERTILIZED, MULCHED, WATERED AND MAINTAINED UNTIL GROWTH IS ESTABLISHED TO MINIMUM COVERAGE OF 70% IN ALL AREAS. ANY AREAS DISTURBED FOR ANY REASON PRIOR TO FINAL ACCEPTANCE OF THE JOB SHALL BE CORRECTED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER. ALL EARTHEN AREAS WILL BE SODDED OR SEEDED AND MULCHED AS SHOWN ON THE LANDSCAPING PLAN.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONTROL OF DUST AND DIRT RISING AND SCATTERING IN THE AIR DURING CONSTRUCTION AND SHALL PROVIDE WATER SPRINKLING OR OTHER SUITABLE METHODS OF CONTROL. THE CONTRACTOR SHALL COMPLY WITH ALL GOVERNING REGULATIONS PERTAINING TO ENVIRONMENTAL PROTECTION.
- SOD, WHERE CALLED FOR, MUST BE INSTALLED AND MAINTAINED ON EXPOSED SLOPES WITHIN 48 HOURS OF COMPLETING FINAL GRADING, AND AT ANY OTHER TIME AS NECESSARY, TO PREVENT EROSION, SEDIMENTATION OR TURBID DISCHARGES.
- THE CONTRACTOR SHALL ENSURE THAT LANDSCAPE ISLAND PLANTING AREAS AND OTHER PLANTING AREAS ARE NOT COMPACTED AND DO NOT CONTAIN ROAD BASE MATERIALS. THE CONTRACTOR SHALL ALSO EXCAVATE AND REMOVE ALL UNDESIRABLE MATERIAL FROM ALL AREAS ON THE SITE TO BE PLANTED AND PROPERLY DISPOSED OF IN A LEGAL MANNER.
- THE CONTRACTOR SHALL INSTALL ALL UNDERGROUND STORM WATER PIPING PER MANUFACTURER'S RECOMMENDATIONS AND STATE DOT SPECIFICATIONS.
- PAVEMENTS SHALL BE INSTALLED IN ACCORDANCE WITH THE RECOMMENDATION OF THE SITE SPECIFIC GEOTECHNICAL EVALUATION REPORT AND CITY & STATE DOT SPECIFICATIONS.
- SPOT ELEVATIONS REPRESENT THE FINISHED SURFACE GRADE OR FLOWLINE OF CURB UNLESS OTHERWISE NOTED.
- LIMITS OF CONSTRUCTION ARE TO THE PROPERTY LINE UNLESS OTHERWISE SPECIFIED ON THE PLAN.
- IMMEDIATELY REPORT TO THE OWNER ANY DISCREPANCIES FOUND BETWEEN ACTUAL FIELD CONDITIONS AND CONSTRUCTION DOCUMENTS.
- THE CONTRACTOR IS RESPONSIBLE FOR LOCATING AND PROTECTING EXISTING UTILITIES, AND SHALL REPAIR ALL DAMAGE TO EXISTING UTILITIES THAT OCCUR DURING CONSTRUCTION WITHOUT COMPENSATION.
- BLEND NEW EARTHWORK SMOOTHLY TO TRANSITION BACK TO EXISTING GRADE.
- ALL PROPOSED GRADES ONSITE SHALL BE 3:1 OR FLATTER UNLESS OTHERWISE INDICATED ON THE PLANS. ANY SLOPES STEEPER THAN 4:1 REQUIRE EROSION AND SEDIMENT CONTROL BLANKET.
- ADHERE TO ALL TERMS AND CONDITIONS AS NECESSARY IN THE GENERAL N.P.D.E.S. PERMIT AND STORMWATER POLLUTION PREVENTION PLAN (SWPPP) FOR STORMWATER DISCHARGE ASSOCIATED WITH CONSTRUCTION ACTIVITIES.
- ADJUST AND/OR CUT EXISTING PAVEMENT AS NECESSARY TO ASSURE A SMOOTH FIT AND CONTINUOUS GRADE.

WATER STORM SEWER & SANITARY SEWER NOTES

- THE CONTRACTOR SHALL CONSTRUCT GRAVITY SEWER LATERALS, MANHOLES, GRAVITY SEWER LINES, AND DOMESTIC WATER AND FIRE PROTECTION SYSTEM AS SHOWN ON THESE PLANS. THE CONTRACTOR SHALL FURNISH ALL NECESSARY MATERIALS, EQUIPMENT, MACHINERY, TOOLS, MEANS OF TRANSPORTATION AND LABOR NECESSARY TO COMPLETE THE WORK IN FULL AND COMPLETE ACCORDANCE WITH THE SHOWN, DESCRIBED AND REASONABLY INTENDED REQUIREMENTS OF THE CONTRACT DOCUMENTS AND JURISDICTIONAL AGENCY REQUIREMENTS. IN THE EVENT THAT THE CONTRACT DOCUMENTS AND THE JURISDICTIONAL AGENCY REQUIREMENTS ARE NOT IN AGREEMENT, THE MOST STRINGENT SHALL GOVERN.
- ALL EXISTING UNDERGROUND UTILITY LOCATIONS SHOWN ARE APPROXIMATE. THE CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS FOR UTILITY LOCATION AND COORDINATION IN ACCORDANCE WITH THE NOTES CONTAINED IN THE GENERAL CONSTRUCTION SECTION OF THIS SHEET.
- THE CONTRACTOR SHALL RESTORE ALL DISTURBED VEGETATION IN KIND, UNLESS SHOWN OTHERWISE.
- DEFLECTION OF PIPE JOINTS AND CURVATURE OF PIPE SHALL NOT EXCEED THE MANUFACTURER'S SPECIFICATIONS. SECURELY CLOSE ALL OPEN ENDS OF PIPE AND FITTINGS WITH A WATERTIGHT PLUG WHEN WORK IS NOT IN PROGRESS. THE INTERIOR OF ALL PIPES SHALL BE CLEAN AND JOINT SURFACES WIPED CLEAN AND DRY AFTER THE PIPE HAS BEEN LOWERED INTO THE TRENCH. VALVES SHALL BE PLUMB AND LOCATED ACCORDING TO THE PLANS.
- ALL PIPE AND FITTINGS SHALL BE CAREFULLY STORED FOLLOWING MANUFACTURER'S RECOMMENDATIONS. CARE SHALL BE TAKEN TO AVOID DAMAGE TO THE COATING OR LINING IN ANY D.I. PIPE FITTINGS. ANY PIPE OR FITTING WHICH IS DAMAGED OR WHICH HAS FLAWS OR IMPERFECTIONS WHICH, IN THE OPINION OF THE ENGINEER OR OWNER, RENDERS IT UNFIT FOR USE, SHALL NOT BE USED. ANY PIPE NOT SATISFACTORY FOR USE SHALL BE CLEARLY MARKED AND IMMEDIATELY REMOVED FROM THE JOB SITE, AND SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
- WATER FOR FIRE FIGHTING SHALL BE MADE AVAILABLE FOR USE BY THE CONTRACTOR PRIOR TO COMBUSTIBLES BEING BROUGHT ON SITE.
- ALL UTILITY AND STORM DRAIN TRENCHES LOCATED UNDER AREAS TO RECEIVE PAVING SHALL BE COMPLETELY BACK FILLED IN ACCORDANCE WITH THE GOVERNING JURISDICTIONAL AGENCY'S SPECIFICATIONS. IN THE EVENT THAT THE CONTRACT DOCUMENTS AND THE JURISDICTIONAL AGENCY REQUIREMENTS ARE NOT IN AGREEMENT, THE MOST STRINGENT SHALL GOVERN.
- UNDERGROUND UTILITY LINES SHALL BE SURVEYED BY A STATE LICENSED PROFESSIONAL LAND SURVEYOR PRIOR TO BACK FILLING.
- CONTRACTOR SHALL PERFORM, AT THEIR OWN EXPENSE, ANY AND ALL TESTS REQUIRED BY THE SPECIFICATIONS AND/OR ANY AGENCY HAVING JURISDICTION. THESE TESTS MAY INCLUDE, BUT MAY NOT BE LIMITED TO, INFILTRATION AND EXFILTRATION, TELEVISION INSPECTION AND A MANDEL TEST ON GRAVITY SEWER. A COPY OF THE TEST RESULTS SHALL BE PROVIDED TO THE UTILITY PROVIDER, OWNER AND JURISDICTIONAL AGENCY AS REQUIRED.
- BETWEEN WATER AND SEWER MANHOLES AND PIPES, CONTRACTOR SHALL PROVIDE FOR A MINIMUM HORIZONTAL CLEARANCE OF 10-FEET AND A MINIMUM VERTICAL SEPARATION OF 18-INCHES.
- IF ANY EXISTING STRUCTURES TO REMAIN ARE DAMAGED DURING CONSTRUCTION IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO REPAIR AND/OR REPLACE THE EXISTING STRUCTURE AS NECESSARY TO RETURN IT TO EXISTING CONDITIONS OR BETTER.
- ALL STORM PIPE ENTERING STRUCTURES SHALL BE GASKETED AND/OR GROUTED TO ASSURE CONNECTION AT STRUCTURE IS WATERTIGHT UNLESS OTHERWISE STATED BY CITY AND STATE DESIGN STANDARDS AND SPECIFICATIONS.
- UNLESS OTHERWISE STATED IN CITY AND STATE DESIGN STANDARDS AND SPECIFICATIONS, ALL STORM SEWER MANHOLES IN PAVED AREAS SHALL BE FLUSH WITH PAVEMENT, AND SHALL HAVE TRAFFIC BEARING RING & COVERS. MANHOLES IN UNPAVED AREAS SHALL BE 6" ABOVE FINISH GRADE. LIDS SHALL BE LABELED "STORM SEWER". EXISTING CASTINGS AND STRUCTURES WITHIN PROJECT LIMITS SHALL BE ADJUSTED TO MEET THESE CONDITIONS AND THE PROPOSED FINISHED GRADE.
- TOPOGRAPHIC INFORMATION IS TAKEN FROM A TOPOGRAPHIC SURVEY BY LAND SURVEYORS. IF THE CONTRACTOR DOES NOT ACCEPT EXISTING TOPOGRAPHY AS SHOWN ON THE PLANS, WITHOUT EXCEPTION, THEN THE CONTRACTOR SHALL SUPPLY, AT THEIR EXPENSE, A TOPOGRAPHIC SURVEY BY A REGISTERED LAND SURVEYOR TO THE OWNER FOR REVIEW.
- CONSTRUCTION SHALL COMPLY WITH ALL APPLICABLE GOVERNING CODES AND BE CONSTRUCTED TO SAME.
- ALL STORM STRUCTURES SHALL HAVE A SMOOTH UNIFORM POURED MORTAR FROM INVERT IN TO INVERT OUT.
- ROOF DRAINS SHALL BE CONNECTED TO STORM SEWER BY PREFABRICATED WYES OR AT STORM STRUCTURES. ROOF DRAINS AND TRUCK WELL DRAIN SHALL RUN AT A MINIMUM 2.0% SLOPE, UNLESS NOTED OTHERWISE, AND TIE IN AT THE CENTERLINE OF THE STORM MAIN.
- PROVIDE INSULATION OF UNDERGROUND ROOF DRAINS AND SANITARY SEWER SERVICES IF ADEQUATE FROST DEPTH CANNOT BE PROVIDED.
- THE CONTRACTOR SHALL PROTECT EXISTING UNDERGROUND UTILITIES AND APPURTENANCES THAT ARE TO REMAIN FROM DAMAGE DURING CONSTRUCTION OPERATIONS.
- THE LOCATION OF EXISTING UTILITIES, STORM DRAINAGE STRUCTURES AND OTHER ABOVE AND BELOW-GRADE IMPROVEMENTS ARE APPROXIMATE AS SHOWN. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT LOCATION, SIZE AND INVERT ELEVATIONS OF EACH PRIOR TO THE START OF CONSTRUCTION.
- A MINIMUM SEPARATION OF 5-FEET IS REQUIRED BETWEEN UNDERGROUND UTILITIES AND TREES UNLESS A ROOT BARRIER IS UTILIZED.
- GAS, PHONE AND ELECTRIC SERVICES SHOWN FOR INFORMATIONAL PURPOSES ONLY. DRY UTILITY COMPANIES MAY ALTER THE DESIGN LAYOUT DURING THEIR REVIEW. CONTRACTOR TO COORDINATE FINAL DESIGN AND INSTALLATION WITH UTILITY COMPANIES.
- COORDINATE UTILITY INSTALLATION WITH IRRIGATION DESIGN AND INSTALLATION.
- ALL DIMENSIONS ARE TO FLOW LINE OF CURB UNLESS OTHERWISE NOTED. PERIMETER WALL DIMENSIONS ARE TO INSIDE WALL FACE. REFERENCE ARCHITECTURAL PLANS FOR EXACT WALL WIDTH AND SPECIFICATIONS.
- REFERENCE ARCHITECTURAL PLANS (BY OTHERS) FOR EXACT BUILDING DIMENSIONS, MATERIALS SPECIFICATIONS.
- REFERENCE M.E.P. PLANS (BY OTHERS) FOR MECHANICAL EQUIPMENT DIMENSIONS AND SPECIFICATIONS.
- CONTRACTOR SHALL REFERENCE STRUCTURAL PLANS (BY OTHERS) FOR FOOTING AND FOUNDATION PAD PREPARATION SPECIFICATIONS.
- CONTRACTOR SHALL REFERENCE M.E.P PLANS (BY OTHERS) FOR ROUTING OF PROPOSED ELECTRICAL & COMMUNICATIONS SERVICES AND SITE LIGHTING LAYOUT.

ISSUED FOR REVIEW - NOT FOR CONSTRUCTION

CREW CARWASH
COLUMBIA HEIGHTS
PREPARED FOR
CREW CARWASH
COLUMBIA HEIGHTS

SHEET NUMBER
C100

Kimley»Horn

2026 KIMLEY-HORN AND ASSOCIATES, INC.
767 EUSTIS STREET, SUITE 100, ST. PAUL, MN 55114
PHONE: 651-945-4197
WWW.KIMLEY-HORN.COM

THIS CERTIFICATE THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

MATT SCHWARTZ
DATE: 08/01/2026
MN LIC. NO. 63415

KHA PROJECT
161033029
DATE
07/01/2026
SCALE
AS SHOWN
DESIGNED BY
MLS
DRAWN BY
DWG
CHECKED BY
DLE

GENERAL NOTES

CREW CARWASH
COLUMBIA HEIGHTS
PREPARED FOR
CREW CARWASH
COLUMBIA HEIGHTS

SHEET NUMBER
C100

BY

DATE

REVISIONS

No.

ALTA/NSPS LAND TITLE SURVEY
For: Kimley - Horn

LEGAL DESCRIPTION:

LAND DESCRIBED IN THE TITLE COMMITMENT:
Lot 2, Block 1, GRAND CENTRAL LOFTS 3RD ADDITION, according to the recorded plat thereof, Anoka County, Minnesota.

LAND NOT DESCRIBED IN THE TITLE COMMITMENT:
Lot 1, Block 1, GRAND CENTRAL LOFTS 3RD ADDITION, according to the recorded plat thereof, Anoka County, Minnesota.

CERTIFICATION:

To: Carlyle Partners, LLC, a Indiana limited liability company, Monty Realty LLC, a Minnesota limited liability company, Guaranty Commercial Title, Inc.; and Old Republic National Insurance Company.

This is to certify that this map or plat and the survey on which it is based were made in accordance with the 2026 Minimum Standard Detail Requirements for ALTA/NSPS Land Title Surveys, jointly established and adopted by ALTA and NSPS and includes items 1, 2, 3, 4, 5, 6(a), 7(a), 7(b)(1), 7(c) 8, 9, 11(a), 13, 14, 16, 18 and 20 of Table A thereof. The field work was completed on April of 2026.

Date of Map or Plat: May 6, 2026

Anderson Engineering of Minnesota, LLC

by: Nicholas Hillmer
Nicholas Hillmer
Minnesota License No. 45774

SURVEY NOTES:

- The horizontal datum and bearings are based on the Anoka County Coordinate System NAD83(2011).
- The vertical datum is the NAVD88. The site benchmark is two top-nut-hydrants depicted hereon.
- The area of the property described hereon is 90,904 square feet or 2.0869 and is divided as follows, Lot 1 is 46,333 square feet or 1.0636 acres, and Lot 2 is 44,480 square feet or 1.0211 acres.
- The legal description and easement information were provided by Old Republic National Title Insurance Company Commitment for Title Insurance, File No. 70387, issued by its agent, Guaranty Commercial Title, Inc., and dated April 3, 2026..
- According to Federal Emergency Management Agency (FEMA), the property described hereon lies in flood zone X (area of minimal flood hazard) per Flood Insurance Rate Map Number 27003C0411E, dated December 16, 2015.
- The location and extent of underground utilities, if shown, are based upon existing drawings provided by the utility companies, above ground evidence and Gopher State One Call markings per ticket number 261042483. However, lacking excavation, the exact location of underground features cannot be accurately, completely, and reliably depicted. In addition, in some jurisdictions, 811 or other similar utility locate requests from surveyors may be ignored or result in an incomplete response. The size and location of utilities shown should be considered approximate. Additional underground utilities may be present. Verification of the existence and location of all utilities should be obtained from the utility owners prior to any planning or design. In accordance with State Statute, the location of utilities shall be confirmed prior to any demolition or construction.
- There were no gaps or overlaps between the subject property and any adjacent right-of-ways.
- There were no regular parking spaces and no handicapped parking spaces observed at the time of the field work.
- The nearest intersecting street to the subject property is the intersection of 47th Ave NE and Central Ave which are contiguous with the subject property.
- There was no observable evidence of recent earth moving work, building construction or building additions observed in the process of conducting the fieldwork.
- According to the City of Columbia Heights, the subject property is zoned MXD (Mixed Use Development) and has the building setback requirements listed below. It is recommended that the property owner obtain a zoning letter from the City to verify all conditions that affect the property through the city zoning ordinance. This survey does not purport to describe all conditions contained in said ordinance.

Building setbacks shall be regulated by the final site plan and development agreement approved by the City Council.
No building setback lines are depicted.

SURVEY RELATED ITEMS FROM SCHEDULE B, PART II:

- 8: Drainage and utility easement(s) over said Lands as shown on the recorded plat of GRAND CENTRAL LOFTS 3RD ADDITION.
- 9: Utility easement(s) over said Lands in favor of City of Columbia Heights, as created in Document No. 186292.
- 10: Terms and conditions of Easements with Covenants and Restrictions Affecting Land, filed March 31, 2017, as Document No. 2166866.004. *This document describes shared easements of a project that may not have come to fruition, between companies "Venture" and "Hy-Vee". Said easements are referenced to features of this project that appear to not have been constructed. Nothing depicted.*

LEGEND

	CATCH BASIN		POWER POLE		FIBER OPTICS		DEPRESSION CONTOUR
	COMMUNICATION PEDESTAL		SANITARY MANHOLE		GAS MAIN		TREE LINE
	ELECTRIC BOX		SIGN		SANITARY SEWER		SANITARY SEWER PER PLAN
	GAS VALVE		STORM MANHOLE		STORM SEWER		STORM SEWER PER PLAN
	HANDHOLE		WATER VALVE		UNDERGROUND ELECTRIC		WATER MAIN PER PLAN
	HANDHOLE ELECTRIC		FOUND IRON MONUMENT		BITUMINOUS SURFACE		WATER VALVE PER PLAN
	HYDRANT		SET 1/2"x14" IRON PIPE MARKED L.S. NO. 45774		CONCRETE SURFACE		
	LIGHT POLE		DECIDUOUS TREE		TRUNCATED DOMES		
	MANHOLE NOT FIELD VERIFIED						

POSSIBLE ENCROACHMENTS

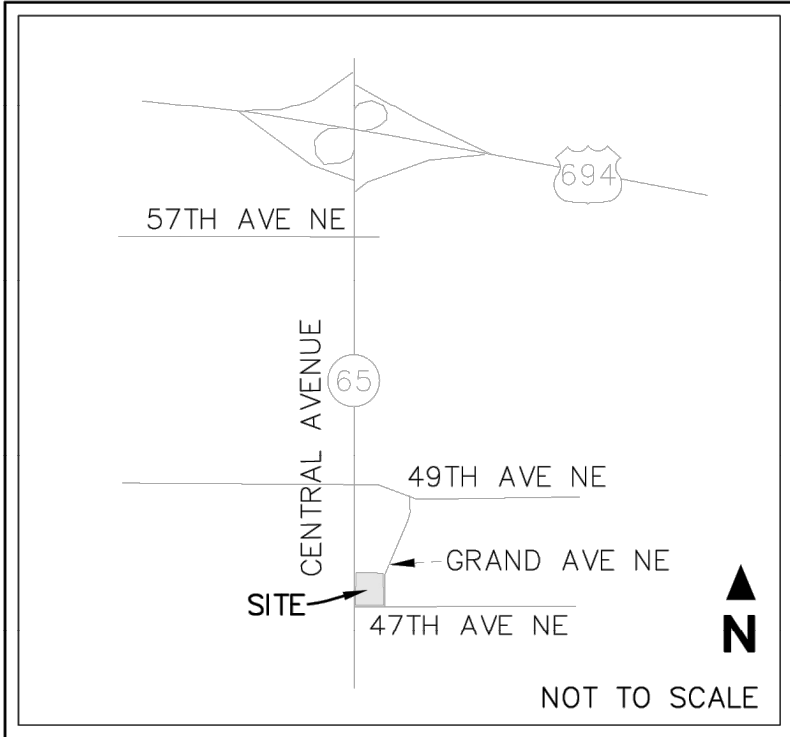
- Boulevard trees, concrete walk and walls on property.
- A dirt trail crosses Lot 2.
- Gas and Fiber Optic lines enters property.
- Roadways stub into the property.
- Communications junction box on property.

NOTE:

This survey depicts easements from the previous plat of GRAND CENTRAL LOFTS, as shown over Lot 1, of the plat of GRAND CENTRAL LOFTS 3RD ADDITION. The Title Commitment did not include Lot 1 or any documentation thereto that would have described if this easement was vacated after the platting of GRAND CENTRAL LOFTS 3RD ADDITION, or not.

As-built information here-on are based on city utility as-builts, and plans from project "Grand Central Lofts."

VICINITY MAP



CLIENT

Kimley»Horn

ANDERSON
ENGINEERING • ARCHITECTURE • LAND SURVEYING
ENVIRONMENTAL SERVICES • LANDSCAPE ARCHITECTURE

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ALTA/NSPS
LAND TITLE
SURVEY

SITE LOCATION

4707 CENTRAL AVENUE
COLUMBIA HEIGHTS, MINNESOTA.



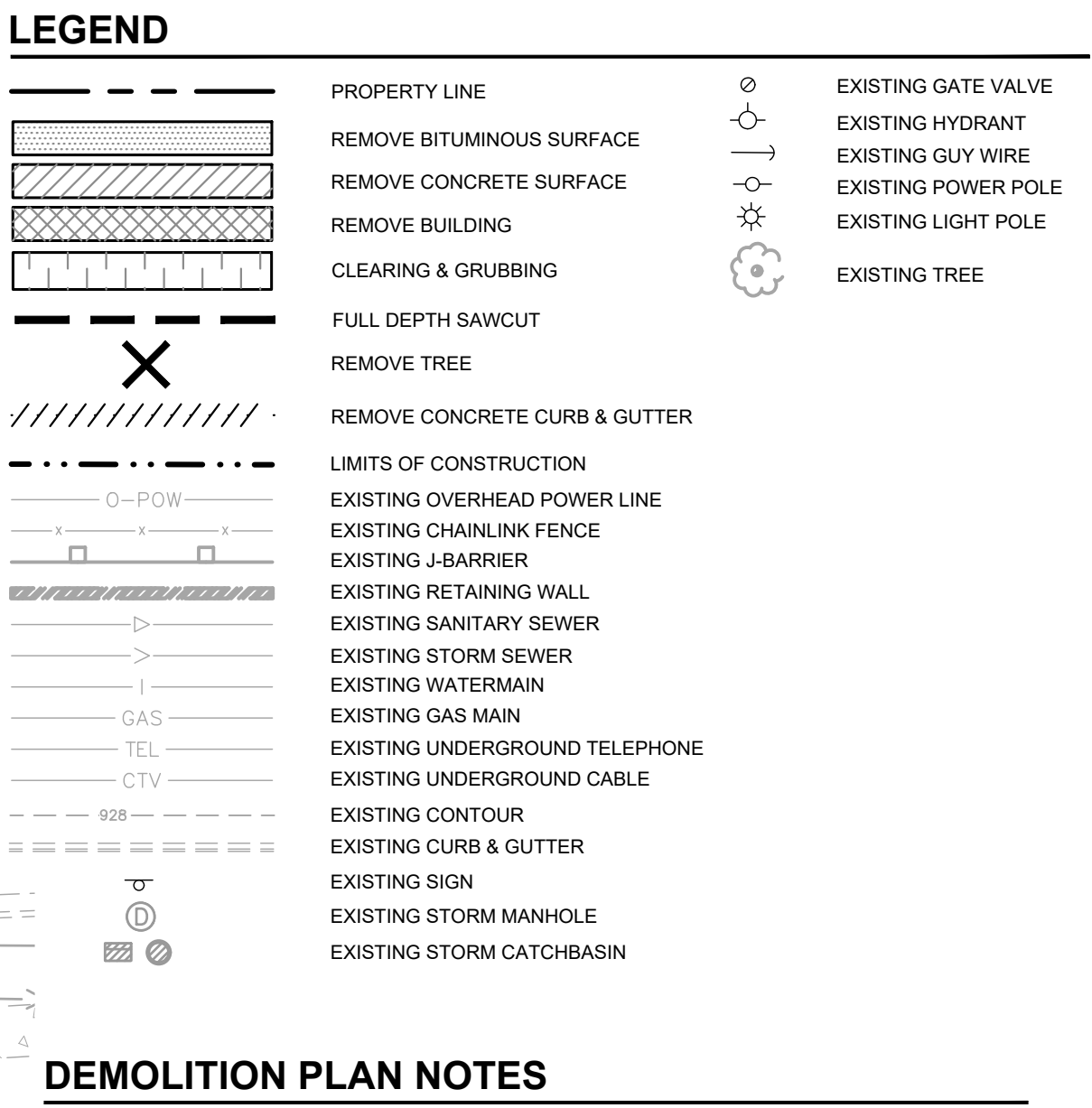
0 30 60
SCALE IN FEET

DATE:

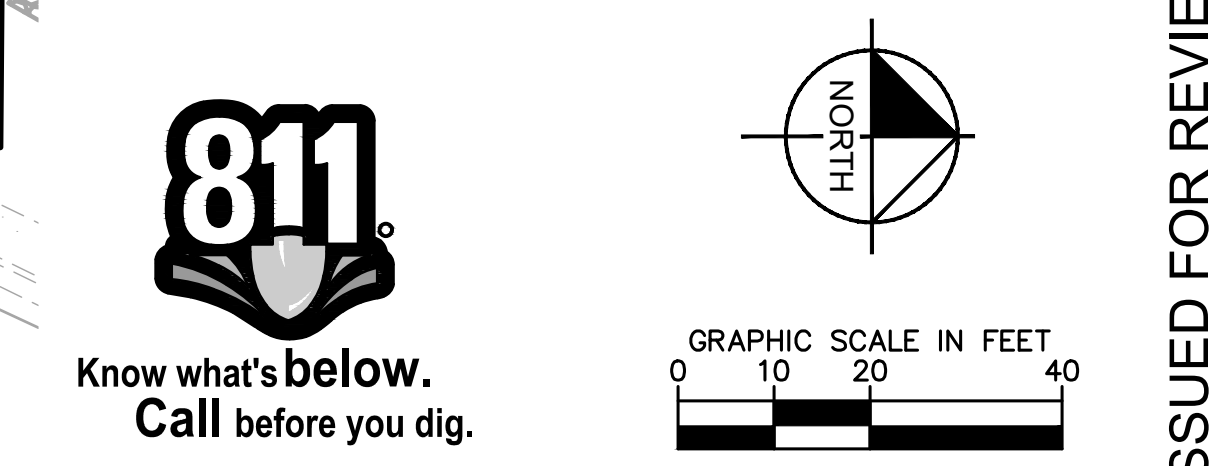
REVISIONS:

PROJECT NO.
19189

SHEET
1/1



1. THE CONTRACTOR IS RESPONSIBLE FOR THE DEMOLITION, REMOVAL, AND DISPOSAL (IN A LOCATION APPROVED BY THE GOVERNING AUTHORITY) OF ALL STRUCTURES, PADS, WELLS, FLUMES, FOUNDATIONS, PARKING, DRIVES, DRAINAGE STRUCTURES, UTILITIES, ETC. SUCH THAT THE IMPROVEMENTS ON THE PLANS CAN BE CONSTRUCTED. FACILITIES TO BE REMOVED SHALL BE UNDERCUT TO SUITABLE MATERIAL, AND BROUGHT TO GRADE WITH SUITABLE COMPACTED FILL MATERIAL PER THE PROJECT DOCUMENTS.
2. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL DEBRIS FROM THE SITE AND DISPOSING OF THE DEBRIS IN A LAWFUL MANNER AND IN ACCORDANCE WITH LOCAL AND STATE REGULATIONS. THE CONTRACTOR SHALL OBTAIN ANY REQUIRED PERMITS FOR DEMOLITION AND DISPOSAL FROM THE APPROPRIATE LOCAL AND STATE AGENCIES. CONTRACTOR SHALL PROVIDE COPIES OF THE PERMIT AND RECEIPTS OF DISPOSAL OF MATERIALS TO THE OWNER AND OWNERS REPRESENTATIVE, INCLUDING THE TYPE OF DEBRIS AND LOCATION WHERE IT WAS DISPOSED.
3. THE CONTRACTOR SHALL MAINTAIN UTILITY SERVICES TO ADJACENT PROPERTIES AT ALL TIMES. UTILITY SERVICES SHALL NOT BE INTERRUPTED WITHOUT APPROVAL FROM THE CONSTRUCTION MANAGER AND COORDINATION WITH THE ADJACENT PROPERTIES AND/OR THE CITY.
4. THE CONTRACTOR SHALL COORDINATE WITH RESPECTIVE UTILITY COMPANIES PRIOR TO THE REMOVAL AND/OR RELOCATION OF UTILITIES. THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANY CONCERNING PORTIONS OF WORK WHICH MAY BE PERFORMED BY THE UTILITY COMPANY'S FORCES AND ANY FEES WHICH ARE TO BE PAID TO THE UTILITY COMPANY FOR THEIR SERVICES. THE CONTRACTOR IS RESPONSIBLE FOR PAYING ALL FEES AND CHARGES.
5. THE LOCATIONS OF EXISTING UTILITIES SHOWN ON THE PLAN HAVE BEEN DETERMINED FROM THE BEST INFORMATION AVAILABLE AND ARE GIVEN FOR THE CONVENIENCE OF THE CONTRACTOR. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THEIR ACCURACY. PRIOR TO THE START OF ANY DEMOLITION ACTIVITY, THE CONTRACTOR SHALL NOTIFY THE AFFECTED UTILITY COMPANIES TO PROVIDE LOCATIONS OF EXISTING UTILITIES WITHIN PROPOSED WORK AREA.
6. EXISTING SEWERS, PIPING AND UTILITIES SHOWN ARE BASED ON AVAILABLE RECORD PLAN DATA AND/OR FIELD UTILITY MARKINGS AND ARE NOT TO BE INTERPRETED AS THE EXACT LOCATION. ADDITIONAL UNMARKED UTILITIES MAY EXIST ON THE SITE. VERIFY EXISTING CONDITIONS AND PROCEED WITH CAUTION AROUND ANY ANTICIPATED UNDERGROUND FEATURES. GIVE NOTICE TO AFFECTED UTILITY COMPANIES REGARDING REMOVAL OF SERVICE LINES AND CAP ANY ABANDONED LINES BEFORE PRECEDING WITH THE PROPOSED WORK.
7. ELECTRICAL, TELEPHONE, CABLE, WATER, FIBER OPTIC, AND/OR GAS LINES NEEDING TO BE REMOVED OR RELOCATED SHALL BE COORDINATED WITH THE AFFECTED UTILITY COMPANY. ADEQUATE TIME SHALL BE PROVIDED FOR RELOCATION AND CLOSE COORDINATION WITH THE UTILITY COMPANY TO PROVIDE A SMOOTH TRANSITION IN UTILITY SERVICES. CONTRACTOR SHALL PAY CLOSE ATTENTION TO EXISTING UTILITIES WITHIN ANY ROAD RIGHT-OF-WAY DURING CONSTRUCTION.
8. CONTRACTOR MUST PROTECT THE PUBLIC AT ALL TIMES WITH FENCING, BARRICADES, ENCLOSURES, ETC. (AND OTHER APPROPRIATE BEST MANAGEMENT PRACTICES) AS APPROVED BY THE CONSTRUCTION MANAGER. MAINTENANCE OF TRAFFIC CONTROL SHALL BE COORDINATED IN ACCORDANCE WITH THE CITY, COUNTY, AND STATE DOT AS NECESSARY.
9. CONTRACTOR SHALL MAINTAIN ACCESS TO ADJACENT PROPERTIES DURING CONSTRUCTION, AND SHALL NOTIFY ADJACENT PROPERTY OWNERS IF ACCESS WILL BE INTERRUPTED OR ALTERED AT ANY TIME DURING CONSTRUCTION.
10. PRIOR TO THE START OF DEMOLITION, INSTALL EROSION CONTROL BMP'S IN ACCORDANCE WITH THE EROSION & SEDIMENT CONTROL PLANS / SWPPP.
11. CONTRACTOR MAY LIMIT SAW-CUT AND PAVEMENT REMOVAL TO ONLY THOSE AREAS WHERE IT IS REQUIRED AS SHOWN ON THESE CONSTRUCTION PLANS BUT IF ANY DAMAGE IS INCURRED ON ANY OF THE SURROUNDING PAVEMENT OR CURB, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ITS REMOVAL AND REPAIR.
12. THE CONTRACTOR SHALL COORDINATE WATER MAIN WORK WITH THE CITY WATER AND FIRE DEPARTMENTS TO ENSURE ADEQUATE FIRE PROTECTION IS CONSTANTLY AVAILABLE TO THE SITE AND SURROUNDING PROPERTIES THROUGH ALL PHASES OF CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR ADVISING PROVIDER OF ANY REQUIRED WATER MAIN SHUT OFFS WITH THE CITY. ANY COSTS ASSOCIATED WITH WATER MAIN SHUT OFFS WILL BE THE RESPONSIBILITY OF THE CONTRACTOR AND NO EXTRA COMPENSATION WILL BE PROVIDED.
13. IN THE EVENT A WELL IS FOUND, THE CONTRACTOR SHALL CONTACT THE ENGINEER AND OWNER IMMEDIATELY. ALL WELLS SHALL BE SEALED BY A LICENSED WELL CONTRACTOR IN ACCORDANCE WITH STATE REQUIREMENTS.
14. IN THE EVENT THAT UNKNOWN CONTAINERS OR TANKS ARE ENCOUNTERED, THE CONTRACTOR SHALL CONTACT THE OWNER AND/OR OWNERS REPRESENTATIVE IMMEDIATELY. ALL CONTAINERS SHALL BE DISPOSED OF AT A PERMITTED LANDFILL PER THE PROJECT DOCUMENTS.
15. CONTRACTOR SHALL NOTIFY THE ENGINEER IF ANY EXISTING DRAINLINE IS ENCOUNTERED ON SITE. ACTIVE DRAINLINE SHALL NOT BE REMOVED WITHOUT APPROVAL FROM THE ENGINEER.
16. IF CONTAMINATED MATERIAL IS ENCOUNTERED ON THE PROJECT SITE, THE CONTRACTOR SHALL STOP WORK AND NOTIFY THE OWNER AND ENGINEER IMMEDIATELY.



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THE CONTRACTOR MUST UPDATE THE SWPPP BY NOTING ON THE SITE MAPS IN THE JOB SITE BINDER TO REFLECT THE PROGRESS OF CONSTRUCTION ACTIVITIES AND GENERAL CHANGES TO THE PROJECT SITE FOR THE DURATION OF LAND DISTURBING ACTIVITIES. AT A MINIMUM, UPDATES SHALL BE MADE DAILY TO TRACK CONSTRUCTION PROGRESS DESCRIBED IN THE SEQUENCE OF CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR NOTING THE LOCATION OF THE JOB SITE TRAILER, TEMPORARY PARKING & LAYDOWN AREAS, PORTA-POTTY, WHEEL WASH, CONCRETE WASHOUT, FUEL & MATERIAL STORAGE, SOLID WASTE CONTAINERS, AND OTHER CONSTRUCTION RELATED FACILITIES THAT MAY IMPACT STORMWATER RUNOFF.

PHASE I BMP QUANTITIES	
SILT FENCE	±518 LF
INLET PROTECTION	9 EA
ROCK CONSTRUCTION ENTRANCE	1 EA
BIO ROLL	237 LF

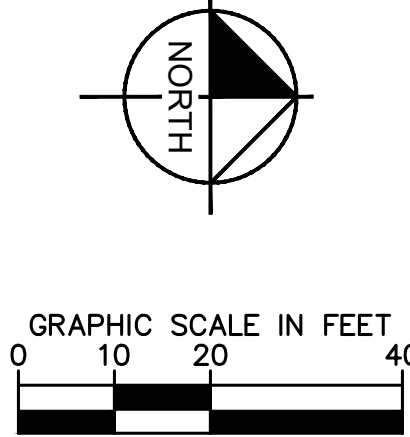
AREA SUMMARY	
TOTAL PROPERTY AREA	1.23 AC / 53,589 SF
EXISTING IMPERVIOUS AREA	0.00 AC / 0.0%
EXISTING PERVIOUS AREA	1.23 AC / 53,589 SF / 100%
PROPOSED IMPERVIOUS AREA	0.78 AC / 33,846 SF / 63%
PROPOSED PERVIOUS AREA	0.45 AC / 19,503 SF / 37%
TOTAL DISTURBED AREA	1.18 AC / 51,762 SF

	ROCK ENTRANCE
	EROSION CONTROL BLANKET
	INLET PROTECTION
	SILT FENCE
	LIMITS OF DISTURBANCE
	BIOROLL

1. THE STORM WATER POLLUTION PREVENTION PLAN ("SWPPP") IS COMPRISED OF THE EROSION CONTROL PLAN, THE STANDARD DETAILS, THE PLAN NARRATIVE, ATTACHMENTS INCLUDED IN THE SPECIFICATIONS OF THE SWPPP, PLUS THE PERMIT AND ALL SUBSEQUENT REPORTS AND RELATED DOCUMENTS.
2. ALL CONTRACTORS AND SUBCONTRACTORS INVOLVED WITH LAND DISTURBING ACTIVITIES SHALL OBTAIN A COPY OF THE SWPPP AND NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) GENERAL PERMIT, AND BECOME FAMILIAR WITH THEIR CONTENTS.
3. BEST MANAGEMENT PRACTICES (BMP'S) AND CONTROLS SHALL CONFORM TO FEDERAL, STATE AND LOCAL REQUIREMENTS, AS APPLICABLE. THE CONTRACTOR SHALL IMPLEMENT ADDITIONAL CONTROLS AS DIRECTED BY THE PERMITTING AGENCY, ENGINEER OR OWNER.
4. SITE ENTRY AND EXIT LOCATIONS SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT THE TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC ROADWAYS. SEDIMENT SPILLED, DROPPED, WASHED, OR TRACKED ONTO A PUBLIC ROADWAY FROM THE CONSTRUCTION SITE MUST BE REMOVED AS SOON AS PRACTICABLE. WHEN WASHING IS REQUIRED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO A PUBLIC ROADWAY, IT SHALL BE DONE IN AN AREA STABILIZED WITH CRUSHED STONE WHICH DRAINS INTO AN APPROVED SEDIMENT BASIN. ANY FINES IMPOSED FOR DISCHARGING SEDIMENT ONTO A PUBLIC RIGHT OF WAY SHALL BE PAID BY THE CONTRACTOR.
5. TEMPORARY SEEDING OR OTHER APPROVED METHODS OF STABILIZATION SHALL BE INITIATED WITHIN 7 DAYS OF THE LAST DISTURBANCE ON ANY AREA OF THE SITE.
6. THE CONTRACTOR SHALL MINIMIZE LAND DISTURBANCE AND CLEARING TO THE MAXIMUM EXTENT PRACTICAL OR AS REQUIRED BY THE GENERAL PERMIT.
7. CONTRACTOR SHALL DENOTE ON THE PLAN THE TEMPORARY PARKING AND STORAGE AREA WHICH SHALL ALSO BE USED AS THE EQUIPMENT MAINTENANCE AND CLEANING AREA, EMPLOYEE PARKING AREA, AND AREA FOR LOCATING PORTABLE FACILITIES, OFFICE TRAILERS, AND TOILET FACILITIES.
8. ALL WASH WATER FROM THE CONSTRUCTION SITE (CONCRETE TRUCKS, VEHICLE CLEANING, EQUIPMENT CLEANING, ETC.) SHALL BE DETAINED AND PROPERLY TREATED BEFORE DISPOSAL.
9. SUFFICIENT OIL AND GREASE ABSORBING MATERIALS AND FLotation BOOMS SHALL BE MAINTAINED ON SITE OR READILY AVAILABLE TO CONTAIN AND CLEAN-UP FUEL OR CHEMICAL SPILLS AND LEAKS.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DUST CONTROL ON SITE. THE USE OF MOTOR OILS AND OTHER PETROLEUM BASED OR TOXIC LIQUIDS FOR DUST SUPPRESSION OPERATIONS IS PROHIBITED.
11. RUBBISH, TRASH, GARBAGE, LITTER, OR OTHER SUCH MATERIALS SHALL BE DEPOSITED INTO SEALED CONTAINERS. MATERIALS SHALL BE PREVENTED FROM LEAVING THE PREMISES THROUGH THE ACTION OF WIND OR STORM WATER DISCHARGE INTO DRAINAGE DITCHES OR WATERS OF THE STATE.
12. STAGING AREAS, STOCKPILES, SPOILS, ETC. SHALL BE LOCATED OUTSIDE OF DRAINAGE WAYS SUCH THAT STORM WATER RUNOFF WILL NOT BE ADVERSELY AFFECTED. PROVIDE STABILIZATION MEASURES SUCH AS PERIMETER EROSION CONTROL BMP'S, SEEDING, OR OTHER COVERING AS NECESSARY TO PREVENT EROSION.
13. CONTRACTOR SHALL BE RESPONSIBLE FOR RE-ESTABLISHING ANY EROSION CONTROL BMP'S DISTURBED DURING CONSTRUCTION OPERATIONS. NOTIFY THE OWNER'S REPRESENTATIVE OF ANY DEFICIENCIES IN THE ESTABLISHED EROSION CONTROL MEASURES THAT MAY LEAD TO UNAUTHORIZED DISCHARGE OF STORM WATER POLLUTANTS. UNAUTHORIZED POLLUTANTS INCLUDE (BUT ARE NOT LIMITED TO) EXCESS CONCRETE DUMPING, CONCRETE RESIDUE, PAINTS, SOLVENTS, GREASES, FUELS, LUBRICANT OILS, PESTICIDES, AND SOLID WASTE MATERIALS.
14. EROSION CONTROL BMP'S SHOWN ON THESE PLANS SHALL BE INSTALLED PRIOR TO THE START OF LAND-DISTURBING ACTIVITIES ON THE PROJECT, AND INITIATED AS SOON AS PRACTICABLE.
15. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR COMPLYING WITH THE REQUIREMENTS OF THE AUTHORITIES HAVING JURISDICTION, AND SHALL MAINTAIN COMPLIANCE WITH APPLICABLE LAWS AND REGULATIONS FOR THE DURATION OF CONSTRUCTION.
16. THE CONTRACTOR SHALL FIELD ADJUST AND/OR PROVIDE ADDITIONAL EROSION CONTROL BMP'S AS NEEDED TO PREVENT EROSION AND OFF-SITE SEDIMENT DISCHARGE FROM THE CONSTRUCTION SITE. LOG AND RECORD ANY ADJUSTMENTS AND DEVIATIONS FROM THE APPROVED EROSION CONTROL PLANS WITHIN THE SWPPP DOCUMENTS STORED IN THE JOB SITE TRAILER.
17. CONTRACTOR IS RESPONSIBLE FOR PROVIDING STREET SWEEPING ON ADJACENT STREETS TO REMOVE SEDIMENT TRACKED FROM THE SITE OR FROM CONSTRUCTION STORMWATER RUNOFF PER THE REQUIREMENTS OF THE CONSTRUCTION STORMWATER PERMIT.
18. EXCESS WATER FROM SEDIMENT TRAP IS TO BE PUMPED FROM THE SEDIMENT TRAP INTO THE DEWATERING BAG. THE DEWATERING BAG SHALL BE PLACED ON AN AGGREGATE PAD THAT IS LOCATED WITHIN A VEGETATED AREA (IF POSSIBLE). RIPRAP OR OTHER APPROVED EROSION DISSIPATION METHODS IN THE MINNESOTA STORMWATER MANUAL SHALL BE USED IN THE FLOW PATH FROM THE DEWATERING BAG BEFORE IT DISCHARGES INTO THE STORM SEWER SYSTEM.

1. INSTALL PERIMETER EROSION CONTROL (I.E. SILT FENCE) AND INLET PROTECTION AT EXISTING STORMWATER INLETS.
2. CLEAR AND STABILIZE CONSTRUCTION ENTRANCE AND CONCRETE WASHOUT.
3. PREPARE TEMPORARY PARKING AND STORAGE AREA.
4. CONSTRUCT AND STABILIZE DIVERSIONS AND TEMPORARY SEDIMENT TRAPS.
5. EROSION CONTROL AND GRASSING OF THE SITE.
6. BEGIN MASS SITE GRADING AND ROUGH GRADE SITE SUFFICIENTLY TO ESTABLISH PROPOSED DRAINAGE PATTERN.
7. START CONSTRUCTION OF THE BUILDING PAD AND STRUCTURES.
8. TEMPORARILY SEED, THROUGHOUT CONSTRUCTION, DISTURBED AREAS THAT WILL BE EXPOSED FOR 14 DAYS OR MORE OR AS REQUIRED BY THE NPDES AND/OR CITY GRADING PERMIT(S).

NOTE: THE SEQUENCE OF CONSTRUCTION IS INTENDED TO CONVEY THE GENERAL CONCEPTS OF THE EROSION CONTROL DESIGN AND SHOULD NOT BE RELIED UPON FOR CONSTRUCTION PURPOSES. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR DETAILED PHASING AND CONSTRUCTION SEQUENCING NECESSARY TO CONSTRUCT THE PROPOSED IMPROVEMENTS. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING IMMEDIATELY, PRIOR TO AND/OR DURING CONSTRUCTION IF ANY ADDITIONAL INFORMATION ON THE CONSTRUCTION SEQUENCE IS NECESSARY.



C300	SHEET NUMBER	CREW CARWASH COLUMBIA HEIGHTS PREPARED FOR	MIN	EROSION AND SEDIMENT CONTROL PLAN - PHASE 1	KHA PROJECT 1610330229 DATE 07/01/2026 SCALE AS SHOWN DESIGNED BY MLS DRAWN BY DWC CHECKED BY DLE	I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY AN ENGINEER OR ARCHITECT LICENSED AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.	MATT SCHWARTZ MN DATE: 06/01/2026 LIC. NO. 63415	Kimley»Horn 2026 KIMLEY-HORN AND ASSOCIATES, INC. 767 EUSTIS STREET, SUITE 100, ST. PAUL, MN 55114 PHONE: 651-445-4197 WWW.KIMLEY-HORN.COM	No.	REVISIONS	DATE	BY

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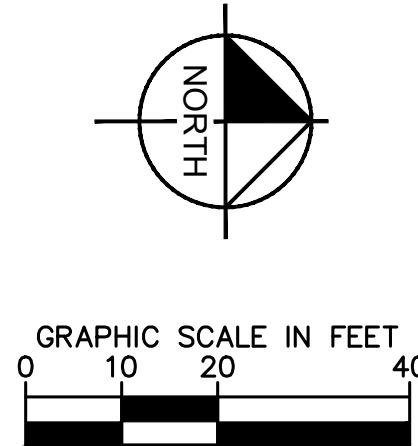
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3. BEST MANAGEMENT PRACTICES (BMPs) AND CONTROLS SHALL CONFORM TO FEDERAL, STATE AND LOCAL REQUIREMENTS, AS APPLICABLE. THE CONTRACTOR SHALL IMPLEMENT ADDITIONAL CONTROLS AS DIRECTED BY THE PERMITTING AGENCY, ENGINEER OR OWNER.
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11. RUBBISH, TRASH, GARBAGE, LITTER, OR OTHER SUCH MATERIALS SHALL BE DEPOSITED INTO SEALED CONTAINERS. MATERIALS SHALL BE PREVENTED FROM LEAVING THE PREMISES THROUGH THE ACTION OF WIND OR STORM WATER DISCHARGE INTO DRAINAGE DITCHES OR WATERS OF THE STATE.
12. STAGING AREAS, STOCKPILES, SPOILS, ETC. SHALL BE LOCATED OUTSIDE OF DRAINAGE WAYS SUCH THAT STORM WATER RUNOFF WILL NOT BE ADVERSELY AFFECTED. PROVIDE STABILIZATION MEASURES SUCH AS PERIMETER EROSION CONTROL BMPs, SEEDING, OR OTHER COVERING AS NECESSARY TO PREVENT EROSION.
13. CONTRACTOR SHALL BE RESPONSIBLE FOR RE-ESTABLISHING ANY EROSION CONTROL BMP DISTURBED DURING CONSTRUCTION OPERATIONS. NOTIFY THE OWNER'S REPRESENTATIVE OF ANY DEFICIENCIES IN THE ESTABLISHED EROSION CONTROL MEASURES THAT MAY LEAD TO UNAUTHORIZED DISCHARGE OF STORM WATER POLLUTANTS. UNAUTHORIZED POLLUTANTS INCLUDE (BUT ARE NOT LIMITED TO) EXCESS CONCRETE DUMPING, CONCRETE RESIDUE, PAINTS, SOLVENTS, GREASES, FUELS, LUBRICANT OILS, PESTICIDES, AND SOLID WASTE MATERIALS.
14. EROSION CONTROL BMPs SHOWN ON THESE PLANS SHALL BE INSTALLED PRIOR TO THE START OF LAND-DISTURBING ACTIVITIES ON THE PROJECT, AND INITIATED AS SOON AS PRACTICABLE.
15. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR COMPLYING WITH THE REQUIREMENTS OF THE AUTHORITIES HAVING JURISDICTION, AND SHALL MAINTAIN COMPLIANCE WITH APPLICABLE LAWS AND REGULATIONS FOR THE DURATION OF CONSTRUCTION.
16. THE CONTRACTOR SHALL FIELD ADJUST AND/OR PROVIDE ADDITIONAL EROSION CONTROL BMPs AS NEEDED TO PREVENT EROSION AND OFF-SITE SEDIMENT DISCHARGE FROM THE CONSTRUCTION SITE. LOG AND RECORD ANY ADJUSTMENTS AND DEVIATIONS FROM THE APPROVED EROSION CONTROL PLANS WITHIN THE SWPPP DOCUMENTS STORED IN THE JOB SITE TRAILER.
17. CONTRACTOR IS RESPONSIBLE FOR PROVIDING STREET SWEEPING ON ADJACENT STREETS TO REMOVE SEDIMENT TRACKED FROM THE SITE OR FROM CONSTRUCTION STORMWATER RUNOFF PER THE REQUIREMENTS OF THE CONSTRUCTION STORMWATER PERMIT.
18. EXCESS WATER FROM SEDIMENT TRAP IS TO BE PUMPED FROM THE SEDIMENT TRAP INTO THE DETERWATERING BAG. THE DETERWATERING BAG SHALL BE PLACED ON AN AGGREGATE PAD THAT IS LOCATED WITHIN A VEGETATED AREA (IF POSSIBLE). RIPRAP OR OTHER APPROVED EROSION DISPERSION METHODS IN THE MINNESOTA STORMWATER MANUAL SHALL BE USED IN THE FLOW PATH FROM THE DETERWATERING BAG BEFORE IT DISCHARGES INTO THE STORM SEWER SYSTEM.

1. TEMPORARILY SEED, THROUGHOUT CONSTRUCTION, DENuded AREAS THAT WILL BE INACTIVE FOR 14 DAYS OR MORE.
2. CONSTRUCT UNDERGROUND SITE UTILITIES AND STORM SEWER, INCLUDING UNDERGROUND STORMWATER MANAGEMENT SYSTEM.
3. INSTALL APPROPRIATE INLET PROTECTION AT ANY NEW STORM SEWER STRUCTURES AS EACH STRUCTURE IS CONSTRUCTED.
4. COMPLETE SITE GRADING AND PERMANENTLY STABILIZE AREAS TO BE VEGETATED AS THEY ARE BROUGHT TO FINAL GRADE.
5. PLACE PAVEMENT BASE MATERIAL AND INSTALL SUBDRAINAGE SYSTEM.
6. COMPLETE PAVEMENTS, CURBS, GUTTER, AND SIDEWALKS.
7. AS APPROPRIATE, REPLACE & MAINTAIN INLET PROTECTION DEVICES WITHIN PAVED AREAS AS WORK PROGRESSES.
8. COMPLETE FINAL GRADING AND INSTALL OF PERMANENT STABILIZATION (SEEDING, SODDING, ETC.) WITHIN LANDSCAPED AREAS.
9. WHEN THE SITE HAS BEEN REVEGETATION AS DEFINED BY THE APPLICABLE EROSION CONTROL PERMITS, REMOVE ALL REMAINING TEMPORARY EROSION & SEDIMENT CONTROL BMP'S AND RE-STABILIZE ANY AREAS DISTURBED BY THE REMOVAL.

NOTE: THE SEQUENCE OF CONSTRUCTION IS INTENDED TO CONVEY THE GENERAL CONCEPTS OF THE EROSION CONTROL DESIGN AND SHOULD NOT BE RELIED UPON FOR CONSTRUCTION PURPOSES. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR DETAILED PHASING AND CONSTRUCTION SEQUENCING NECESSARY TO CONSTRUCT THE PROPOSED IMPROVEMENTS. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING IMMEDIATELY, PRIOR TO AND/OR DURING CONSTRUCTION IF ANY ADDITIONAL INFORMATION ON THE CONSTRUCTION SEQUENCE IS NECESSARY.



EROSION AND

CREW CARWASH

PREPARED FOR
CREW CARWASH

COLUMBIA HEIGHTS

KHA PROJECT
161033029

DATE _____

07/01/2026

SCALE AS SHOW

DESIGNED BY ML

DRAWN BY DW

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.

MATT SCHWARTZ

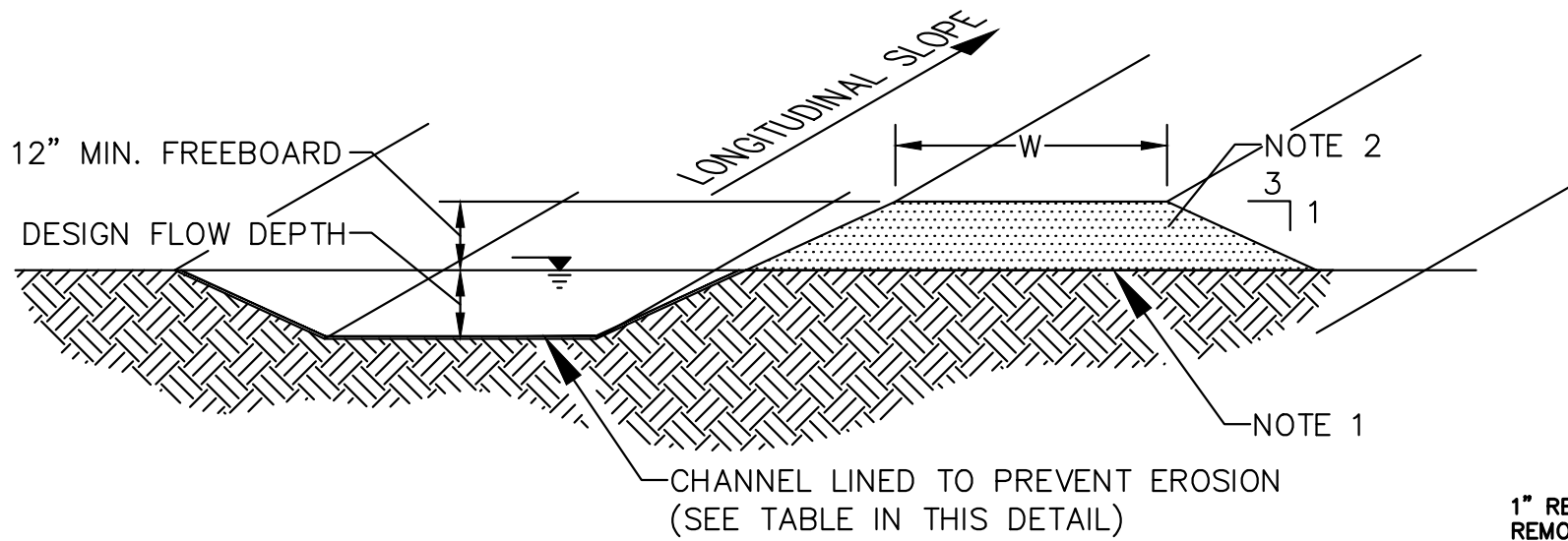
MINI
ZYLINDRISCH

Kimley»Horn

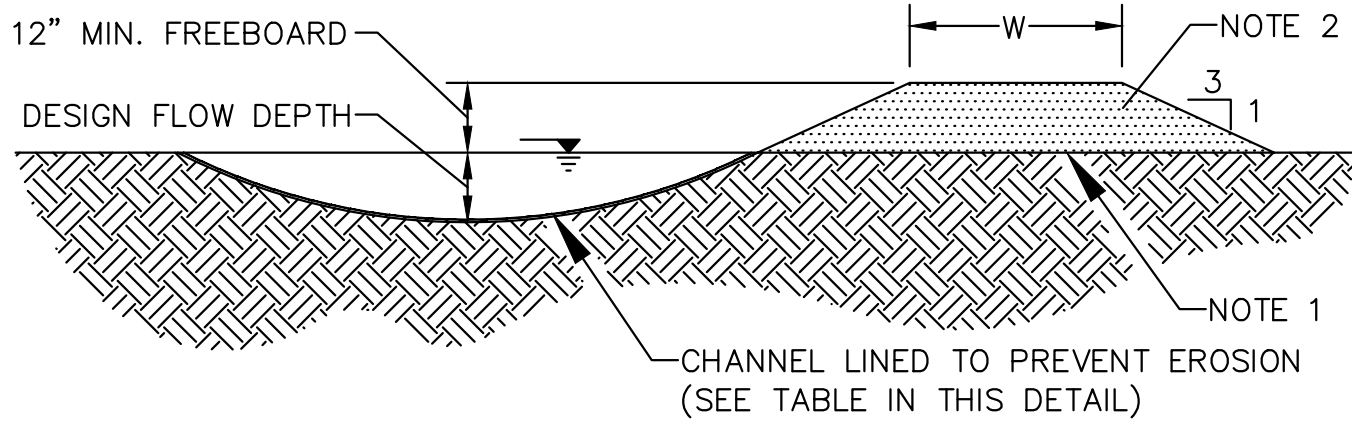
2026 KIMLEY-HORN AND ASSOCIATES, INC.

STREET, SUITE 100, ST. PAUL

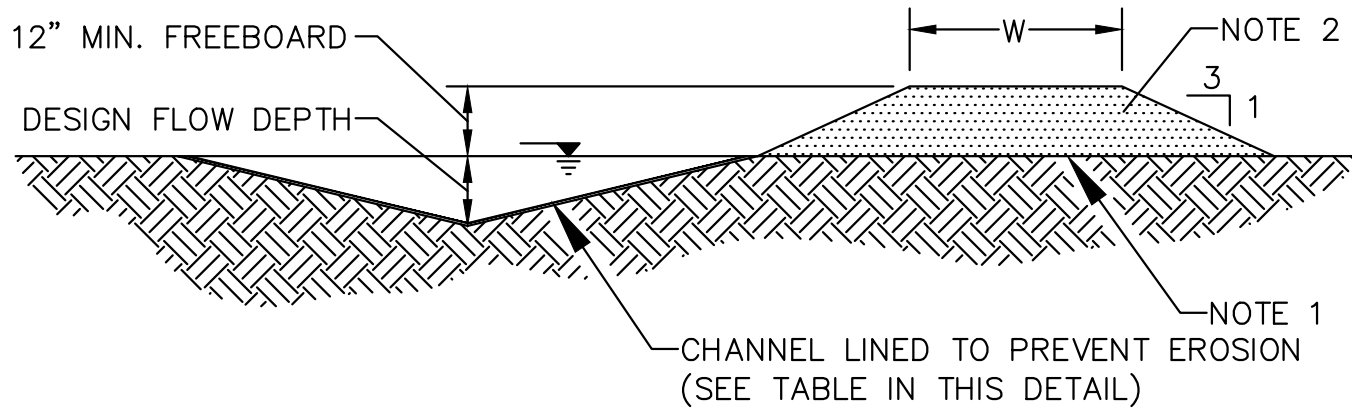
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TYPICAL TRAPEZOIDAL DIVERSION



TYPICAL PARABOLIC DIVERSION



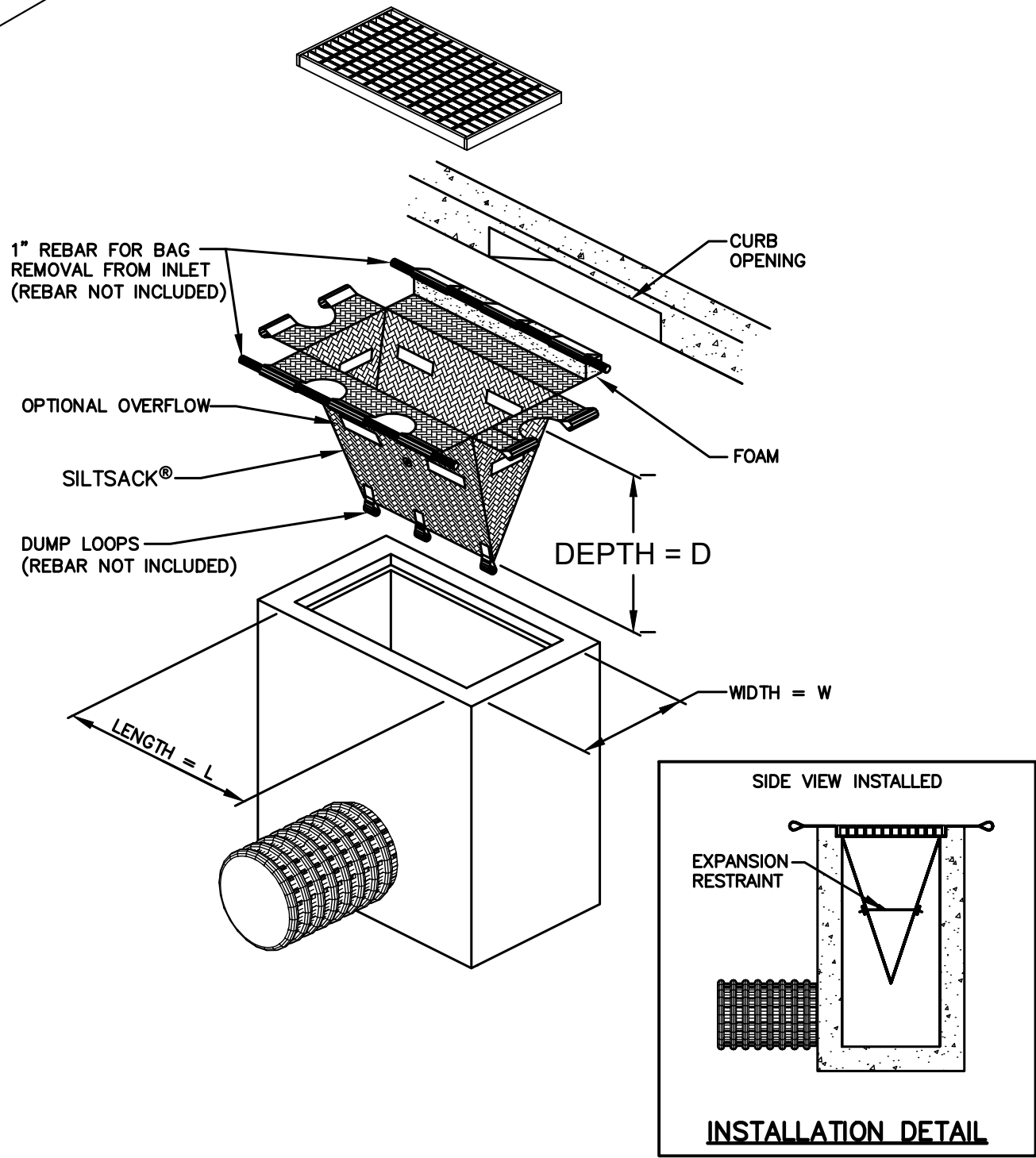
TYPICAL VEE-SHAPED DIVERSION

NOTES:

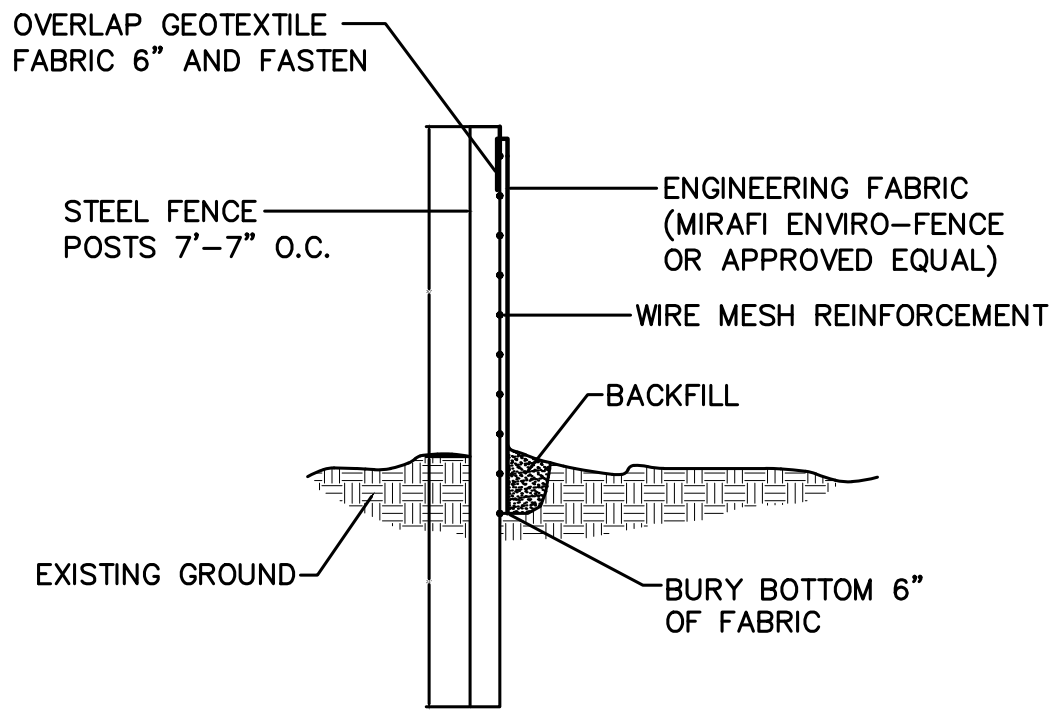
1. REMOVE ANY EXISTING VEGETATION AND SCARIFY OR BENCH ADJACENT SOILS PRIOR TO PLACING BERM.
2. BERM MATERIALS MUST BE ADEQUATELY COMPACTED AND IMMEDIATELY STABILIZED.
3. DIVERSION DITCHES/BERMS MUST BE IMMEDIATELY STABILIZED TO PREVENT EROSION AND TRANSPORT OF SEDIMENT.

TEMPORARY DIVERSION
N.T.S.

1 DIVERSION DITCH
SCALE: NTS



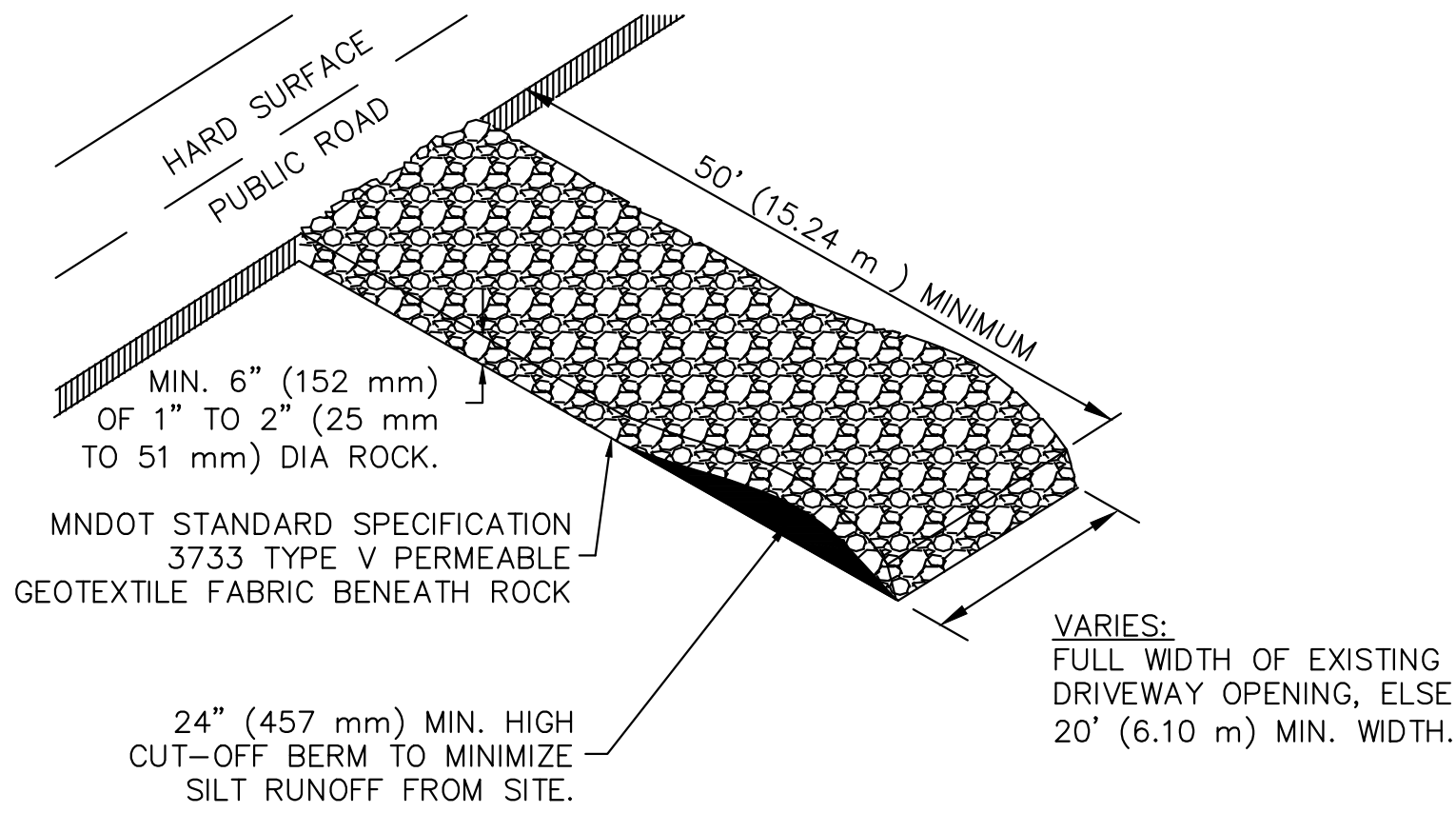
2 INLET PROTECTION
SCALE: NTS



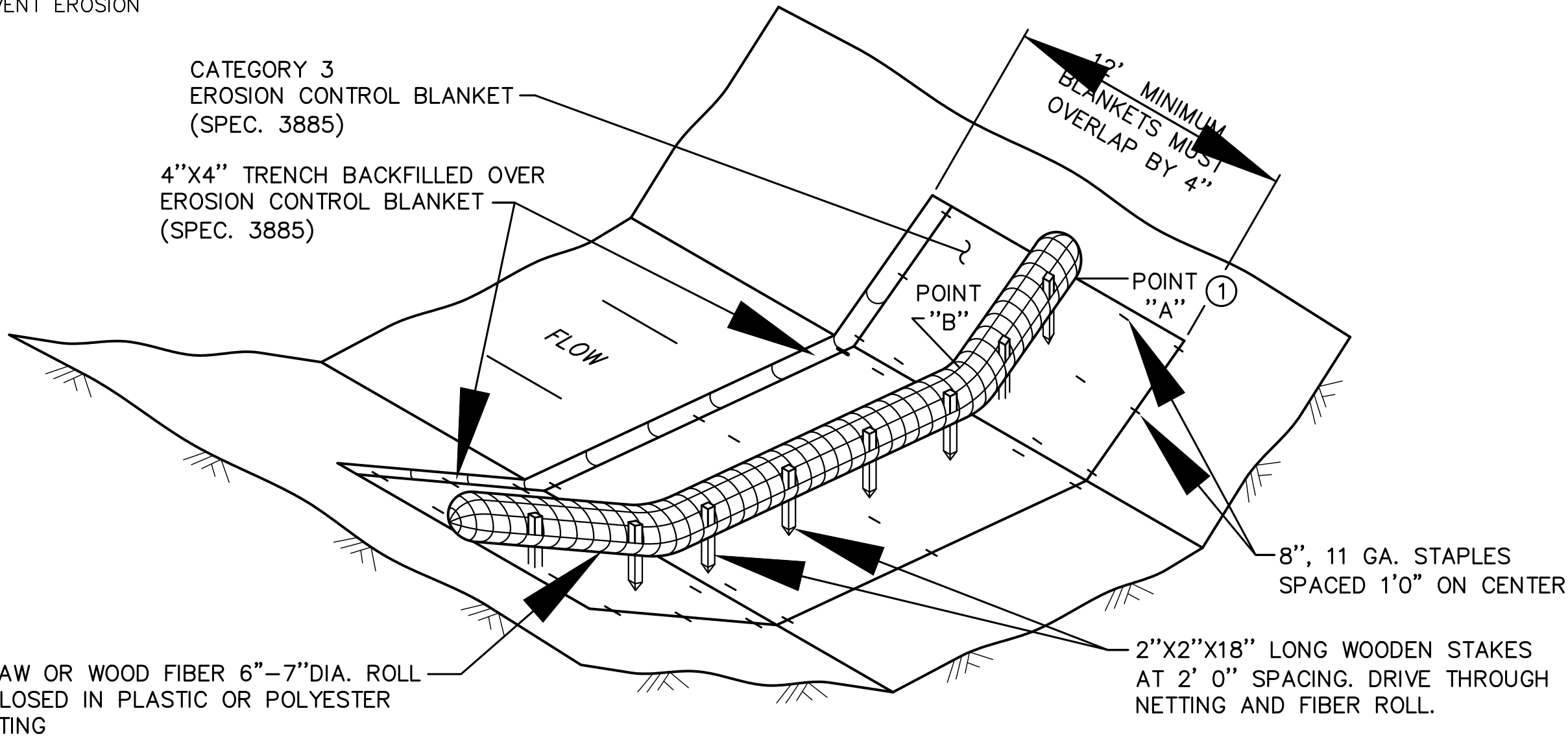
NOTE:
PAID FOR AS SILT FENCE—HEAVY DUTY
CONTRACTOR IS RESPONSIBLE FOR REMOVAL OF ALL EROSION
CONTROL MATERIALS FOLLOWING TURF ESTABLISHMENT

HEAVY-DUTY EROSION
CONTROL FENCE

3 SILT FENCE
SCALE: NTS

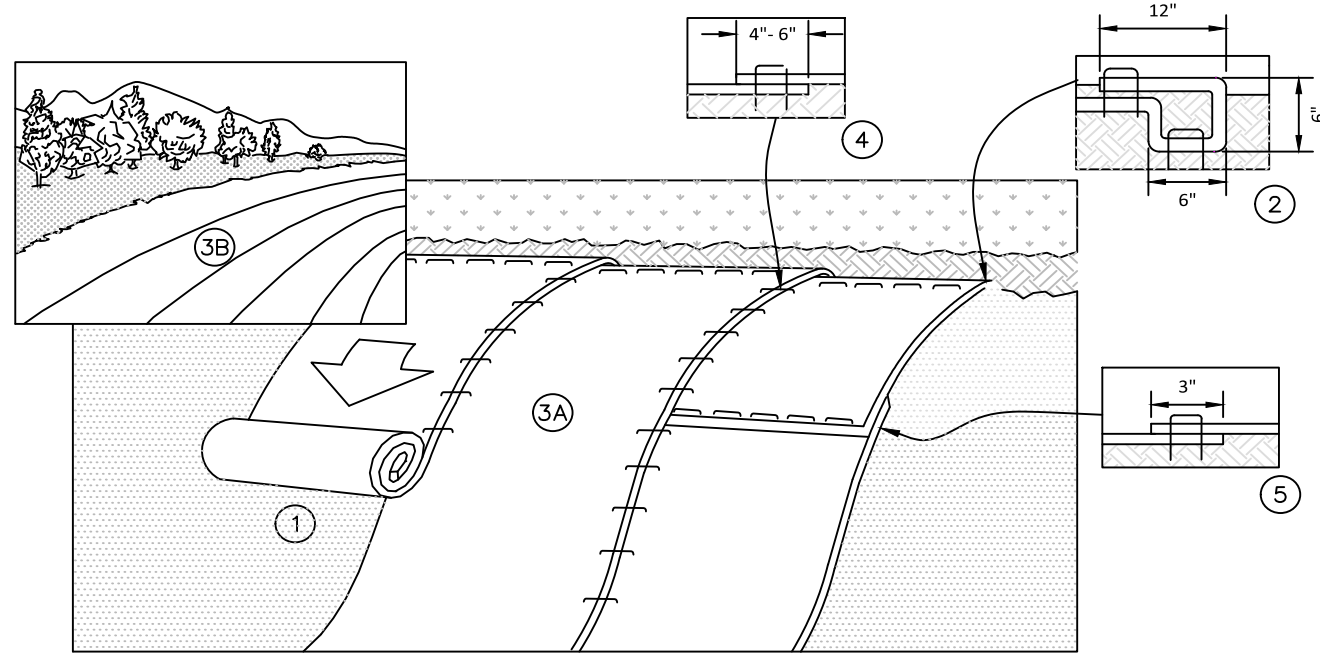


4 CONSTRUCTION ENTRANCE
SCALE: NTS



BIO-ROLL BLANKET SYSTEM
(TYPE 3 SPEC. 3889)

5 BIOROLL
SCALE: NTS



1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN A 6" DEEP X 6" WIDE TRENCH WITH APPROXIMATELY 12" OF BLANKET EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE BLANKET.
3. ROLL THE BLANKETS (A.) DOWN OR (B.) HORIZONTALLY ACROSS THE SLOPE. BLANKETS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL BLANKETS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS PER MANUFACTURES RECOMMENDATION.
4. THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 4"-6" OVERLAP DEPENDING ON BLANKET TYPE. TO ENSURE PROPER SEAM ALIGNMENT, PLACE THE EDGE OF THE OVERLAPPING BLANKET (BLANKET BEING INSTALLED ON TOP) EVEN WITH THE SEAM STITCH ON THE PREVIOUSLY INSTALLED BLANKET.
5. CONSECUTIVE BLANKETS SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART ACROSS ENTIRE BLANKET WIDTH.
6. PLACE STAPLES/STAKES PER MANUFACTURE RECOMMENDATION FOR THE APPROPRIATE SLOPE BEING APPLIED.

NOTES:

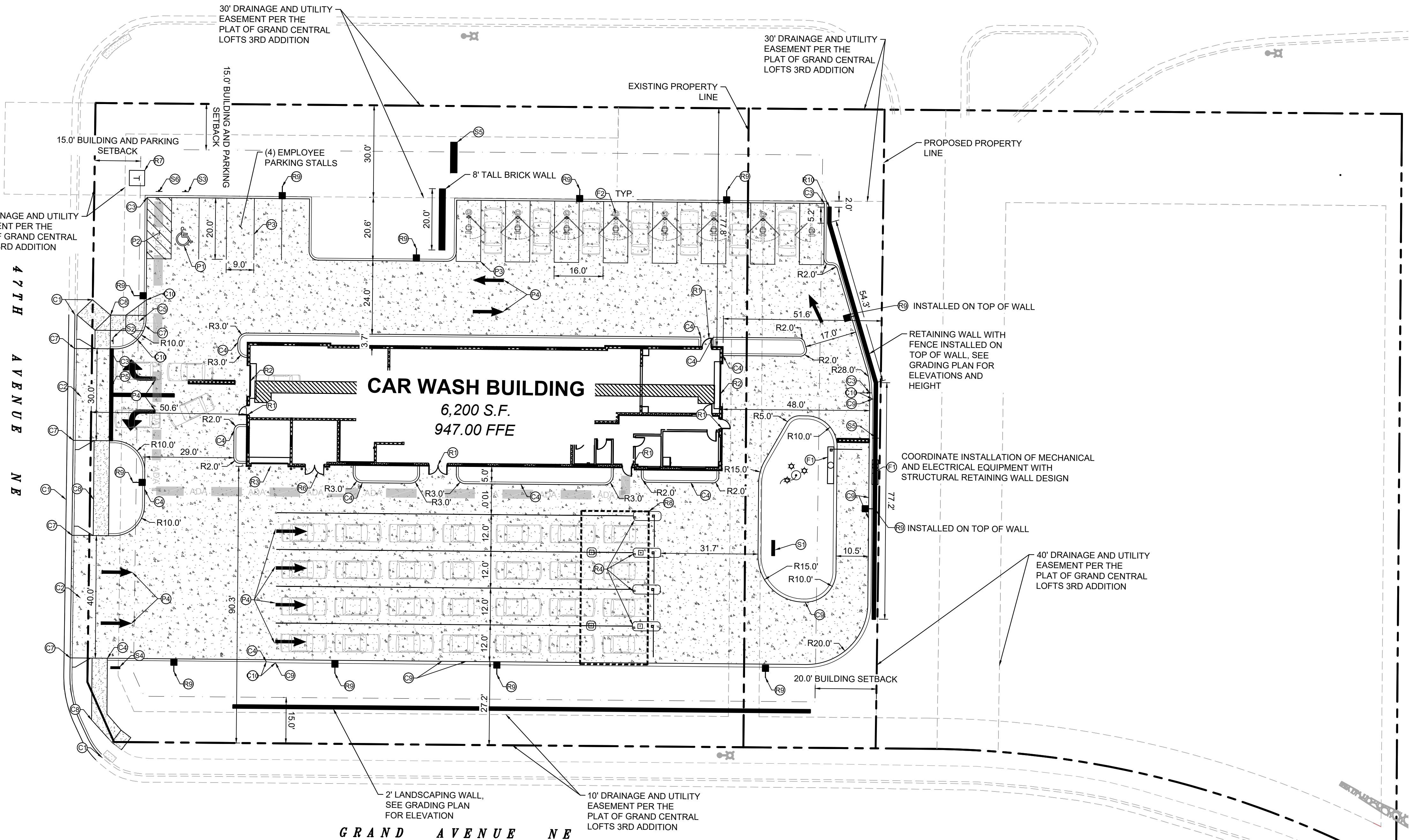
1. IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" MAY BE NECESSARY TO PROPERLY SECURE THE BLANKETS.
2. FOLLOW EROSION CONTROL TECHNOLOGY COUNCIL SPECIFICATION FOR PRODUCT SELECTION

6 EROSION CONTROL BLANKET
NO SCALE

ISSUED FOR REVIEW - NOT FOR CONSTRUCTION

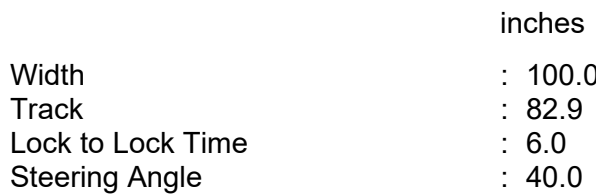
CREW CARWASH COLUMBIA HEIGHTS PREPARED FOR CREW CARWASH COLUMBIA HEIGHTS		EROSION AND SEDIMENT CONTROL DETAILS		KHA PROJECT 161033029 DATE 07/01/2026 SCALE AS SHOWN DESIGNED BY MLS DRAWN BY DWG CHECKED BY DLE		I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY CLOSE PERSONAL SUPERVISION THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.		 2026 KIMLEY-HORN AND ASSOCIATES, INC. 767 EUSTIS STREET, SUITE 100, ST. PAUL, MN 55114 PHONE 651-445-4197 WWW.KIMLEY-HORN.COM		No.		REVISIONS		DATE		BY	

No.	REVISIONS	DATE	BY



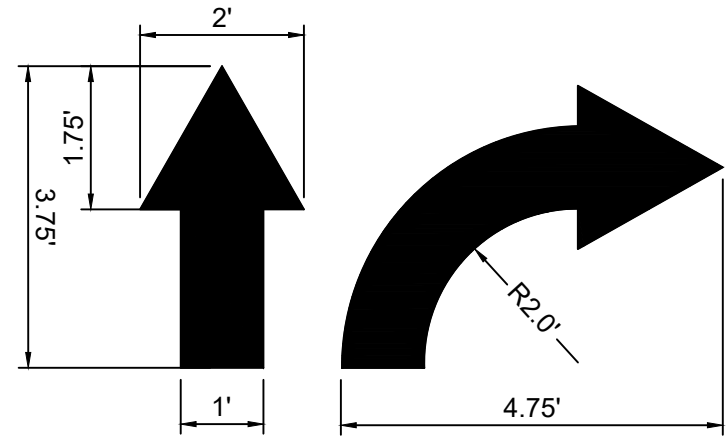
LEGEND

	PROPERTY LINE
	SETBACK LINE
	DRAINAGE AND UTILITY EASEMENT
	LANDSCAPING WALL
	PROPOSED CURB AND GUTTER
	HEAVY DUTY CONCRETE PAVEMENT <u>SEE DETAILS FOR SECTION</u>
	STANDARD DUTY CONCRETE PAVEMENT <u>SEE DETAILS FOR SECTION</u>
	CONCRETE SIDEWALK <u>SEE DETAILS FOR SECTION</u>



Know what's **below**.
Call before you dig

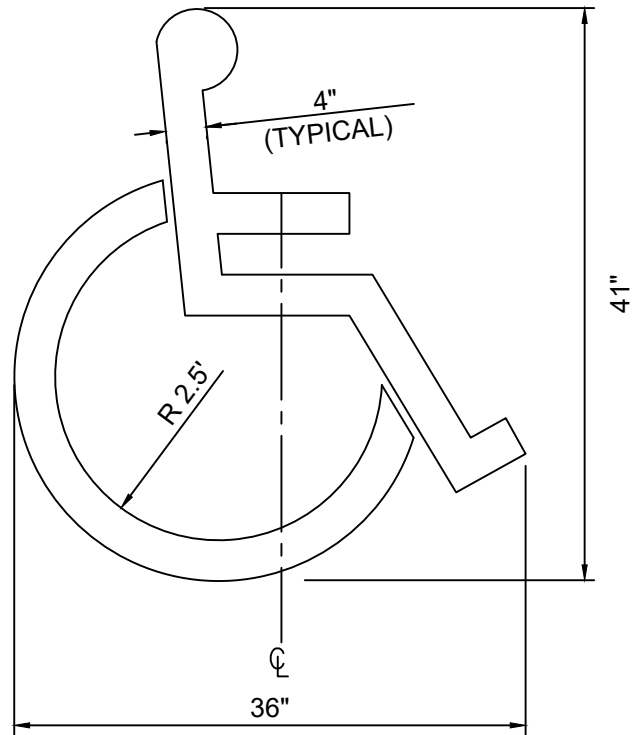
	SHEET NUMBER	C401	
CREW CARWASH COLUMBIA HEIGHTS	PREPARED FOR	FIRE CIRCULATION PLAN	KHA PROJECT 16/1033029
CREW CARWASH COLUMBIA HEIGHTS			DATE 07/01/2026
			SCALE AS SHOWN
			DESIGNED BY MLS
			DRAWN BY KBP
			CHECKED BY DLE
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			MATT SCHWARTZ MN DATE: 08/01/2026 LIC. NO. 63415
			© 2026 KIMLEY-HORN AND ASSOCIATES, INC. 767 EUSTIS STREET, SUITE 100, ST. PAUL, MN 55114 PHONE: 651-454-1197 WWW.KIMLEY-HORN.COM
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NOTE: ALL TRAFFIC FLOW ARROWS TO BE SOLID WHITE REFLECTIVE TRAFFIC PAINT AS PER DIMENSIONS ABOVE

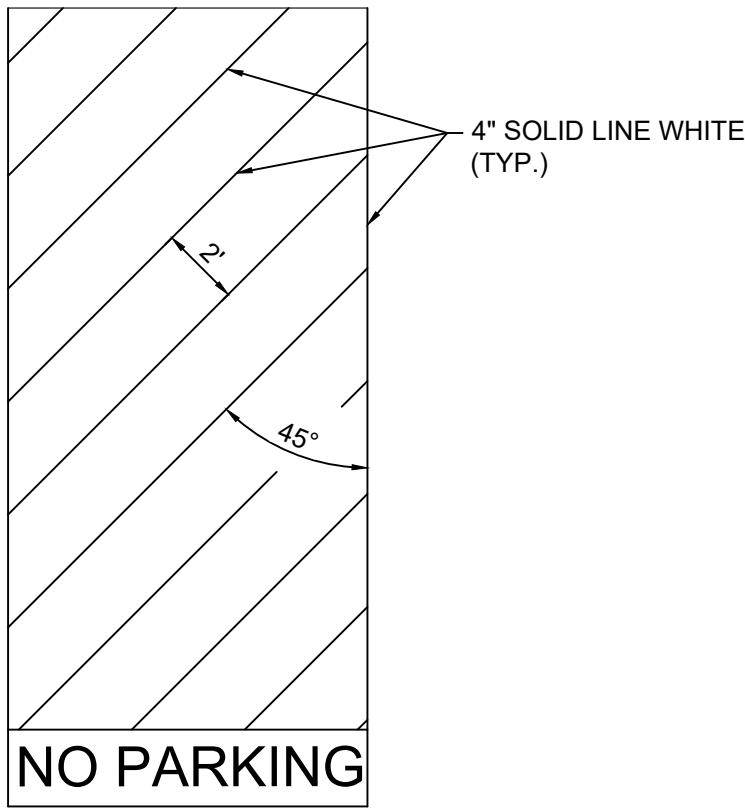
1 TRAFFIC ARROW

NO SCALE



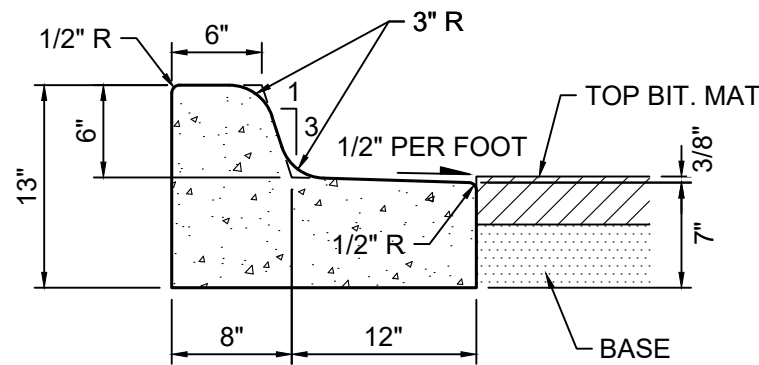
2 ACCESSIBLE PARKING SYMBOL

NO SCALE



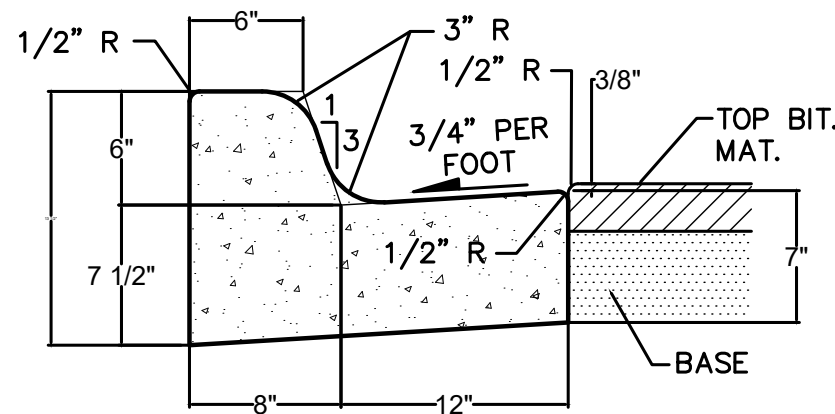
3 TYPICAL CROSS HATCHING MARKINGS

NO SCALE



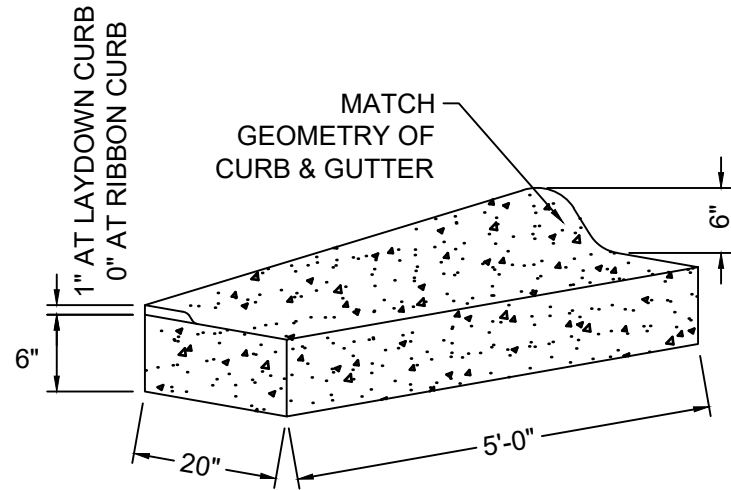
5 6" CURB & GUTTER (TIP-OUT)

NO SCALE



6 6" CURB & GUTTER (TIP-IN)

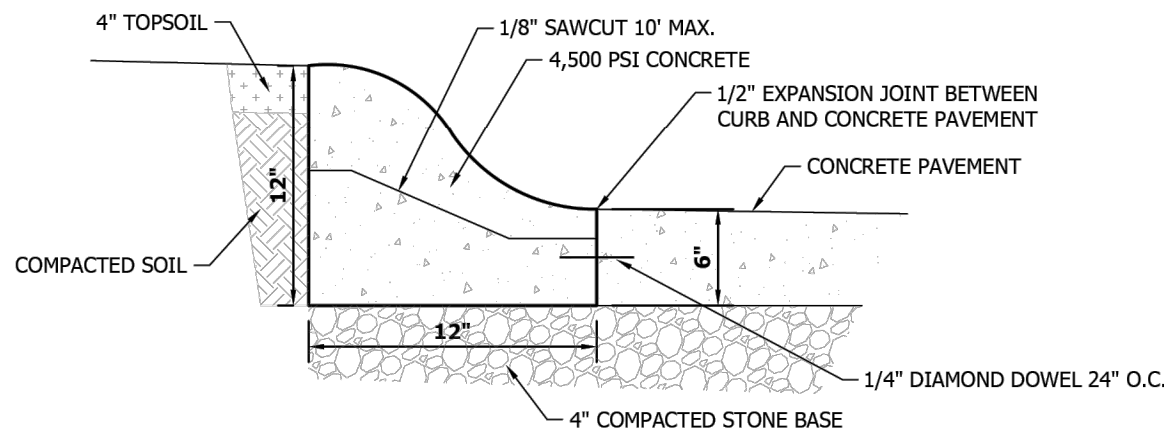
NO SCALE



NOTES:
1. REFER TO CONCRETE CURB & GUTTER DETAIL FOR SPECIFICATIONS AND AGGREGATE BASE COURSE DIMENSIONS

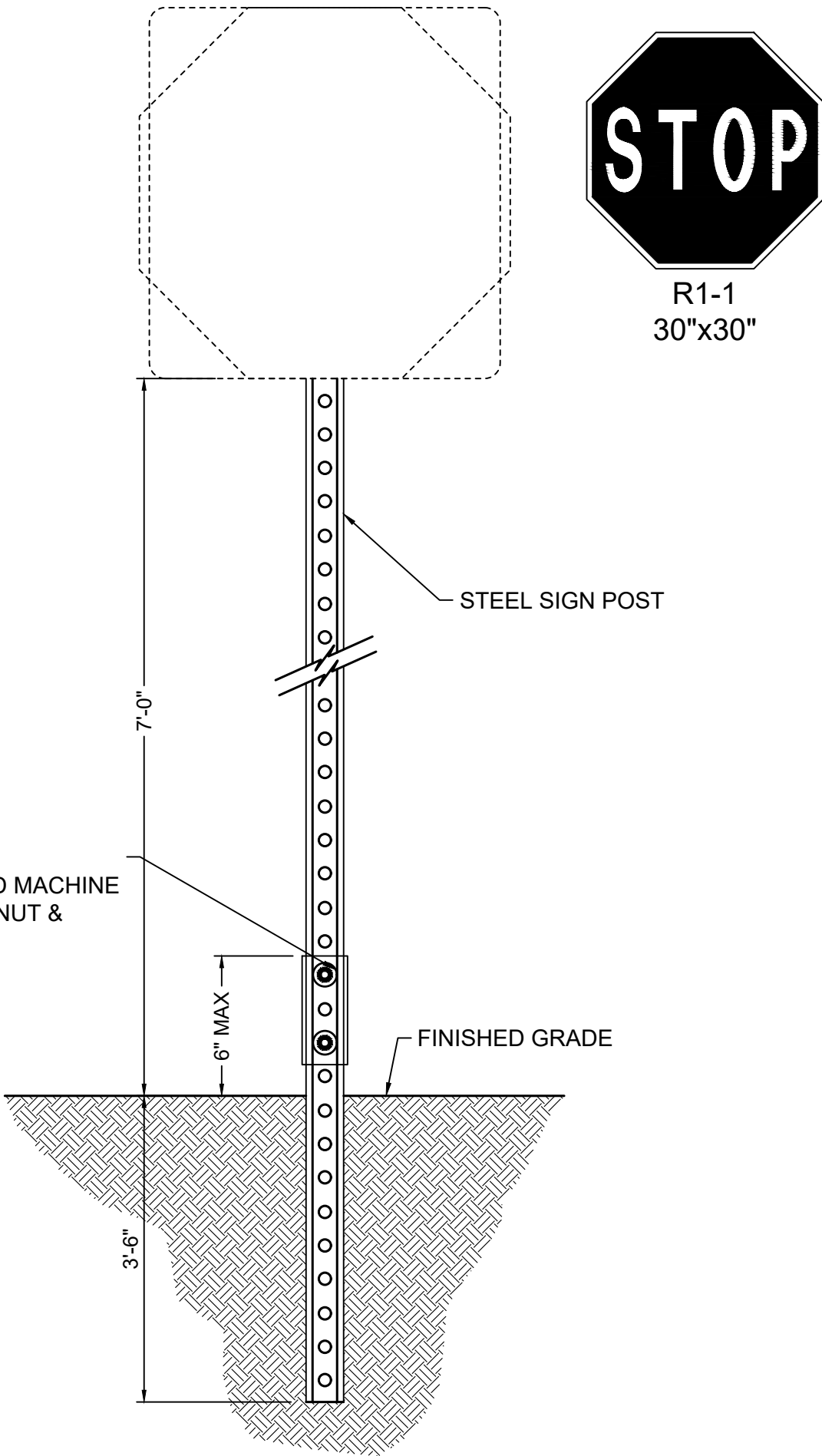
7 CONCRETE CURB TAPER

NO SCALE



9 ROLL CURB

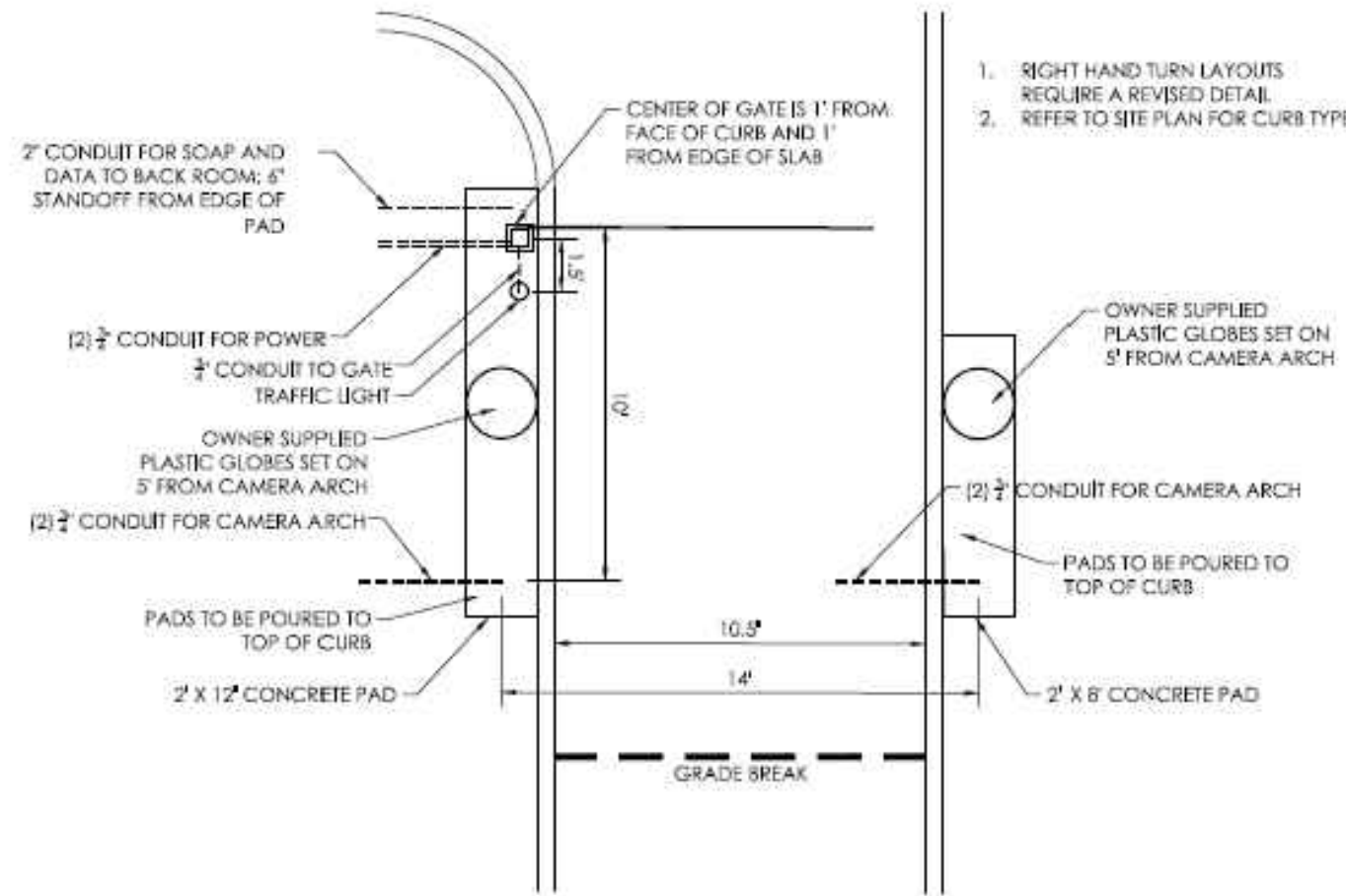
NO SCALE



NOTES:
1. SIGNS SHALL BE 18 GAUGE STEEL
2. POSTS SHALL BE GALVANIZED STEEL U-CHANNEL, PERFORATED WITH 3/8" HOLES AT 1" CENTERS
3. SIGNS SHALL COMPLY WITH LOCAL MUTCD REQUIREMENTS

10 TRAFFIC SIGN POST

SCALE: NTS

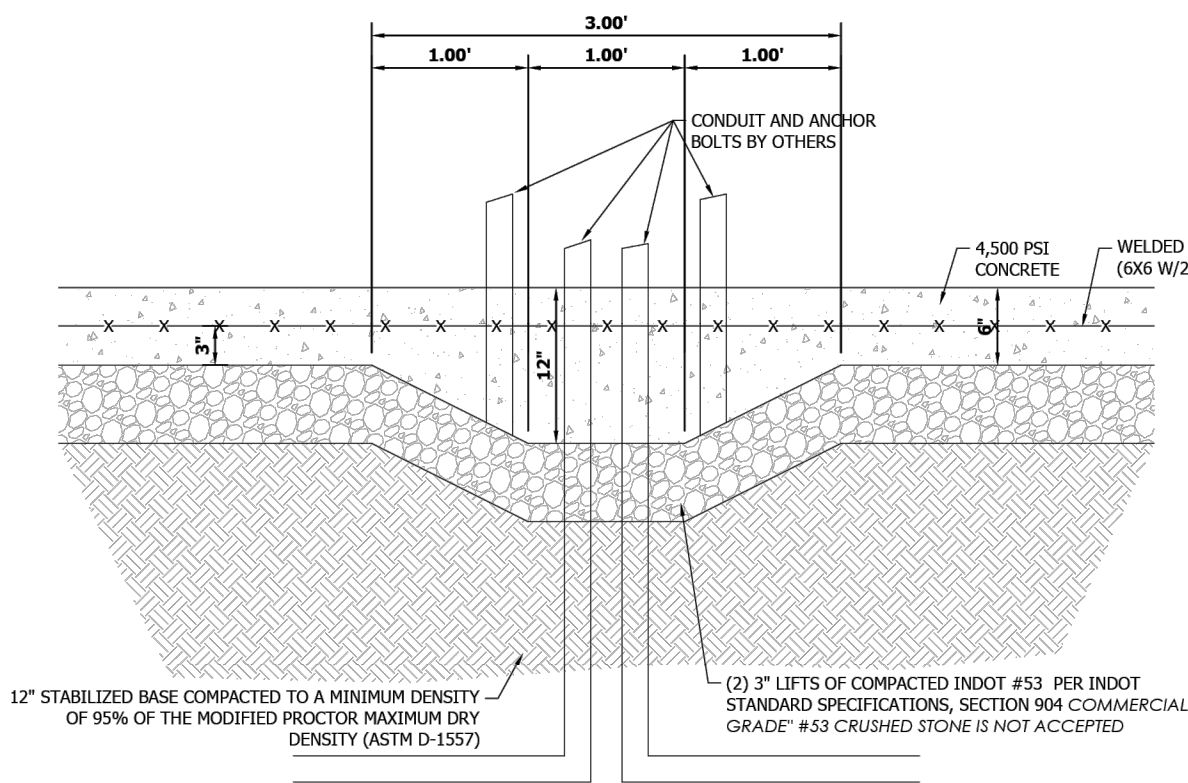


BUG GATE LAYOUT

NOT TO SCALE

4 BUG GATE LAYOUT

NO SCALE



NOTES:
1. CONCRETE TO BE CLASS "A"
2. REFER TO APPLICABLE DETAIL FOR CONCRETE JOINT DETAILS
3. SEE NOTES THIS SHEET

THICKEN SLAB FOR VACUUM STATIONS

NOT TO SCALE

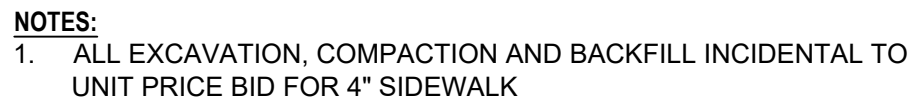
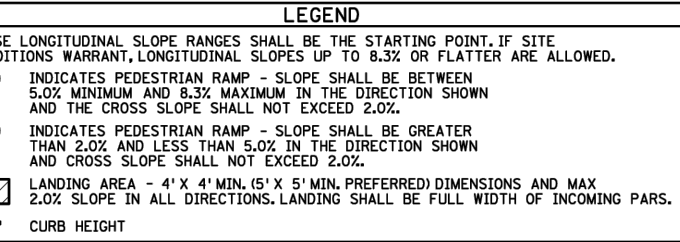
11 VACUUM STATION THICKENED SLAB

NO SCALE

NOTES:
1. SIGNS SHALL BE 18 GAUGE STEEL, WITH BAKED ENAMEL WHITE LETTERS AND BORDER ON BLUE BACKGROUND, WHERE APPLICABLE.
2. POST SHALL BE GALVANIZED STEEL U-CHANNEL, PERFORATED WITH 3/8" HOLES AT 1" CENTERS
3. SIGNS SHALL COMPLY WITH LOCAL MUTCD REQUIREMENTS

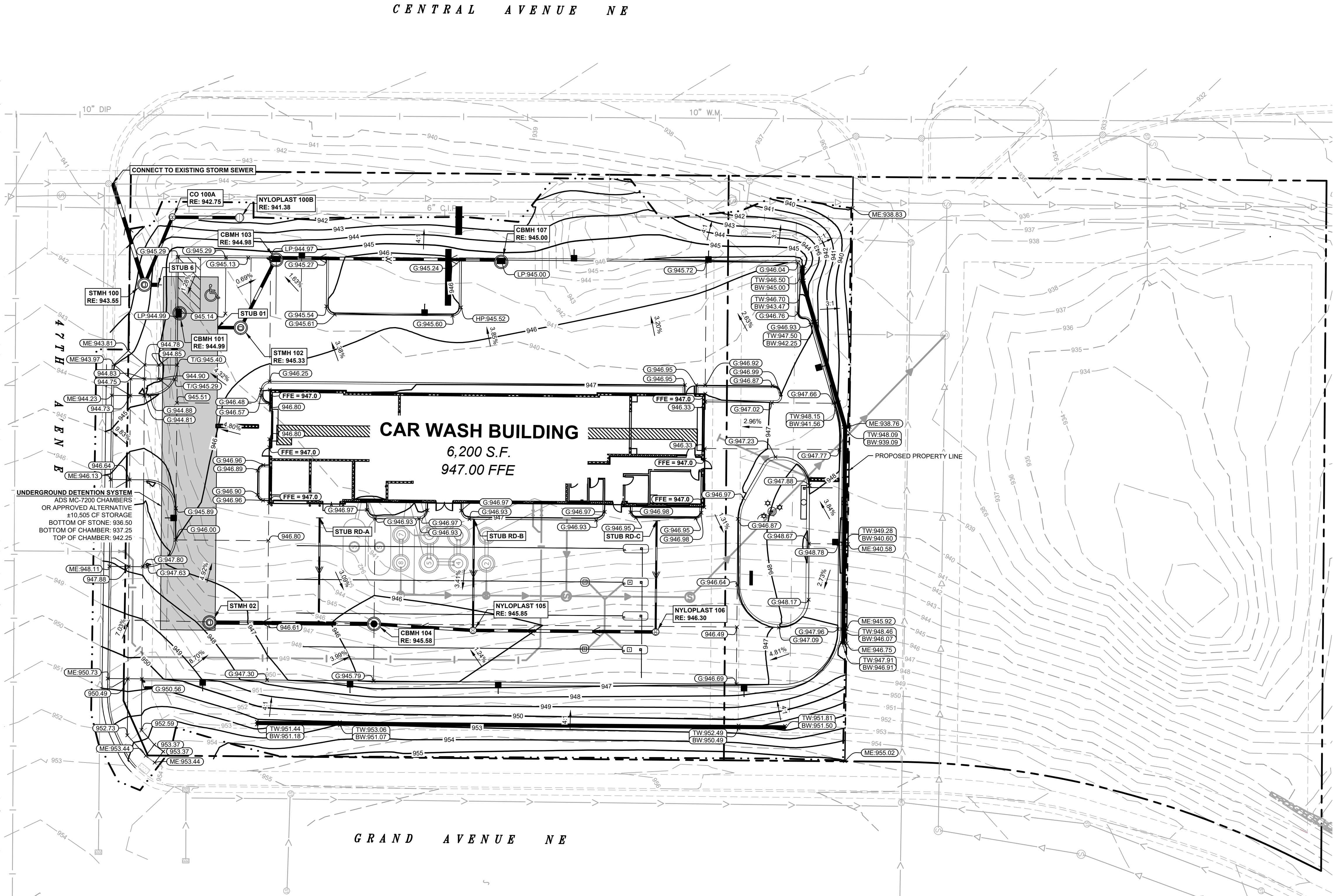
8 ACCESSIBLE PARKING SIGN

NO SCALE



SHEET NUMBER C402	CREW CARWASH COLUMBIA HEIGHTS PREPARED FOR	CREW CARWASH COLUMBIA HEIGHTS MIN
SITE DETAILS		

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LEGEND

- PROPERTY LINE
- EXISTING CONTOUR
- PROPOSED CONTOUR
- PROPOSED RIDGE LINE
- PROPOSED SWALE
- PROPOSED STORM MANHOLE (SOLID CASTING)
- PROPOSED STORM MANHOLE (ROUND INLET CASTING)
- PROPOSED STORM MANHOLE/ CATCH BASIN (CURB INLET CASTING)
- PROPOSED STORM SEWER CLENOUT
- PROPOSED FLARED END SECTION
- PROPOSED RIPRAP
- PROPOSED STORM SEWER
- PROPOSED SPOT ELEVATION
- PROPOSED HIGH POINT ELEVATION
- PROPOSED LOW POINT ELEVATION
- PROPOSED GUTTER ELEVATION
- PROPOSED TOP OF CURB ELEVATION
- PROPOSED FLUSH PAVEMENT ELEVATION
- MATCH EXISTING ELEVATION
- PROPOSED EMERGENCY OVERFLOW ELEVATION
- PROPOSED GRADE AT TOP/BOTTOM OF WALL
- PROPOSED DRAINAGE DIRECTION
- PROPOSED GRADE BETWEEN POINTS

GRADING PLAN NOTES

- PERFORM GRADING WORK IN ACCORDANCE WITH APPLICABLE CITY SPECIFICATIONS AND BUILDING PERMIT REQUIREMENTS.
- CONTACT STATE 811 CALL-BEFORE-YOU-DIG LOCATING SERVICE AT LEAST TWO WORKING DAYS PRIOR TO EXCAVATION FOR UNDERGROUND UTILITY LOCATIONS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL HORIZONTAL AND VERTICAL CONTROL.
- FIELD VERIFY THE LOCATIONS AND ELEVATIONS OF EXISTING UTILITIES AND TOPOGRAPHIC FEATURES PRIOR TO THE START OF LAND DISTURBING ACTIVITIES. NOTIFY THE PROJECT ENGINEER OF ANY DISCREPANCIES OR VARIATIONS IMPACTING THE PROPOSED DESIGN OF THE PROJECT.
- IN PAVED AREAS, ROUGH GRADE TO SUBGRADE ELEVATION AND LEAVE THE SITE READY FOR SUB-BASE.
- SUBGRADE EXCAVATION SHALL BE BACKFILLED IMMEDIATELY AFTER EXCAVATION TO HELP OFFSET ANY STABILITY PROBLEMS DUE TO WATER SEEPAGE OR STEEP SLOPES. WHEN PLACING NEW SURFACE MATERIAL ADJACENT TO EXISTING PAVEMENT, THE EXCAVATION SHALL BE BACKFILLED PROMPTLY TO AVOID UNDERMINING OF EXISTING PAVEMENT.
- ELEVATIONS SHOWN REPRESENT FINISHED SURFACE GRADES. SPOT ELEVATIONS ALONG CURB & GUTTER REPRESENT THE FLOW LINE UNLESS OTHERWISE NOTED.
- EXCESS MATERIAL, BITUMINOUS SURFACING, CONCRETE ITEMS, ABANDONED UTILITY ITEMS, AND OTHER UNSTABLE MATERIALS SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF OFF THE CONSTRUCTION SITE.
- CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTION OF PAVEMENTS AND CURB AND GUTTER WITH SMOOTH UNIFORM SLOPES THAT PROVIDE POSITIVE DRAINAGE TO COLLECTION POINTS. MAINTAIN A MINIMUM SLOPE OF 1.25% IN ASPHALT PAVEMENT AREAS AND A MINIMUM SLOPE OF 0.50% IN CONCRETE PAVEMENT AREAS.
- MAINTAIN A MINIMUM SLOPE OF 0.50% ALONG CURB & GUTTER. REVIEW PAVEMENT GRADIENT AND CONSTRUCT "INFALL" CURB WHERE PAVEMENT DRAINS TOWARD THE GUTTER, AND "OUTFALL" CURB WHERE PAVEMENT DRAINS AWAY FROM THE GUTTER.
- INSTALL A MINIMUM OF 4-INCHES OF AGGREGATE BASE MATERIAL UNDER PROPOSED CONCRETE CURB & GUTTER, SIDEWALKS, AND TRAILS UNLESS OTHERWISE DETAILED.
- GRADING FOR SIDEWALKS AND ACCESSIBLE ROUTES, INCLUDING CROSSING DRIVEWAYS, SHALL CONFORM TO CURRENT STATE & NATIONAL ADA STANDARDS:
 - ACCESSIBLE RAMP SLOPES SHALL NOT EXCEED 8.3% (1:12).
 - SIDEWALK CROSS-SLOPES SHALL NOT EXCEED 2.0%.
 - LONGITUDINAL SIDEWALK SLOPES SHALL NOT EXCEED 5.0%.
 - ACCESSIBLE PARKING STALLS AND ACCESS AISLES SHALL NOT EXCEED 2.0% IN ANY DIRECTION. A MAXIMUM SLOPE OF 1.50% IS PREFERRED.

SIDEWALK ACCESS TO EXTERNAL BUILDING DOORS AND GATES SHALL BE ADA COMPLIANT. NOTIFY ENGINEER IMMEDIATELY IF ADA CRITERIA CANNOT BE MET IN ANY LOCATION PRIOR TO PAVEMENT INSTALLATION. CHANGE ORDERS WILL NOT BE ACCEPTED FOR ADA COMPLIANCE ISSUES.

- UPON COMPLETION OF LAND DISTURBING ACTIVITIES, RESTORE ADJACENT OFFSITE AREAS DISTURBED BY CONSTRUCTION TO MATCH OR EXCEED THE ORIGINAL CONDITION. LANDSCAPE AREAS SHALL BE RE-VEGETATED WITH A MINIMUM OF 4-INCHES OF TOPSOIL.

- EXCAVATE DRAINAGE TRENCHES TO FOLLOW PROPOSED STORM SEWER ALIGNMENTS. REFER TO THE UTILITY PLANS FOR LAYOUT AND ELEVATIONS FOR PROPOSED SANITARY SEWER, WATER MAIN, AND OTHER BUILDING UTILITY SERVICE CONNECTIONS.

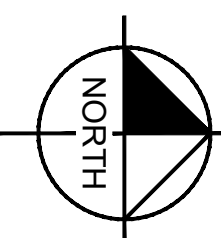
GRADING QUANTITIES

RAW CUT (CY)	±808
RAW FILL (CY)	±8025
NET FILL (CY)	±7218

EARTHWORK QUANTITIES ARE PRELIMINARY, SUBJECT TO CHANGE, AND SHOULD NOT BE USED FOR CONTRACTOR QUANTITY TAKEOFF. CALCULATIONS ARE BASED ON EXISTING TOPOGRAPHIC DATA AND ARE SUBJECT TO GEOTECHNICAL GUIDANCE. CALCULATIONS ARE A COMPARISON OF EXISTING TO FINAL GRADE AND DO NOT ACCOUNT FOR PAVEMENT AND OTHER CONSTRUCTION HOLD DOWNS. SHRINK/SWELL FACTORS FROM THE FINAL GEOTECHNICAL REPORT HAVE NOT BEEN INCORPORATED.



Know what's below.
Call before you dig.



GRAPHIC SCALE IN FEET
0 10 20 40

ISSUED FOR REVIEW - NOT FOR CONSTRUCTION

CREW CARWASH
COLUMBIA HEIGHTS

PREPARED FOR

CREW CARWASH

COLUMBIA HEIGHTS

Kimley»Horn

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KHA PROJECT
161033029
DATE
07/01/2026
SCALE
AS SHOWN
DESIGNED BY
MLS
DRAWN BY
KBP
CHECKED BY
DLE

GRADING AND
DRAINAGE PLAN

MN

CREW CARWASH
COLUMBIA HEIGHTS

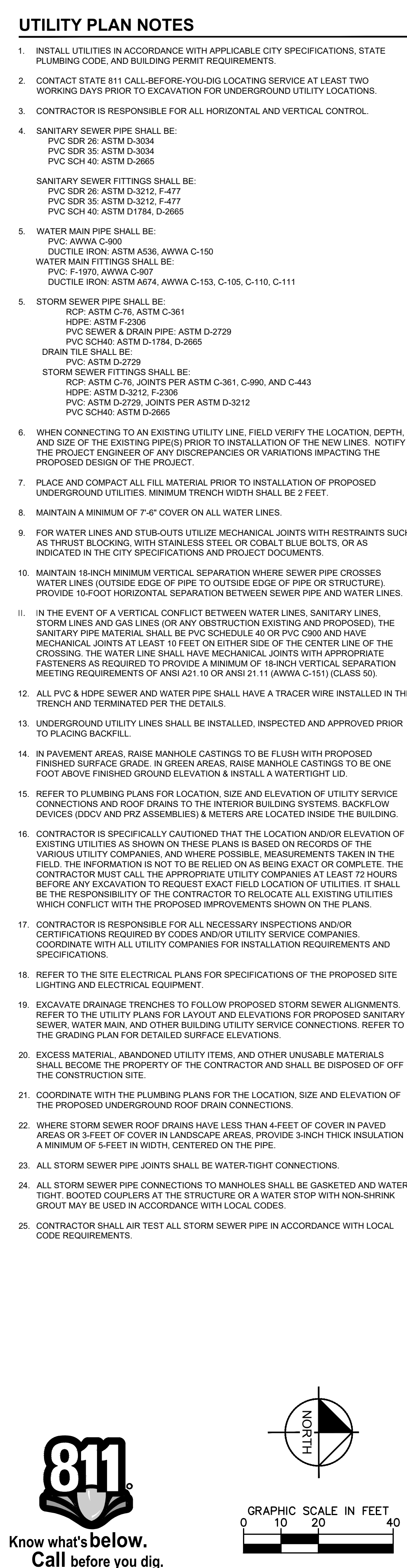
SHEET NUMBER
C500

No.

REVISIONS

DATE

BY



	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 FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER	ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	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 EMBEDMENT STONE ('B' LAYER) TO 24" (600 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE. MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER	AASHTO M145 ¹ A-1, A-2-4, A-3 OR AASHTO M43 ¹ 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 24" (600 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 12" (300 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS.
B	EMBEDMENT STONE: FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE OR RECYCLED CONCRETE ⁵	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.	CLEAN, CRUSHED, ANGULAR STONE OR RECYCLED CONCRETE ⁵	AASHTO M43 ¹ 3, 357, 4, 467, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE. ^{2,3}

1. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS" CHAMBER CLASSIFICATION 60x101

2. MC-7200 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS"

3. THE SITE DESIGN ENGINEER SHALL BE RESPONSIBLE FOR ASSESSING THE BEARING CAPACITY, STIFFNESS, ALLOWABLE SETTLEMENT, ALLOWABLE DEFLECTION, ALLOWABLE SOILS, AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE TYPE OF EXPOSED SOIL, MOISTURE CONDITIONS, REFERENCE STORMWATER DESIGN MANUAL FOR BEARING CAPACITY GUIDE.

4. PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION.

5. REQUIREMENTS FOR HANDLING AND INSTALLATION:

- a) TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
- b) TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 3" (75 mm).
- c) TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS COEFFICIENT SHALL AS DEFINED IN SECTION 5.01 OF ASTM F2418 SHALL BE GREATER THAN OR EQUAL TO 500 LB/IN²/FT² AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.



1	SHEET OF 1	 4640 TRUEMAN BLVD HILLIARD, OH 43026	StormTech® Chamber System	STANDARD CROSS SECTION MC-7200 CHAMBER			
				DATE	ISSUE	DATE	DESCRIPTION
1				08/04/25	7247.70	08/04/25	DRAWING: JLM DATE: 08/04/25 DRAWN: SMW

CREW CARWASH

COLUMBIA HEIGHTS

PREPARED FOR

CREW CARWASH

COLUMBIA HEIGHTS

MM

SHEET NUMBER

C603

UTILITY DETAILS

KHA PROJECT

161033029

DATE

07/01/2026

SCALE

AS SHOWN

DESIGNED BY

MLS

DRAWN BY

KBP

CHECKED BY

DLE

Kimley»»Horn
2026 KIMLEY-HORN AND ASSOCIATES, INC.
767 EUSTIS STREET, SUITE 100, ST. PAUL, MN 55114
PHONE 651-445-4197
WWW.KIMLEY-HORN.COM

[illegible]

TOTAL REQUIRED TREES:	16 TREES
TOTAL PROPOSED TREES:	17 TREES

	EXISTING DECIDUOUS TREE (TYP.)
	EDGER (TYP.)
	APPROXIMATE LIMITS OF SOD/IRRIGATION. SOD ALL DISTURBED AREAS (TYP.)
	ROCK MULCH (TYP.)
	SOD (TYP.)

(A) EDGER (TYP.)

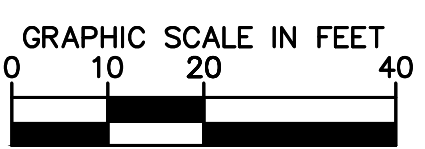
(B) DOUBLE SHREDDED HARDWOOD MULCH (TYP.)

(C) ROCK MULCH (TYP.)

(D) SOD (TYP.)

<u>SYMBOL</u>	<u>CODE</u>	<u>QTY</u>	<u>COMMON NAME</u>	<u>BOTANICAL NAME</u>	<u>CAL</u>	<u>HT</u>
<u>CONIFEROUS TREE</u>						
	CSP	3	CHALET SWISS STONE PINE	PINUS CEMBRA 'CHALET'	B & B	6' HT.
<u>OVERSTORY TREE</u>						
	BRM	3	BRANDYWINE RED MAPLE	ACER RUBRUM 'BRANDYWINE'	B & B	2.5" CAL.
	GSG	4	GOLDSPIRE GINKGO TREE	GINKGO BILOBA 'BLAGON'	B & B	2.5" CAL.
	STL	3	SENTRY® LINDEN	TILIA AMERICANA 'MCKSENTRY'	B & B	2.5" CAL.
	VFE	3	VALLEY FORGE ELM	ULMUS AMERICANA 'VALLEY FORGE'	B & B	2.5" CAL.
<u>SYMBOL</u>	<u>CODE</u>	<u>QTY</u>	<u>COMMON NAME</u>	<u>BOTANICAL NAME</u>	<u>CONT</u>	<u>SPACING</u>
<u>CONIFEROUS SHRUBS</u>						
	ELU	14	EVERLOW YEW	TAXUS X MEDIA 'EVERLOW'	#5 CONT.	4' O.C.
	MJJ	29	MINT JULEP® JUNIPER	JUNIPERUS CHINENSIS 'MONLEP'	#5 CONT.	5' O.C.
	SGJ	21	SEA GREEN JUNIPER	JUNIPERUS CHINENSIS 'SEA GREEN'	#5 CONT.	5' O.C.
	TCA	5	TECHNY ARBORVITAE	THUJA OCCIDENTALIS 'TECHNY'	#5 CONT.	6' O.C.
<u>DECIDUOUS SHRUBS</u>						
	AMC	9	AUTUMN MAGIC BLACK CHOKEBERRY	ARONIA MELANOCARPA 'AUTUMN MAGIC'	#5 CONT.	4' O.C.
	DSC	19	DAKOTA SUNSPOT® BUSH CINQUEFOIL	DASIPHORA FRUTICOSA 'FARGO'	#5 CONT.	3' O.C.
	FDD	14	FIREDDANCE™ DOGWOOD	CORNUS SERICEA 'BAILADELINE'	#5 CONT.	4' O.C.
	KOH	16	KODIAK® ORANGE HONEYSUCKLE	DIERVILLA X 'G2X88544'	#5 CONT.	4' O.C.
	KOR	13	CORAL KNOCK OUT® ROSE	ROSA X 'RADRAL'	#5 CONT.	3' O.C.
	MFS	9	MATCHA BALL® FALSE SPIRAEA	SORBARIA SORBIFOLIA 'LEVGREEN'	#5 CONT.	4' O.C.
<u>ORNAMENTAL GRASSES</u>						
	KFG	41	KARL FOERSTER FEATHER REED GRASS	CALAMAGROSTIS X ACUTIFLORA 'KARL FOERSTER'	#1 CONT.	2.5' O.C.
	NSG	26	NORTHWIND SWITCH GRASS	PANICUM VIRGATUM 'NORTHWIND'	#1 CONT.	2.5' O.C.
	PDS	85	PRAIRIE DROPSEED	SPOROBOLUS HETEROLEPIS	#1 CONT.	2' O.C.
<u>PERENNIALS</u>						
	AJS	76	AUTUMN JOY STONECROP	HYLOTELEPHIUM X 'HERBSTFREUDE'	#1 CONT.	18" O.C.
	BIB	45	BLUE ICE BLUESTAR	AMSONIA X 'BLUE ICE'	#1 CONT.	18" O.C.
	CRS	71	CRAZYBLUE RUSSIAN SAGE	SALVIA YANGII 'CRAZYBLUE'	#1 CONT.	24" O.C.
	MOO	81	MILLENIUM ORNAMENTAL ONION	ALLIUM X 'ALLMIG1'	#1 CONT.	18" O.C.
	MSY	69	MOONSHINE YARROW	ACHILLEA X 'MOONSHINE'	#1 CONT.	18" O.C.
	OCB	45	OBSIDIAN CORAL BELLS	HEUCHERA X 'OBSIDIAN'	#1 CONT.	18" O.C.

ABBREVIATIONS:
B&B = BALLED AND BURLAPPED CAL. = CALIPER HT. = HEIGHT MIN. = MINIMUM O.C. = ON CENTER SP. = SPECIES
QTY. = QUANTITY

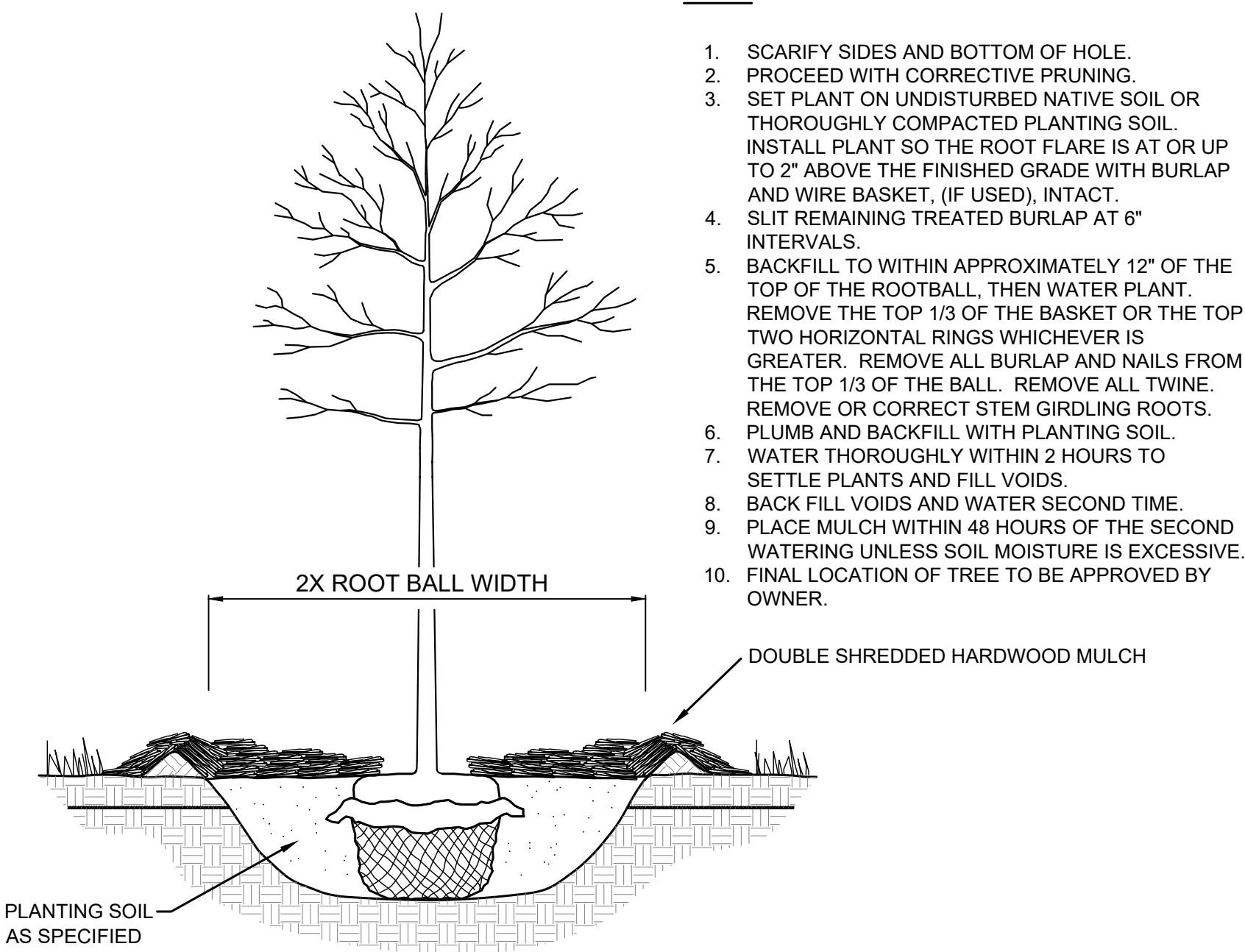


1

TREE PLANTING DETAIL

SCALE: N.T.S.

L101

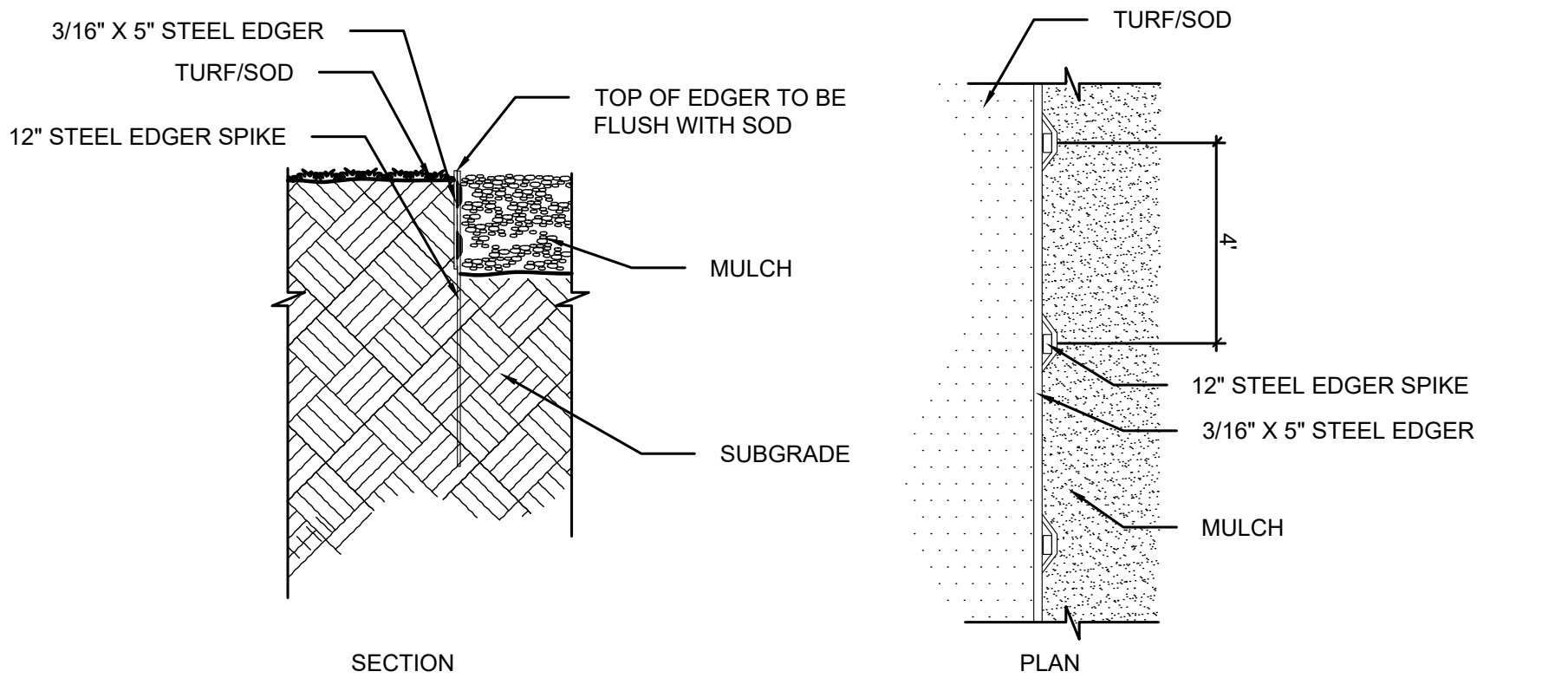
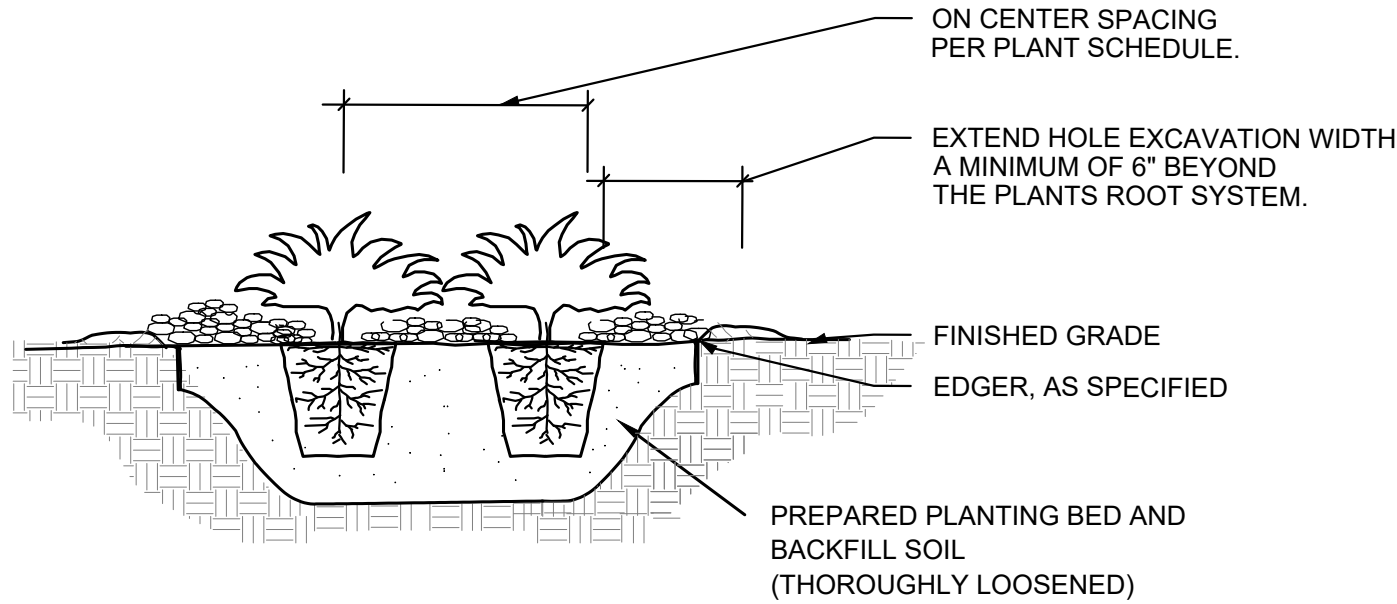


2

SHRUB / PERENNIAL PLANTING DETAIL

SCALE: N.T.S.

L101



3

STEEL EDGER DETAIL

SCALE: N.T.S.

L101

LANDSCAPE NOTES

PLANTING

1. CONTACT COMMON GROUND ALLIANCE AT 811 OR CALL811.COM TO VERIFY LOCATIONS OF ALL UNDERGROUND UTILITIES PRIOR TO INSTALLATION OF ANY PLANTS OR LANDSCAPE MATERIAL.
2. ACTUAL LOCATION OF PLANT MATERIAL IS SUBJECT TO FIELD AND SITE CONDITIONS.
3. NO PLANTING WILL BE INSTALLED UNTIL ALL GRADING AND CONSTRUCTION HAS BEEN COMPLETED IN THE IMMEDIATE AREA.
4. ALL SUBSTITUTIONS MUST BE APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO SUBMISSION OF ANY BID AND/OR QUOTE BY THE LANDSCAPE CONTRACTOR.
5. PROVIDE TWO YEAR GUARANTEE OF ALL PLANT MATERIALS. THE GUARANTEE BEGINS ON THE DATE OF THE LANDSCAPE ARCHITECT'S OR OWNER'S WRITTEN ACCEPTANCE OF THE INITIAL PLANTING. REPLACEMENT PLANT MATERIAL SHALL HAVE A ONE YEAR GUARANTEE COMMENCING UPON PLANTING.
6. ALL PLANTS TO BE SPECIMEN GRADE, MINNESOTA-GROWN AND/OR HARDY. SPECIMEN GRADE SHALL ADHERE TO, BUT IS NOT LIMITED BY, THE FOLLOWING STANDARDS:
ALL PLANTS SHALL BE FREE FROM DISEASE, PESTS, WOUNDS, SCARS, ETC.
ALL PLANTS SHALL BE FREE FROM NOTICEABLE GAPS, HOLES, OR DEFORMITIES.
ALL PLANTS SHALL BE FREE FROM BROKEN OR DEAD BRANCHES.
ALL PLANTS SHALL HAVE HEAVY, HEALTHY BRANCHING AND LEAFING.
CONIFEROUS TREES SHALL HAVE AN ESTABLISHED MAIN LEADER AND A HEIGHT TO WIDTH RATIO OF NO LESS THAN 5:3.
7. PLANTS TO MEET AMERICAN STANDARD FOR NURSERY STOCK (ANSI Z60.1-2014 OR MOST CURRENT VERSION) REQUIREMENTS FOR SIZE AND TYPE SPECIFIED.
8. PLANTS TO BE INSTALLED AS PER MNLA & ANSI STANDARD PLANTING PRACTICES.
9. INSTALL PLANTS BY PLANT INSTALLATION PERIOD INFORMATION IN THE LATEST STANDARD PLANTING DETAILS FROM MNDOT. PLANTINGS BEFORE OR AFTER THESE DATES ARE DONE AT RISK.
10. PLANTS SHALL BE IMMEDIATELY PLANTED UPON ARRIVAL AT SITE. PROPERLY HEEL-IN MATERIALS IF NECESSARY; TEMPORARY ONLY.
11. PRIOR TO PLANTING, FIELD VERIFY THAT THE ROOT COLLAR/ROOT FLARE IS LOCATED AT THE TOP OF THE BALLED & BURLAP TREE. IF THIS IS NOT THE CASE, SOIL SHALL BE REMOVED DOWN TO THE ROOT COLLAR/ROOT FLARE. WHEN THE BALLED & BURLAP TREE IS PLANTED, THE ROOT COLLAR/ROOT FLARE SHALL BE EVEN OR SLIGHTLY ABOVE FINISHED GRADE.
12. OPEN TOP OF BURLAP ON BB MATERIALS; REMOVE POT ON POTTED PLANTS; SPLIT AND BREAK APART PEAT POTS.
13. PRUNE PLANTS AS NECESSARY - PER STANDARD NURSERY PRACTICE AND TO CORRECT POOR BRANCHING OF EXISTING AND PROPOSED TREES.
14. WRAP ALL SMOOTH-BARKED TREES - FASTEN TOP AND BOTTOM. REMOVE BY APRIL 1ST.
15. STAKING OF TREES AS REQUIRED; REPOSITION, PLUMB AND STAKE IF NOT PLUMB AFTER ONE YEAR.

SOIL

16. THE NEED FOR SOIL AMENDMENTS SHALL BE DETERMINED UPON SITE SOIL CONDITIONS PRIOR TO PLANTING. LANDSCAPE CONTRACTOR SHALL NOTIFY LANDSCAPE ARCHITECT FOR THE NEED OF ANY SOIL AMENDMENTS.
17. BACKFILL SOIL AND TOPSOIL TO ADHERE TO MNDOT STANDARD SPECIFICATION 3877 (LOAM TOPSOIL BORROW) AND TO BE EXISTING TOP SOIL FROM SITE FREE OF ROOTS, ROCKS LARGER THAN ONE INCH, SUBSOIL, DEBRIS, AND LARGE WEEDS UNLESS SPECIFIED OTHERWISE. MINIMUM 4" DEPTH TOPSOIL FOR ALL LAWN GRASS AREAS AND 12" DEPTH TOPSOIL FOR TREE, SHRUBS, AND PERENNIALS.

MULCH

18. MULCH TO BE AT ALL TREE, SHRUB, PERENNIAL, AND MAINTENANCE AREAS. TREE AND SHRUB PLANTING BEDS SHALL HAVE 4" DEPTH OF DOUBLE SHREDDED HARDWOOD MULCH. DOUBLE SHREDDED HARDWOOD MULCH TO BE USED AROUND ALL PLANTS WITHIN TURF AREAS. PERENNIAL AND ORNAMENTAL GRASS BEDS SHALL HAVE 2" DEPTH DOUBLE SHREDDED HARDWOOD MULCH. MULCH TO BE FREE OF DELETERIOUS MATERIAL AND NATURAL IN COLOR (DYE-FREE), OR APPROVED EQUAL. ROCK MULCH TO BE GRAY TRAP ROCK AT 2-1/2" DIAMETER MINUS, AT MINIMUM 4" DEPTH, OR APPROVED EQUAL. APPLY PRE-EMERGENT HERBICIDE PRIOR TO MULCH PLACEMENT PER MANUFACTURER RECOMMENDATIONS, USE PREEN OR PRE-APPROVED EQUAL. ROCK MULCH TO BE ON COMMERCIAL GRADE FILTER FABRIC, BY TYPAR, OR APPROVED EQUAL WITH NO EXPOSURE. MULCH AND FABRIC TO BE APPROVED BY OWNER PRIOR TO INSTALLATION. MULCH TO MATCH EXISTING CONDITIONS (WHERE APPLICABLE).

EDGER

19. EDGING TO BE COMMERCIAL GRADE COL-MET (OR EQUAL) STEEL EDGING; 3/16" THICK X 5" TALL, COLOR BLACK, OR SPADED EDGE, AS INDICATED. STEEL EDGING SHALL BE PLACED WITH SMOOTH CURVES AND STAKED WITH METAL SPIKES NO GREATER THAN 4 FOOT ON CENTER WITH TOP OF EDGER AT GRADE. FOR MOWERS TO CUT ABOVE WITHOUT DAMAGE. UTILIZE CURBS AND SIDEWALKS FOR EDGING WHERE POSSIBLE. WHERE EDGING TERMINATES AT A SIDEWALK, BEVEL OR RECESS ENDS TO PREVENT TRIP HAZARD. SPADED EDGE TO PROVIDE V-SHAPED DEPTH AND WIDTH TO CREATE SEPARATION BETWEEN MULCH AND GRASS. INDIVIDUAL TREE, SHRUB, OR RAIN-GARDEN BEDS TO BE SPADED EDGE, UNLESS NOTED OTHERWISE. EDGING TO MATCH EXISTING CONDITIONS (WHERE APPLICABLE).

SEED/SOD

20. ALL DISTURBED AREAS TO BE SODDED, UNLESS OTHERWISE NOTED. SOD TO BE STANDARD MINNESOTA GROWN AND HARDY BLUEGRASS MIX, FREE OF LAWN WEEDS. ALL TOPSOIL AREAS TO BE RAKED TO REMOVE DEBRIS AND ENSURE DRAINAGE. SLOPES OF 3:1 OR GREATER SHALL BE STAKED. SEED AS SPECIFIED, PER MNDOT SPECIFICATIONS AND SUPPLIER/MANUFACTURER RECOMMENDATIONS. IF NOT INDICATED ON LANDSCAPE PLAN, SEE EROSION CONTROL PLAN.

IRRIGATION

21. PROVIDE IRRIGATION TO ALL PLANTED AREAS ON SITE. IRRIGATION SYSTEM TO BE DESIGN/BUILD BY LANDSCAPE CONTRACTOR. LANDSCAPE CONTRACTOR TO PROVIDE SHOP DRAWINGS TO LANDSCAPE ARCHITECT FOR APPROVAL PRIOR TO INSTALLATION OF IRRIGATION SYSTEM. CONTRACTOR TO PROVIDE OPERATION MANUALS, AS-BUILT PLANS, AND NORMAL PROGRAMMING. SYSTEM SHALL BE WINTERIZED AND HAVE SPRING STARTUP DURING FIRST YEAR OF OPERATION. SYSTEM SHALL HAVE ONE-YEAR WARRANTY ON ALL PARTS AND LABOR. ALL INFORMATION ABOUT INSTALLATION AND SCHEDULING CAN BE OBTAINED FROM THE GENERAL CONTRACTOR. SYSTEM SHALL INCLUDE A RAIN SENSOR AND APPROPRIATE TECHNOLOGY. CONTROLLER TO BE COMMERCIAL GRADE, EPA WATERSENSE APPROVED, CAPABLE OF FLOW SENSING AND OPERATING A MASTER VALVE ON / OFF BY STATION. IRRIGATION SYSTEM TO INCLUDE FLOW SENSOR AND WIRED RAIN / FREEZE SENSOR. PROVIDE MASTER VALVE. THE IRRIGATION SYSTEM SHALL BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS. ZONE PARAMETERS: HEAD-TO-HEAD COVERAGE AND NO SPRAYING OVER WALKS. SEPARATE LAWN ZONES BY MICROCLIMATE- LAWN ON NORTH SIDE OF BUILDING VS LAWN ON SOUTH SIDE OF BUILDING, LAWN ON SLOPE VS LAWN ON LEVEL GRADE, LAWN AREAS TO HAVE MULTI-STREAM ROTARY SPRINKLERS/ SPRAYS/ ROTORS. SHRUB AND PERENNIAL BED AREAS TO HAVE DRIP. TREES IN LAWN AREA TO BE COVERED BY MULTI-STREAM ROTARY SPRINKLERS/ SPRAYS/ ROTORS. TREES IN SHRUBS / PERENNIAL BED AREA TO BE WATERED WITH DRIP IRRIGATION. ALL IRRIGATION HEADS TO BE PRESSURE REGULATED.

ESTABLISHMENT

22. PROVIDE NECESSARY WATERING OF PLANT MATERIALS UNTIL THE PLANT IS FULLY ESTABLISHED OR IRRIGATION SYSTEM IS OPERATIONAL. OWNER WILL NOT PROVIDE WATER FOR CONTRACTOR.
23. REPAIR, REPLACE, OR PROVIDE SOD/SEED AS REQUIRED FOR ANY ROADWAY BOULEVARD AREAS ADJACENT TO THE SITE DISTURBED DURING CONSTRUCTION.

WARRANTY

24. REPAIR ALL DAMAGE TO PROPERTY FROM PLANTING OPERATIONS AT NO COST TO OWNER.
25. MAINTAIN TREES, SHRUBS, SEED AND OTHER PLANTS UNTIL PROJECT COMPLETION, BUT IN NO CASE, LESS THAN FOLLOWING PERIOD; 1 YEAR AFTER PROJECT COMPLETION. MAINTAIN TREES, SHRUBS, SEED AND OTHER PLANTS BY PRUNING, CULTIVATING, AND WEEDING AS REQUIRED FOR HEALTHY GROWTH. RESTORE PLANTING SAUCERS, TIGHTEN AND REPAIR STAKE AND GUY SUPPORTS AND RESET TREES AND SHRUBS TO PROPER GRADES OR VERTICAL POSITION AS REQUIRED. RESTORE OR REPLACE DAMAGED WRAPPINGS. SPRAY AS REQUIRED TO KEEP TREES AND SHRUBS FREE OF INSECTS AND DISEASE. REPLENISH MULCH TO THE REQUIRED DEPTH. MAINTAIN LAWNS FOR 60 DAYS AFTER INSTALLING SOD INCLUDING MOWING WHEN SOD RECIOTES 4" IN HEIGHT. WEED PLANTING BEDS AND MULCH SAUCERS AT MINIMUM ONCE A MONTH DURING THE GROWING SEASON. PROVIDE A MONTHLY REPORT TO THE OWNER ON WEEDING AND OTHER MAINTENANCE RESPONSIBILITIES.

ISSUED FOR REVIEW - NOT FOR CONSTRUCTION

CREW CARWASH
COLUMBIA HEIGHTS

PREPARED FOR

CREW CARWASH
COLUMBIA
HEIGHTS

LANDSCAPE
DETAILS

LICENSED PROFESSIONAL LANDSCAPE ARCHITECT
THAT I AM A DULY LICENSED PROFESSIONAL
LANDSCAPE ARCHITECT UNDER THE LAWS OF
THE STATE OF MINNESOTA

CLARE F. KIBOKO, P.L.A.
CLARE F. KIBOKO, P.L.A.

DATE: 08/01/2026 MN LIC. NO. 64528

KHA PROJECT	DATE	SCALE	AS SHOWN	DESIGNED BY	ATK	DRAWN BY	ATK	CHECKED BY	CFK
161033029	07/01/2026								

Kimley»Horn

2026 KIMLEY-HORN AND ASSOCIATES, INC.
767 EUSTIS STREET, SUITE 100, ST. PAUL, MN 55114
PHONE: 651-445-4197
WWW.KIMLEY-HORN.COM

BY	DATE	REVISIONS	No.

SHEET NUMBER
L101