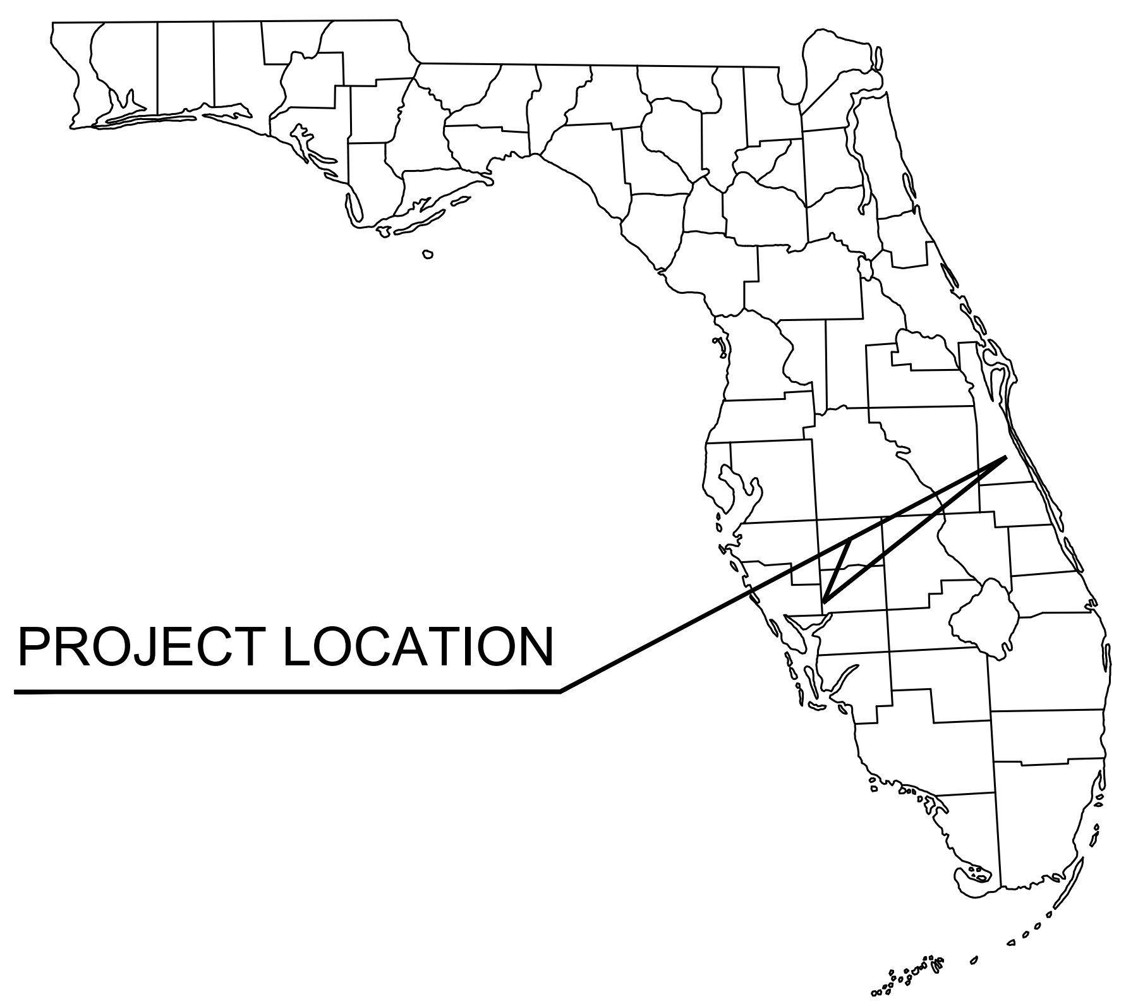
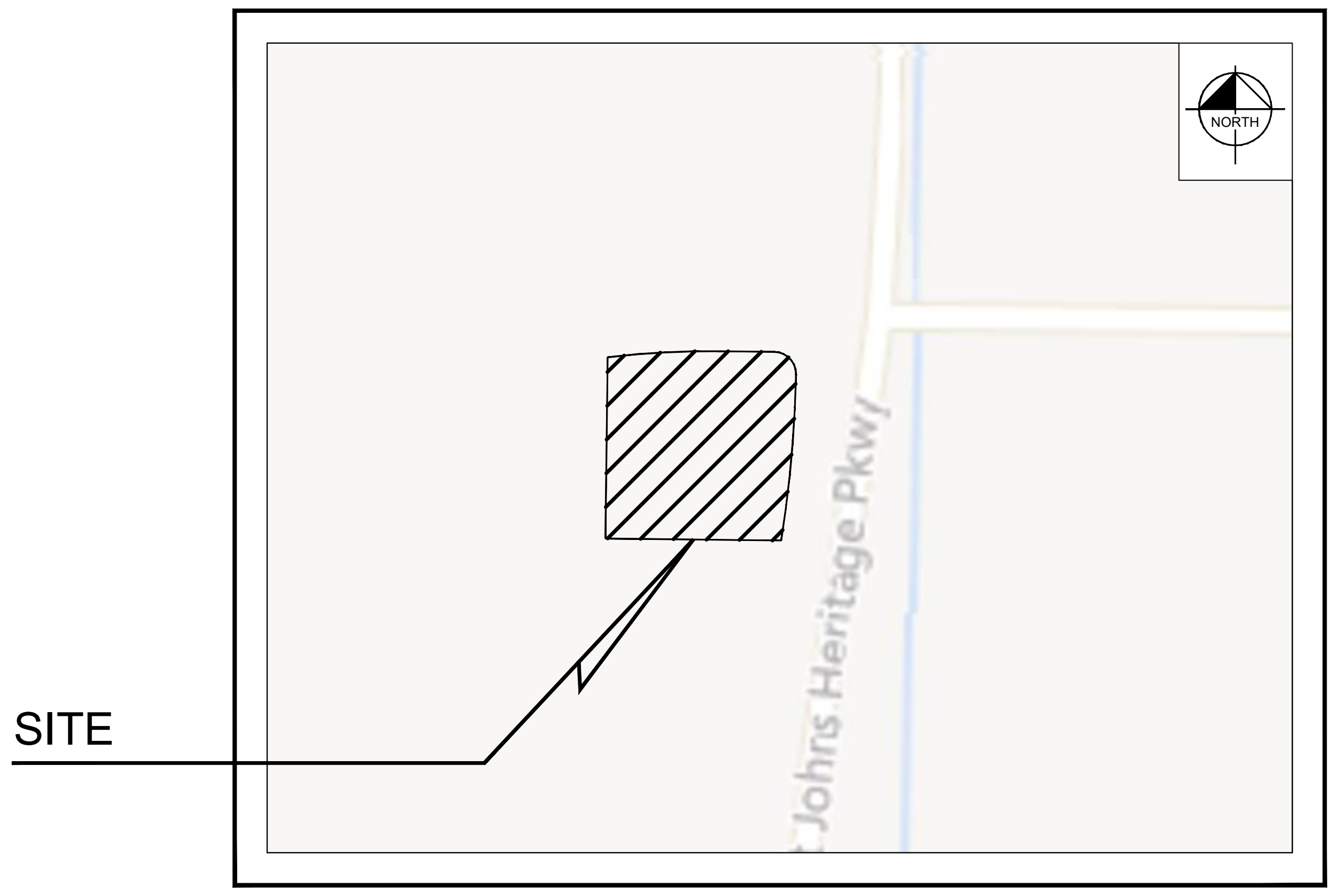
CONSTRUCTION PLANS
FOR
7-11 PALM BAY

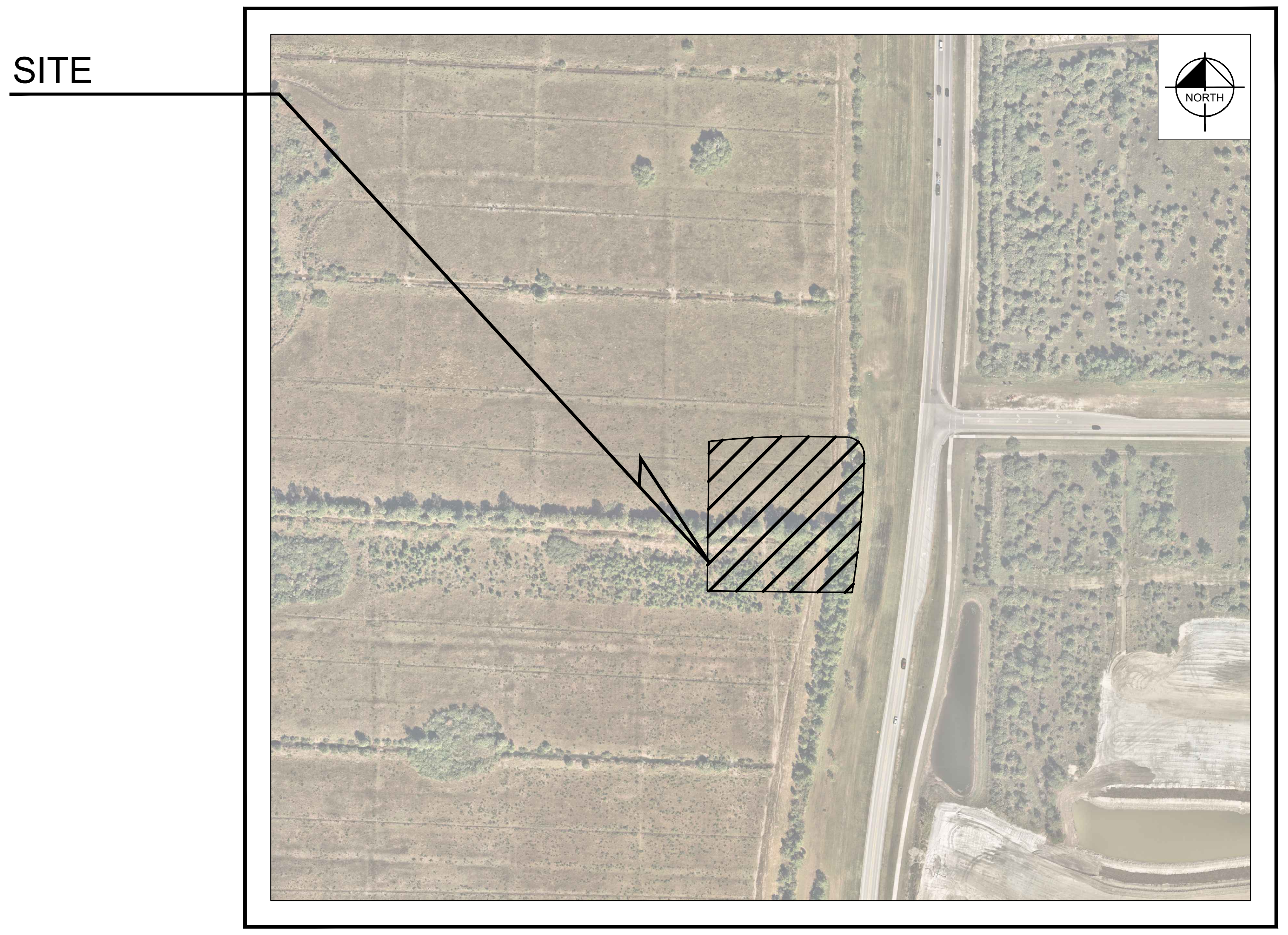
PARCEL #:
28-36-20-00-750

PALM BAY, FLORIDA
AUGUST 21, 2025





AERIAL PHOTOGRAPH
N.T.S.



SECTION 20, TOWNSHIP 28S, RANGE 36E
LOCATION MAP
N.T.S.

LEGAL DESCRIPTION:

A PARCEL OF LAND LYING IN SECTION 20, TOWNSHIP 28 SOUTH, RANGE 36 EAST, BREVARD COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCE AT THE SOUTHEAST CORNER OF THE WEST I /2 OF SECTION 21, TOWNSHIP 28 SOUTH, RANGE 36 EAST, THENCE N00°45'06"E ALONG THE EAST LINE OF SAID SECTION 21 A DISTANCE OF 1488.29 FEET; THENCE DEPARTING SAID EAST LINE, RUN N89°14'54"W A DISTANCE OF 55.00 FEET, MORE OR LESS, TO A POINT ON THE WEST RIGHT OF WAY LINE OF WATER CONTROL DISTRICT OF SOUTH BREVARD CANAL N UMBER FIFTY NINE (A 95 FOOT RIGHT OF WAY), SAID POINT ALSO BEING A POINT ON THE PROPOSED SOUTH I 00 FOOT RIGHT OF WAY OF THE PROPOSED EMERSON DRIVE EXTENSION AND A POINT ON A NON TANGENT CURVE TO THE LEFT , OF WHICH THE RADIUS POINT LIES S00°03'59"W, A RADIAL DISTANCE OF 1,390.00 FEET; THENCE RUN SOUTHWESTERLY ALONG THE ARC AND SAID PROPOSED SOUTH RIGHT OF WAY OF SAID PROPOSED EMERSON DRIVE EXTENSION, THROUGH A CENTRAL ANGLE OF 11°58'18", A DISTANCE OF 290.44 FEET TO A POINT OF TANGENCY; THENCE CONTINUE ALONG SAID SOUTH RIGHT OF WAY S78°05'41"W A DISTANCE OF 102.96 FEET TO A POINT OF CURVATURE; THENCE SOUTHWESTERLY A DISTANCE OF 362.10 FEET ALONG SAID SOUTH RIGHT OF WAY AND AN ARC OF A CURVE TO THE RIGHT HAVING A RADIUS OF 1,650.00 FEET, A CENTRAL ANGLE OF 12°34'25", AND A CHORD WHICH BEARS S84°22'53"W A DISTANCE OF 361.37 FEET TO A POINT OF TANGENCY; THENCE CONTINUE ALONG SAID SOUTH RIGHT OF WAY N89°19'54"W A DISTANCE OF 2,043.26 FEET TO THE POINT OF BEGINNING OF THE HEREIN DESCRIBED PARCEL; THENCE CONTINUE N89°19'54"W, ALONG SAID SOUTH RIGHT OF WAY, A DISTANCE OF 84.85 FEET TO A POINT OF CURVATURE; THENCE CONTINUE ALONG SAID SOUTH RIGHT OF WAY A DISTANCE OF 180.54 FEET ALONG AN ARC OF A CURVE TO THE LEFT HAVING A RADIUS OF 1400.00 FEET, A CENTRAL ANGLE OF 07°23'19", AND A CHORD WHICH BEARS S86°58'26"W A DISTANCE OF 180.41 FEET TO A POINT OF NON TANGENCY; THENCE S00°42'13"W A DISTANCE OF 288.38 FEET; THENCE S89°19'54"E A DISTANCE OF 279.60 FEET, MORE OR LESS, TO A POINT ON THE PROPOSED WEST 200 FOOT RIGHT OF W AY OF THE PROPOSED PALM BAY PARKWAY, SAID POINT ALSO BEING A POINT ON A NON TANGENT CURVE TO THE LEFT, OF WHICH THE RADIUS POINT LIES N81°06'20"W, A RADIAL DISTANCE OF 2,000.00 FEET; THENCE RUN NORTHEASTERLY ALONG THE ARC AND SAID PROPOSED WEST RIGHT OF WAY THROUGH A CENTRAL ANGLE OF 07'36'33", A DISTANCE OF 265.61 FEET TO A POINT OF COMPOUND CURVATURE; THENCE DEPARTING SAID WEST RIGHT OF WAY, RUN NORTHWESTERLY A DISTANCE OF 55.35 FEET, MORE OR LESS, ALONG AN ARC OF A CURVE TO THE LEFT HAVING A RADIUS OF 35.00 FEET, A CENTRAL ANGLE OF 90°37'01",AND A CHORD WHICH BEARS N44°01'24"W A DISTANCE OF 49.76 FEET, MORE OR LESS, TO A POINT ON THE PROPOSED SOUTH 100 FOOT RIGHT OF WAY OF THE PROPOSED EMERSON DRIVE EXTENSION, SAID POINT ALSO BEING THE POINT OF BEGINNING; CONTAINING 2.000 ACRES, MORE OR LESS.

CITY OF PALM BAY NOTE:

RIGHT OF WAY REVIEW AND APPROVAL DOES NOT CONSTITUTE CITY APPROVAL OR REVIEW OF ANY PRIVATE PARTY DEED RESTRICTIONS, COVENT, PRIVATE EASEMENT, OR OTHER PRIVATE AGREEMENT. ANY CHANGES TO THE APPROVED PLAN MUST BE COORDINATED THROUGH THE PUBLIC WORKS ENGINEERING PROGRAM. THE APPLICANT ASSUMES THE RISK THAT THE RIGHT OF WAY PERMIT MAY REQUIRE ADDITIONAL CITY REVIEWS INCLUDING ENGINEERING REVISIONS OR OTHER APPLICABLE CITY REVIEW PROCESSES SHOULD ANY ACTION TO ENFORCE ANY SUCH RESTRICTIONS REQUIRE REDESIGN OF THE PROJECT.

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UTILITY PROVIDERS

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DEREK E. RAMSBURG, P.E.
No. 88965
FL LICENSE NUMBER
88965
8/21/2025

VERTICAL DATUM:
ELEVATIONS SHOWN ARE
REFERENCED TO NGVD29
DATUM.

SHEET NUMBER
C0.0

No.

GENERAL

1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO BECOME FAMILIAR WITH THE PERMIT AND INSPECTION REQUIREMENTS SPECIFIED BY THE VARIOUS GOVERNMENTAL AGENCIES AND THE ENGINEER. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS, SUCH AS RIGHT OF WAY PERMIT(S), EXCAVATION/FILL PERMIT(S), FIRE PROTECTION PERMIT(S), OR UNDERGROUND UTILITY PERMIT(S), PRIOR TO START OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING ALL INSPECTION CRITERIA OF APPLICABLE AGENCIES, SCHEDULING OF INSPECTIONS, AND OBTAINING REQUIRED INSPECTIONS FROM AGENCY.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND VERIFYING (HORIZONTALLY AND VERTICALLY) ALL EXISTING UTILITIES PRIOR TO START OF CONSTRUCTION AND FOR NOTIFYING THE VARIOUS UTILITY COMPANIES TO MAKE THE NECESSARY ARRANGEMENTS FOR ANY RELOCATION, TEMPORARY DISTRIBUTION SERVICE, OR CLARIFICATION OF ACTIVITY REGARDING SAID UTILITY. THE CONTRACTOR SHALL EXERCISE CAUTION WHEN CROSSING AN UNDERGROUND UTILITY, WHETHER SHOWN ON THESE PLANS OR FIELD LOCATED. ALL OTHER UTILITIES WHICH INTERFERE WITH THE PROPOSED CONSTRUCTION SHALL BE RELOCATED BY THE RESPECTIVE UTILITY COMPANIES AND THE CONTRACTOR SHALL COOPERATE WITH THEM DURING RELOCATION OPERATIONS. ANY DELAY OR INCONVENIENCE OF THE VARIOUS UTILITIES SHALL BE INCIDENTAL TO THE CONTRACT AND NO EXTRA COMPENSATION WILL BE ALLOWED. CONTRACTOR SHALL CALL "SUNSHINE ONE" AT 811 TO HAVE EXISTING UTILITIES LOCATED AT LEAST 48 HOURS PRIOR TO CONSTRUCTION.
3. THE LOCATIONS OF ALL EXISTING UTILITIES, STORM DRAINAGE SYSTEMS, AND TOPOGRAPHIC FEATURES SHOWN ON THE PLANS HAVE BEEN DETERMINED FROM THE BEST AVAILABLE INFORMATION AND ARE PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THEIR ACCURACY. SHOULD A DISCREPANCY ARISE BETWEEN THESE PLANS AND ACTUAL FIELD CONDITIONS, WHICH WOULD APPRECIABLY AFFECT THE EXECUTION OF THESE PLANS, THE CONTRACTOR SHALL HALT CONSTRUCTION AND NOTIFY THE ENGINEER IMMEDIATELY.
4. ALL DISTURBED AREAS NOT DESIGNED TO BE LANDSCAPED OR SODDED SHALL BE SEEDED AND MULCHED AS DIRECTED BY THE ENGINEER.
5. THE CONTRACTOR SHALL NOT EXCAVATE, REMOVE, OR OTHERWISE DISTURB ANY MATERIAL, STRUCTURE, OR PART OF A STRUCTURE WHICH IS LOCATED OUTSIDE THE LINES, GRADES, OR GRADING SECTIONS ESTABLISHED FOR THIS PROJECT, EXCEPT WHERE SUCH EXCAVATION OR REMOVAL IS PROVIDED FOR IN THE CONTRACT, PLANS, OR SPECIFICATIONS. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY DAMAGE TO EXISTING FACILITIES, ABOVE OR BELOW GROUND, THAT MAY OCCUR AS A RESULT OF THE WORK PERFORMED, BY THE CONTRACTOR OR SUB-CONTRACTORS, AS CALLED FOR IN THESE CONTRACT DOCUMENTS.
6. ALL WORK AND MATERIALS FURNISHED SHALL BE REASONABLY CLOSE IN CONFORMITY WITH THE LINES, GRADES, GRADING SECTIONS, CROSS SECTIONS, DIMENSIONS, MATERIAL REQUIREMENTS, AND TESTING REQUIREMENTS THAT ARE SPECIFIED IN THE CONTRACT PLANS OR SPECIFICATIONS.
7. ALL SPECIFICATIONS AND DOCUMENTS REFERENCED HEREIN SHALL BE OF THE LATEST REVISION, AS APPLICABLE AT THE TIME ALL PERMITS HAVE BEEN OBTAINED.
8. ALL UNDERGROUND UTILITIES MUST BE IN-PLACE, TESTED AND INSPECTED PRIOR TO BASE AND SURFACE CONSTRUCTION.
9. THE GRAPHIC INFORMATION DEPICTED ON THESE PLANS HAS BEEN COMPILED TO PROPORTION BY SCALE AS ACCURATELY AS POSSIBLE. HOWEVER, DUE TO REPRODUCTIVE DISTORTION, REDUCTION, AND/OR REVISIONS, INFORMATION CONTAINED HEREIN IS NOT INTENDED TO BE SCALED FOR CONSTRUCTION PURPOSES.
10. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS ON ALL PRECAST AND MANUFACTURED ITEMS TO THE OWNER'S ENGINEER FOR REVIEW.
11. CONTRACTOR TO COORDINATE WITH THE APPLICABLE ELECTRIC UTILITY SUPPLIER REGARDING ANY NECESSARY RELOCATION(S) OF UNDERGROUND AND/OR OVERHEAD ELECTRIC FACILITIES, AND FOR THE LOCATION AND INSTALLATION OF TRANSFORMER PAD(S) AND ASSOCIATED ELECTRIC FACILITIES.
12. UPON COMPLETION OF CONSTRUCTION, THE CONTRACTOR SHALL FURNISH THE OWNER'S ENGINEER WITH COMPLETE "AS-BUILT" INFORMATION, CERTIFIED BY A LICENSED LAND SURVEYOR CURRENTLY REGISTERED IN THE STATE OF FLORIDA. AT A MINIMUM, THIS "AS-BUILT" INFORMATION SHALL INCLUDE: TOP OF PIPE/INVERT ELEVATIONS AND HORIZONTAL LOCATIONS OF ALL WATER, SANITARY SEWER, AND RECLAIM WATER UTILITIES INSTALLED (AS APPLICABLE); PAVEMENT GRADE BREAK LOCATIONS AND SUFFICIENT ELEVATIONS OF FINISHED GRADE SURFACES WHICH ALLOW THE ENGINEER TO DETERMINE COMPLIANCE WITH THE PROPOSED DESIGN; TOP & INVERT ELEVATIONS OF THE STORMWATER COLLECTION SYSTEM, INCLUDING THE POND GRADES, POND CONTROL STRUCTURE, & SWALES; ANY IMPROVEMENTS WITHIN THE FDOT & VOLUSIA COUNTY RIGHT-OF-WAYS. FINAL AS-BUILTS SHALL MEET REQUIREMENTS PER THE CITY OF ORANGE CITY'S LAND DEVELOPMENT CODE. REFER TO SECTION 804-D "INSPECTION AND CERTIFICATION". NO ENGINEER'S CERTIFICATIONS OF COMPLETION OR REQUESTS FOR FINAL ACCEPTANCE WILL BE SUBMITTED UNTIL THIS INFORMATION HAS BEEN RECEIVED AND APPROVED BY THE OWNER'S ENGINEER.
13. THE CONTRACTOR SHALL RESTORE OFF-SITE CONSTRUCTION AREAS TO EQUAL AND/OR BETTER CONDITION THAN EXISTING PRIOR TO START OF CONSTRUCTION.
14. THE CONTRACTOR SHALL COMPLY WITH THE LEGAL LOAD RESTRICTIONS IN HAULING OF MATERIALS IN PUBLIC ROADS BEYOND THE LIMITS OF WORK. A SPECIAL PERMIT WILL NOT RELIEVE THE CONTRACTOR OF LIABILITY FOR THE DAMAGE WHICH MAY RESULT FROM THE MOVING OF MATERIAL AND EQUIPMENT.
15. SURVEY MONUMENTS OR BENCHMARKS, WHICH HAVE TO BE DISTURBED BY THIS WORK, SHALL BE REPLACED UPON COMPLETION OF WORK BY A A LICENSED LAND SURVEYOR CURRENTLY REGISTERED IN THE STATE OF FLORIDA.
16. CONTRACTOR SHALL TRIM, TACK AND MATCH EXISTING PAVEMENT AT LOCATIONS WHERE NEW PAVEMENT MEETS EXISTING PAVEMENT.
17. CURBING SHALL BE PLACED AT THE EDGES OF ALL PAVEMENT, UNLESS OTHERWISE NOTED. REFER TO THE THE LATEST EDITION OF F.D.O.T. "DESIGN STANDARDS FOR DESIGN, CONSTRUCTION, MAINTENANCE, AND UTILITY OPERATIONS ON THE STATE HIGHWAY SYSTEM" FOR DETAILS AND SPECIFICATIONS OF ALL CURB AND GUTTERS CALLED FOR IN THESE PLANS WITHIN PUBLIC RIGHTS OF WAY.
18. CONTRACTOR IS TO ADJUST ANY UTILITY ELEMENT MEANT TO BE FLUSH WITH GRADE (CLEAN OUT MANHOLES, CATCH BASINS, INLETS, ETC.) THAT IS AFFECTED BY SITE WORK OR GRADE CHANGES, WHETHER SPECIFICALLY NOTED ON PLANS OR NOT.
19. CONTRACTOR TO COORDINATE ABANDONMENT OF EXISTING MONITORING WELLS AND REMEDIATION SYSTEM WITH A LICENSED WELL DRILLER. AS SITE WORK ADVANCES, CONTRACTOR TO COORDINATE WITH THE NAVY AND FDEP FOR THE NEW MONITORING WELL LOCATIONS. MONITORING WELLS TO BE INSTALLED BY A LICENSED WELL DRILLER.

PAVING/GRADING TESTING AND INSPECTION

1. ALL PAVING SHALL BE PERFORMED IN ACCORDANCE WITH THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
2. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING APPLICABLE TESTING WITH THE SOILS ENGINEER. TESTS WILL BE REQUIRED PURSUANT WITH THE SOILS REPORT. UPON COMPLETION OF WORK THE SOILS ENGINEER WILL SUBMIT CERTIFICATIONS TO THE OWNER AND OWNER'S ENGINEER STATING THAT ALL REQUIREMENTS HAVE BEEN MET.
3. A QUALIFIED TESTING LABORATORY SHALL PERFORM ALL TESTING NECESSARY TO ASSURE COMPLIANCE OF THE IN-PLACE MATERIALS AS REQUIRED BY THESE PLANS AND GEOTECHNICAL REPORT, THE VARIOUS AGENCIES AND PERMIT CONDITIONS. SHOULD ANY RETESTING BE REQUIRED DUE TO THE FAILURE OF ANY TESTS TO MEET THESE REQUIREMENTS, THE CONTRACTOR WILL BEAR ALL COSTS OF SAID RETESTING.

TREES AND VEGETATION

1. THE CONTRACTOR IS TO MINIMIZE THE REMOVAL OF VEGETATION TO THE GREATEST EXTENT PRACTICAL.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF ALL LANDSCAPE BUFFERS AND RETENTION AND DETENTION FACILITIES UNTIL THE WORK HAS BEEN ACCEPTED BY THE OWNER. ALL DISTURBED AREAS SHALL BE RETURNED TO THEIR ORIGINAL CONDITION.

PAVEMENT MARKING AND SIGNAGE

1. THE INSTALLATION, SHAPE, AND SIZE OF ALL SIGNS AND THEIR LETTERING SHALL COMPLY WITH THE LATEST EDITIONS OF THE U.S. DEPARTMENT OF TRANSPORTATION "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) AND THE F.D.O.T. "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" AND THE F.D.O.T. "DESIGN STANDARDS FOR DESIGN, CONSTRUCTION, MAINTENANCE, AND UTILITY OPERATIONS ON THE STATE HIGHWAY SYSTEM". WHERE CONFLICTS EXIST BETWEEN THE PLANS AND THE ABOVE MENTIONED SPECIFICATIONS, THE MORE STRINGENT CRITERIA SHALL PREVAIL.

SAFETY

1. ALL SUBSURFACE CONSTRUCTION SHALL COMPLY WITH THE "TRENCH SAFETY ACT". THE CONTRACTOR SHALL INSURE THAT THE METHOD OF TRENCH PROTECTION AND CONSTRUCTION IS IN COMPLIANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) REGULATIONS. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO COMPLY AND ENFORCE ALL APPLICABLE SAFETY REGULATIONS. THE ABOVE INFORMATION HAS BEEN PROVIDED FOR THE CONTRACTOR'S INFORMATION ONLY AND DOES NOT IMPLY THAT THE OWNER OR ENGINEER WILL INSPECT AND/OR ENFORCE SAFETY REGULATIONS.
2. DURING THE CONSTRUCTION AND/OR MAINTENANCE OF THIS PROJECT, ALL SAFETY REGULATIONS ARE TO BE ENFORCED. THE CONTRACTOR OR HIS REPRESENTATIVE SHALL BE RESPONSIBLE FOR THE CONTROL AND SAFETY OF THE TRAVELING PUBLIC AND THE SAFETY OF HIS/HER PERSONNEL. LABOR SAFETY REGULATIONS SHALL CONFORM TO THE PROVISIONS SET FORTH BY OSHA IN THE FEDERAL REGISTER OF THE DEPARTMENT OF TRANSPORTATION. THE MINIMUM STANDARDS AS SET FORTH IN THE CURRENT EDITION OF "THE STATE OF FLORIDA, MANUAL ON TRAFFIC CONTROL AND SAFE PRACTICES FOR STREET AND HIGHWAY CONSTRUCTION, MAINTENANCE AND UTILITY OPERATIONS" SHALL BE FOLLOWED IN THE DESIGN, APPLICATION, INSTALLATION, MAINTENANCE AND REMOVAL OF ALL TRAFFIC CONTROL DEVICES, WARNING DEVICES AND BARRIERS NECESSARY TO PROTECT THE PUBLIC AND CONSTRUCTION PERSONNEL FROM HAZARDS WITHIN THE PROJECT LIMITS. CONTRACTOR SHALL PROVIDE FOR THE SAFETY AND CONTROL OF LOCAL TRAFFIC DURING CONSTRUCTION. ADDITIONAL INFORMATION MAY BE REQUIRED IF LANE CLOSURE DURATIONS ARE LONGER THAN DAYTIME OPERATIONS.

STORM DRAINAGE SYSTEM

1. THE LATEST EDITION OF F.D.O.T. "DESIGN STANDARDS FOR DESIGN, CONSTRUCTION, MAINTENANCE, AND UTILITY OPERATIONS ON THE STATE HIGHWAY SYSTEM" IS REFERRED TO FOR THE STRUCTURAL DESIGN OF DRAINAGE STRUCTURES SPECIFIED IN THESE PLANS, AS REFERENCED BY STANDARD INDEX. ALL SPECIALTY DRAINAGE STRUCTURES REQUIRE SEPARATE STRUCTURAL DESIGN, WHICH IS NOT INCLUDED IN THESE PLANS. STATION OFFSETS ARE TO THE CENTERLINE OF THE STRUCTURE TOP (I.E. DITCH BOTTOM INLET OR CURB INLET TOP), AS OPPOSED TO THE STRUCTURE BASE.
2. ALL STORM SEWER PIPE SHALL BE REAINFORCED CONCRETE CLASS III (ASTM C-76) UNLESS OTHERWISE NOTED ON PLANS. ALL DRAINAGE STRUCTURES SHALL BE IN ACCORDANCE WITH F.D.O.T. ROADWAY AND TRAFFIC DESIGN STANDARDS UNLESS OTHERWISE NOTED ON PLANS.
3. PIPE LENGTHS SHOWN ARE APPROXIMATE AND TO CENTER OF DRAINAGE STRUCTURES, WITH THE EXCEPTION OF MITERED END AND FLARED END SECTIONS. LENGTHS OF PIPE SHOWN WHICH TERMINATE WITH MITERED END OR FLARED END SECTIONS ARE MEASURED TO THE DOWNSTREAM INVERT OF THE MITERED END OR FLARED END SECTION.
4. ALL DRAINAGE STRUCTURE GRATES AND COVERS IN PAVED AREAS, EITHER EXISTING OR PROPOSED SHALL BE TRAFFIC RATED FOR H-20 LOADINGS.
5. CONSTRUCTION OF THE STORM WATER MANAGEMENT SYSTEM MUST BE COMPLETE AND ALL DISTURBED AREAS STABILIZED IN ACCORDANCE WITH THE PERMITTED PLANS AND CONDITIONS PRIOR TO ANY OF THE FOLLOWING: ISSUANCE OF THE FIRST CERTIFICATE OF OCCUPANCY; INITIATION OF INTENDED USE OF THE INFRASTRUCTURE; OR TRANSFER OF RESPONSIBILITY FOR MAINTENANCE OF THE SYSTEM TO A LOCAL GOVERNMENT OR OTHER RESPONSIBLE ENTITY.
6. STORM WATER PIPES, STRUCTURES, MINIMUM COVER, AND INSTALLATION PROCEDURES TO BE IN ACCORDANCE WITH THE CITY OF PALM BAY CODE.
7. DURING CONSTRUCTION, NO DIRECT DISCHARGE OF WATER TO DOWNSTREAM RECEIVING WATERS WILL BE ALLOWED. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING WATER QUALITY AND SHALL ROUTE DISCHARGE WATER IN SUCH A MANNER AS TO ADEQUATELY REMOVE SILT PRIOR TO RUNOFF FROM THE SITE.

EARTHWORK / GRADING / DEMUCKING PROCEDURES

1. A GEOTECHNICAL ENGINEERING INVESTIGATION REPORT HAS BEEN PREPARED FOR PURPOSES OF STORM WATER DESIGN, OF WHICH COPIES ARE AVAILABLE THROUGH THE OWNER OR THEIR SOIL TESTING COMPANY. A GEOTECHNICAL ENGINEER SHALL BE RETAINED BY THE CONTRACTOR TO PROVIDE ON-SITE INSPECTIONS DURING EXCAVATION/FILL OPERATIONS AND TESTING OF THE COMPACTED FILL SO THAT PROPER DOCUMENTATION OF THE REQUIRED COMPACTING CRITERIA CAN BE PROVIDED.
2. ALL EXISTING DEBRIS (ABOVE OR BELOW GROUND), CONSTRUCTION DEBRIS AND OTHER WASTE MATERIAL SHALL BE DISPOSED OF OFF-SITE BY THE CONTRACTOR, IN ACCORDANCE WITH APPLICABLE REGULATORY AGENCY REQUIREMENTS IN A LEGAL MANNER.
3. UNLESS OTHERWISE NOTED, GRADE TO MEET EXISTING ELEVATION AT PROPERTY LINES. FINAL GRADES SHOWN INCLUDE SOD HEIGHT. PROPOSED SPOT ELEVATIONS REPRESENT FINISHED PAVEMENT OR GROUND SURFACE GRADES, UNLESS OTHERWISE NOTED. IT MAY BE NECESSARY TO FIELD ADJUST PAVEMENT ELEVATIONS TO PRESERVE THE ROOT SYSTEMS OF TREES SHOWN TO BE SAVED. CONTRACTOR TO COORDINATE WITH OWNER'S ENGINEER PRIOR TO ANY ELEVATION CHANGES. ALL AREAS SHALL BE GRADED TO DRAIN AWAY FROM THE BUILDINGS.
4. ALL DELETERIOUS SUBSURFACE MATERIAL (I.E. MUCK, PEAT, BURIED DEBRIS) IS TO BE EXCAVATED AND REPLACED WITH SUITABLE/COMPACTED SOILS, AS DIRECTED BY THE OWNER OR THEIR SOILS TESTING COMPANY. DELETERIOUS MATERIAL IS TO BE STOCKPILED OR REMOVED FROM THE SITE AS DIRECTED BY THE OWNER. EXCAVATED AREAS ARE TO BE BACKFILLED WITH APPROVED MATERIALS AND COMPACTED AS SHOWN ON THESE PLANS. CONTRACTOR IS RESPONSIBLE FOR ACQUIRING ANY PERMITS THAT ARE NECESSARY FOR REMOVING DELETERIOUS MATERIAL FROM THE SITE.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXCAVATIONS AGAINST COLLAPSE AND WILL PROVIDE BRACING, SHEETING OR SHORING AS NECESSARY. DEWATERING METHODS SHALL BE USED AS REQUIRED TO KEEP TRENCHES DRY WHILE PIPE AND APPURTENANCES ARE BEING PLACED.
6. ALL NECESSARY FILL AND EMBANKMENT THAT IS PLACED DURING CONSTRUCTION SHALL CONSIST OF MATERIAL SPECIFIED BY THE OWNER'S SOILS TESTING COMPANY OR ENGINEER AND BE PLACED AND COMPACTED ACCORDING TO THESE PLANS.
7. THE CONTRACTOR SHALL INSURE THAT PROPER SOIL DENSITIES ARE ACHIEVED FOR PLACEMENT OF ALL HEADWALL/ENDWALL FOOTINGS, RETAINING WALL FOOTINGS, AND IN GENERAL, ANY FOOTING SUPPORT DESCRIBED ON THESE PLANS. IT WILL ALSO BE THE RESPONSIBILITY OF THE CONTRACTOR TO INSURE THAT SUFFICIENT SOILS TESTING HAS BEEN PERFORMED PRIOR TO FINAL INSTALLATION OF IMPROVEMENTS.
8. ANY UNSUITABLE ORGANIC SOIL SHALL BE EXCAVATED TO A MINIMUM MARGIN OF 6 FEET BEYOND ITS PERIPHERY EXCAVATED TO EXPOSE THE UNDERLYING NON-ORGANIC FINE SAND.
9. IF DETERMINED NECESSARY, DEWATERING DURING EXCAVATING/BACKFILLING OPERATIONS MAY BE ACCOMPLISHED BY DITCHING AND THE USE OF SUMP PUMPS AND/OR OTHER METHODS (WELL POINTS), AS NECESSARY. CONTRACTOR TO OBTAIN ALL REQUIRED PERMITS FOR DEWATERING ACTIVITIES THAT MAY BE REQUIRED.
10. UPON APPROVAL OF THE GEOTECHNICAL ENGINEER, THE EXCAVATED AREAS MAY BE BACKFILLED WITH CLEAN FINE SAND FREE OF UNSUITABLE OR DELETERIOUS MATERIAL. HOWEVER, THE FILL SHOULD NOT BE PLACED IN MORE THAN 6 INCHES OF STANDING WATER. ONCE THE FILL IS AT LEAST 2 FEET ABOVE THE DEWATERED LEVEL, BACKFILLING MAY PROCEED AS DIRECTED BY THE GEOTECHNICAL ENGINEER.

DEMOLITION

1. CONTRACTOR SHALL SUBMIT DEMOLITION SCHEDULE TO OWNER PRIOR TO PROCEEDING WITH DEMOLITION ACTIVITIES.
2. EXTENT OF SITE CLEARING IS SHOWN ON DRAWINGS.
3. CONTRACTOR SHALL CONDUCT SITE DEMOLITION OPERATIONS TO ENSURE MINIMUM INTERFERENCE WITH ROADS, STREETS, WALKS, AND OTHER ADJACENT OCCUPIED OR USED FACILITIES. DO NOT CLOSE OR OBSTRUCT STREETS, WALKS OR OTHER OCCUPIED OR USED FACILITIES WITHOUT PERMISSION FROM AUTHORITIES HAVING JURISDICTION.
4. CONTRACTOR SHALL PROVIDE PROTECTION NECESSARY TO PREVENT DAMAGE TO EXISTING IMPROVEMENTS INDICATED ON PLAN "EXISTING TO REMAIN".
5. CONTRACTOR SHALL RESTORE DAMAGED IMPROVEMENTS TO THEIR ORIGINAL CONDITION, AS ACCEPTABLE TO PARTIES HAVING JURISDICTION.
6. CONTRACTOR SHALL REMOVE WASTE MATERIALS AND UNSUITABLE AND EXCESS TOPSOIL FROM PROPERTY AND DISPOSE OF OFF-SITE IN A LEGAL MANNER.
7. CONTRACTOR SHALL DEMOLISH AND COMPLETELY REMOVE FROM SITE MATERIAL INDICATED ON PLAN OR NOTES "TO BE REMOVED".
8. CONTRACTOR SHALL PROTECT STRUCTURES, UTILITIES, SIDEWALKS, PAVEMENTS, AND OTHER FACILITIES FROM DAMAGE CAUSED BY SETTLEMENT, LATERAL MOVEMENT, UNDERMINING, WASHOUT AND OTHER HAZARDS CREATED BY THE DEMOLITION OPERATION.

TEST, INSPECTION AND CLOSEOUT REQUIREMENTS

1. ALL GRAVITY SEWER PIPING SHALL BE SUBJECT TO A VISUAL INSPECTION BY THE OWNER'S ENGINEER AND APPLICABLE MUNICIPALITY/AGENCY. THE CONTRACTOR SHALL NOTIFY THE ENGINEER 48 HOURS IN ADVANCE TO SCHEDULE INSPECTION(S). THE CONTRACTOR SHALL BE RESPONSIBLE FOR COSTS ASSOCIATED WITH A TELEVISED INSPECTION (TV) OF THE PROPOSED GRAVITY SEWER LINE CONSTRUCTION. TV INSPECTION SHALL BE IN ACCORDANCE WITH CITY OF PALM BAY UTILITIES STANDARDS AND SPECIFICATIONS MANUAL. THE CONTRACTOR SHALL PROVIDE COPIES OF THE TV INSPECTION TAPE TO THE ENGINEER, THE OWNER AND THE APPLICABLE MUNICIPALITY/AGENCY.
2. THE CONTRACTOR SHALL PERFORM LEAKAGE TESTS ON ALL GRAVITY SEWERS PER CITY OF PALM BAY UTILITIES STANDARDS.
3. AN AS-BUILT SURVEY SHALL BE PREPARED IN ACCORDANCE WITH CHAPTER 5J-17, FLORIDA ADMINISTRATIVE CODE (F.A.C.), PURSAUNT TO CHAPTER 472, FLORIDA STATUTES (F.S.) SHALL BE REQUIRED.
4. THE CONTRACTOR SHALL PROVIDE UTILITY AS-BUILT AND GRADING/DRAINAGE AS-BUILT RECORD DRAWINGS BASED ON THE CIVIL DESIGN PLAN SHEETS. ALL AS-BUILTS SHALL BE OVERLAID ON THE CIVIL DESIGN PLANS WITH THE DESIGN SHADED BACK AND THE AS-BUILT BOLD. THE AS-BUILTS SHALL BE SIGNED AND SEALED BY A REGISTERED LAND SURVEYOR.
5. UPON COMPLETION OF CONSTRUCTION, THE CONTRACTOR MUST SUBMIT TO THE CITY SIGNED AND SEALED RECORD DRAWINGS ACCOMPANIED BY AN ELECTRONIC TRANSFER FILE WITH PDF AND ACAD FILES OF THE SIGNED AND SEALED RECORD DRAWINGS AS WELL AS AN EXCEL SPREADSHEET SHOWING THE COLLECTED X, Y, AND Z COORDINATES OF ASSETS. RECORD DRAWINGS SHALL COMPLY WITH THE CITY OF ORANGE CITY UTILITIES STANDARDS HANDBOOK INCLUDING THE FITTINGS TO BE UTILIZED AT UTILITY CONFLICTS THAT ARE NOT IDENTIFIED ON THE PLAN & PROFILE SHEETS.
6. THE GRADING/DRAINAGE AS-BUILT SHALL INCLUDE ALL CONSTRUCTED IMPROVEMENTS THAT HAVE LOCATION AND/OR ELEVATION INFORMATION CALLED-OUT ON THE PLANS. THE AS-BUILT SHALL CLEARLY PROVIDE THE SAME INFORMATION IDENTIFIED ON THE DESIGN DOCUMENTS AND ALSO THE CONSTRUCTED LOCATIONS AND ELEVATIONS AS-BUILT INFORMATION.
7. THE CONTRACTOR SHALL PROVIDE A SIGNED AND SEALED LETTER FROM THE INDEPENDENT TESTING AGENCY THAT STATES CONFORMANCE WITH THE CONTRACT DOCUMENT REQUIREMENTS FOR COMPACTION TESTING. THE CONTRACTOR IS TO PROMPTLY NOTIFY THE OWNER AND ENGINEER OF RECORD WHEN ANY TESTING OR INSPECTIONS ARE DEFICIENT OR IRREGULAR.

No.	REVISIONS	DATE	BY

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KHA PROJECT
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DATE
8/21/2025
SCALE AS SHOWN
DESIGNED BY BMG
DRAWN BY BMG
CHECKED BY DER

GENERAL NOTES

7-11 PALM BAY

CITY OF PALM BAY FLORIDA

SHEET NUMBER
C1.0

PAVING, GRADING AND DRAINAGE

1. ALL PAVING SHALL BE PERFORMED IN ACCORDANCE WITH THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.

2. ALL DELETERIOUS SUBSURFACE MATERIAL (I.E. MUCK, PEAT, BURIED DEBRIS, ETC.) IS TO BE EXCAVATED AND REPLACED WITH SUITABLE/COMPACTED SOILS, AS DIRECTED BY THE GEOTECHNICAL ENGINEER OF RECORD OR THE OWNERS ENGINEERS. DELETERIOUS MATERIAL IS TO BE STOCKPILED OR REMOVED FROM THE SITE AS DIRECTED BY THE OWNER OR OWNER'S ENGINEER. EXCAVATED AREAS ARE TO BE BACKFILLED WITH APPROVED MATERIALS AND COMPACTED AS SHOWN ON THESE PLANS AND PER THE GEOTECHNICAL REPORT. CONTRACTOR IS RESPONSIBLE FOR ACQUIRING ANY PERMITS THAT ARE NECESSARY FOR REMOVING DELETERIOUS MATERIAL FROM THE SITE.

3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXCAVATIONS AGAINST COLLAPSE AND WILL PROVIDE BRACING, SHEETING OR SHORING AS NECESSARY. DEWATERING METHODS SHALL BE USED AS REQUIRED TO KEEP TRENCHES DRY WHILE PIPE AND APPURTENANCES ARE BEING PLACED.

4. ALL NECESSARY FILL AND EMBANKMENT THAT IS PLACED DURING CONSTRUCTION SHALL CONSIST OF MATERIAL SPECIFIED BY THE OWNER'S SOILS TESTING COMPANY OR ENGINEER AND BE PLACED AND COMPACTED ACCORDING TO THESE PLANS.

5. PROPOSED SPOT ELEVATIONS REPRESENT FINISHED PAVEMENT OR GROUND SURFACE GRADES, UNLESS OTHERWISE NOTED.

6. IT MAY BE NECESSARY TO FIELD ADJUST PAVEMENT ELEVATIONS TO PRESERVE THE ROOT SYSTEMS OF TREES SHOWN TO BE SAVED. CONTRACTOR TO COORDINATE WITH OWNER'S ENGINEER PRIOR TO ANY ELEVATION CHANGES.

7. CONTRACTOR SHALL TRIM, TACK AND MATCH EXISTING PAVEMENT AT LOCATIONS WHERE NEW PAVEMENT MEETS EXISTING PAVEMENT.

8. CURBING SHALL BE PLACED AT THE EDGES OF ALL PAVEMENT, UNLESS OTHERWISE NOTED. REFER TO THE 2023/2024 EDITION OF F.D.O.T. "STANDARD PLANS FOR ROADWAY CONSTRUCTION" FOR DETAILS AND SPECIFICATIONS OF ALL F.D.O.T. TYPE CURB AND GUTTERS CALLED FOR IN THESE PLANS.

9. PRIOR TO CONSTRUCTING CONCRETE PAVEMENT, THE CONTRACTOR IS TO SUBMIT A PROPOSED JOINTING PATTERN TO THE SOILS ENGINEER FOR APPROVAL.

10. CONTRACTOR TO PROVIDE A 1/2" TO 1" BITUMINOUS EXPANSION JOINT MATERIAL WITH SEALER AT ABUTMENT OF CONCRETE AND OTHER MATERIALS (STRUCTURES, OTHER POURED)

11. ALL PAVEMENT MARKINGS SHALL BE MADE IN ACCORDANCE WITH THE 2023/2024 EDITION OF F.D.O.T. "STANDARD PLANS FOR ROADWAY CONSTRUCTION".

12. THE CONTRACTOR WILL STABILIZE BY SEED AND MULCH, SOD, OR OTHER APPROVED MATERIALS ANY DISTURBED AREAS WITHIN ONE WEEK FOLLOWING CONSTRUCTION OF THE UTILITY SYSTEMS AND PAVEMENT AREAS. CONTRACTOR SHALL MAINTAIN SUCH AREAS UNTIL FINAL ACCEPTANCE BY OWNER. CONTRACTOR TO COORDINATE WITH OWNER REGARDING TYPE OF MATERIAL, LANDSCAPING AND IRRIGATION REQUIREMENTS.

13. THE CONTRACTOR SHALL RESTORE OFF-SITE CONSTRUCTION AREAS TO EQUAL AND/OR BETTER CONDITION THAN EXISTING PRIOR TO START OF CONSTRUCTION.

14. UNLESS OTHERWISE NOTED, GRADE TO MEET EXISTING ELEVATION AT PROPERTY LINES.

15. SURVEY MONUMENTS OR BENCHMARKS, WHICH HAVE TO BE DISTURBED BY THIS WORK, SHALL BE REPLACED UPON COMPLETION OF WORK BY A REGISTERED LAND SURVEYOR AT CONTRACTORS EXPENSE.

16. FINAL GRADES SHOWN INCLUDE SOD HEIGHT. ALL AREAS SHALL BE GRADED TO DRAIN AWAY FROM THE BUILDINGS.

17. ALL WORK TO BE PERFORMED IN ACCORDANCE WITH ALL LOCAL, STATE AND JURISDICTIONAL PERMITTING AGENCIES.

18. CONTRACTOR IS TO ADJUST ANY UTILITY ELEMENT MEANT TO BE FLUSH WITH GRADE (CLEAN-OUTS, MANHOLES, CATCH BASINS, INLETS, ETC.) THAT IS AFFECTED BY SITE WORK OR GRADE CHANGES, WHETHER SPECIFICALLY NOTED ON PLANS OR NOT.

DRAINAGE SYSTEM TESTING AND INSPECTION

1. THE STORM DRAINAGE PIPING SYSTEM SHALL BE SUBJECT TO A VISUAL INSPECTION BY THE OWNER'S ENGINEER PRIOR TO THE PLACEMENT OF BACKFILL. CONTRACTOR TO NOTIFY THE ENGINEER 2 FULL BUSINESS DAYS IN ADVANCE TO SCHEDULE INSPECTION.

2. THE CONTRACTOR SHALL MAINTAIN AND PROTECT FROM MUD, DIRT, DEBRIS, ETC. THE STORM DRAINAGE SYSTEM UNTIL FINAL ACCEPTANCE OF THE PROJECT. THE STORM SYSTEM WILL BE REINSPECTED BY THE OWNER'S ENGINEER PRIOR TO APPROVAL FOR CERTIFICATE OF OCCUPANCY PURPOSES. THE CONTRACTOR MAY BE REQUIRED TO RECLEAN PIPES AND INLETS AT THE CONTRACTORS EXPENSE AND PRIOR TO FINAL ACCEPTANCE.

SANITARY SYSTEM

1. ALL PVC PIPE SHALL BE SOLID WALL POLYVINYL CHLORIDE PIPE AND COMPLY WITH ASTM D 3034 AND ALL APPLICABLE ASTM DOCUMENTS AS COVERED IN SECTION NO. 2 OF ASTM D 3034. MAIN LINES SHALL BE A MINIMUM OF 8" DIAMETER, AND LATERALS SHALL BE A MINIMUM 6" DIAMETER.

2. ALL GRAVITY SEWERS MUST BE SDR 35 PVC, EXCEPT FOR PIPE DEEPER THAN 14 FEET, IN WHICH CASE SDR 26 PIPE SHALL BE USED. ELASTOMERIC GASKET JOINTS SHALL BE UTILIZED FOR PVC PIPE, AND SHALL COMPLY WITH ASTM F477, ASTM D3034 & ASTM F679. JOINTS SHALL COMPLY WITH ASTM D3212.

3. ALL SLOPES FOR GRAVITY SEWER MAINS AND SERVICE CONNECTIONS SHALL COMPLY WITH THE FOLLOWING MINIMUM GRADES: 4" @ 2.00%; 6" @ 1.00% ; AND 8" @ 0.40%.

4. ALL SANITARY SEWER WORK SHALL CONFORM WITH APPLICABLE THE CITY OF PALM BAY UTILITY DEPARTMENT STANDARDS AND SPECIFICATIONS.

5. PRIOR TO COMMENCING WORK WHICH REQUIRES CONNECTING PROPOSED FACILITIES TO EXISTING LINES OR APPURTENANCES, THE CONTRACTOR SHALL VERIFY THE LOCATION AND ELEVATION(S) OF EXISTING CONNECTION POINT(S) AND NOTIFY THE OWNER'S ENGINEER OF ANY CONFLICTS OR DISCREPANCIES.

6. SANITARY SEWER MAINS SHALL HAVE SUITABLE MAGNETIC LOCATOR TAPE(S) BURIED AT LEAST 18 INCHES ABOVE THE MAIN LINES.

7. EXISTING MANHOLES SHALL BE COATED OR LINED AND NEW MANHOLES SHALL BE LINED TO RESIST CORROSION FROM A SANITARY SEWER ENVIRONMENT. COATINGS OR LINERS SHALL BE APPLIED IN STRICT ACCORDANCE WITH THE COATING OR LINER MANUFACTURER'S RECOMMENDATIONS.

SANITARY TESTING AND INSPECTION

1. ALL GRAVITY SEWER PIPING SHALL BE SUBJECT TO A VISUAL INSPECTION BY THE OWNER'S ENGINEER AND APPLICABLE MUNICIPALITY/AGENCY. THE CONTRACTOR SHALL NOTIFY THE ENGINEER 48 HOURS IN ADVANCE TO SCHEDULE INSPECTION(S). THE CONTRACTOR SHALL BE RESPONSIBLE FOR COSTS ASSOCIATED WITH A TELEVISED INSPECTION (TV) OF THE PROPOSED GRAVITY SEWER LINE CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE COPIES OF THE TV INSPECTION TAPE TO THE ENGINEER, THE OWNER AND THE CITY OF PALM BAY UTILITIES.

2. THE CONTRACTOR SHALL PERFORM AN INFILTRATION/EXFILTRATON TEST ON ALL GRAVITY SEWERS IN ACCORDANCE WITH THE CITY OF PALM BAY UTILITIES DEPARTMENT STANDARDS AND SPECIFICATIONS. SAID TESTS ARE TO BE CERTIFIED BY THE ENGINEER OF RECORD AND SUBMITTED TO THE THE CITY OF PALM BAY UTILITIES DEPARTMENT FOR APPROVAL. THE SCHEDULING, COORDINATION AND NOTIFICATION OF ALL PARTIES IS THE CONTRACTOR'S RESPONSIBILITY.

3. LEAKAGE TESTS ARE SPECIFIED REQUIRING THAT:
   A. THE LEAKAGE EXFILTRATION OR INFILTRATION DOES NOT EXCEED 200 GALLONS PER INCH OF PIPE DIAMETER PER MILE PER DAY FOR ANY SECTION OF THE SYSTEM.
   B. EXFILTRATION OR INFILTRATION TESTS BE PERFORMED WITH A MINIMUM POSITIVE HEAD OF 2 FEET
   C. AIR TESTS, AS A MINIMUM, CONFORM TO THE TEST PROCEDURE DESCRIBED IN ASTM C-828 FOR CLAY PIPE, ASTM C 924 FOR CONCRETE PIPE, ASTM F-1417 FOR PLASTIC PIPE, AND FOR OTHER MATERIALS APPROPRIATE TEST PROCEDURES.

4. CONTRACTOR TO PERFORM APPROPRIATE DEFLECTION TESTS FOR ALL FLEXIBLE PIPE. TESTING IS REQUIRED AFTER THE FINAL BACKFILL HAS BEEN IN PLACE AT LEAST 30 DAYS TO PERMIT STABILIZATION OF THE SOIL-PIPE SYSTEM. TESTING REQUIREMENTS SPECIFY:
   A. NO PIPE SHALL EXCEED A DEFLECTION OF 5%.
   B. USING A RIGID BALL OR MANDREL FOR THE DEFLECTION TEST WITH A DIAMETER NOT LESS THAN 95% OF THE BASE INSIDE DIAMETER OR AVERAGE INSIDE DIAMETER OF THE PIPE, DEPENDING ON WHICH IS SPECIFIED IN THE ASTM SPECIFICATION, INCLUDING THE APPENDIX, TO WHICH THE PIPE IS MANUFACTURED.
   C. PERFORMING THE TEST WITHOUT MECHANICAL PULLING DEVICES.

5. CONTRACTOR TO INSPECT & TEST MANHOLE FOR WATERTIGHTNESS OR DAMAGE PRIOR TO PLACING INTO SERVICE. AIR TESTING, IF SPECIFIED FOR CONCRETE SEWER MANHOLES, SHALL CONFORM TO THE TEST PROCEDURES DESCRIBED IN ASTM C-1244.

POTABLE WATER SYSTEM

1. ALL DIP PIPE SHALL BE CLASS 50 OR HIGHER. REFER TO NOTE #4 BELOW FOR ADDITIONAL DIP SPECIFICATIONS. ADEQUATE MEASURES AGAINST CORROSION SHALL BE UTILIZED.

2. ALL WATER MAIN PIPE FITTINGS AND APPURTENANCES SHALL BE INSTALLED TO COMPLY WITH THE CITY OF PALM BAY UTILITY STANDARDS AND SPECIFICATIONS.

3. ALL WATER SERVICE LINES, VALVES AND METERS SHALL BE INSTALLED TO COMPLY WITH THE CITY OF PALM BAY UTILITY STANDARDS AND SPECIFICATIONS.

4. ALL DUCTILE IRON PIPE, 4" TO 24", SHALL BE MANUFACTURED IN ACCORDANCE WITH THE LATEST EDITION OF AWWA C151/A21.51. PIPE SHALL BE FURNISHED IN 18 OR 20 FOOT SECTIONS, PIPE THICKNESS SHALL BE CLASS 50, UNLESS OTHERWISE SPECIFIED.

5. ALL WATER SYSTEM CONSTRUCTION, UP TO AND INCLUDING POINT OF METERING AND BACK FLOW PREVENTION (IF REQUIRED), SHALL BE BUILT ACCORDING TO THE CITY OF PALM BAY UTILITY STANDARDS AND SPECIFICATIONS.

6. CONTRACTOR TO INSTALL TEMPORARY BLOWOFFS, AT THE END(S) OF PROPOSED WATER MAINS AND SERVICE LATERALS TO BUILDING(S), TO ASSURE ADEQUATE FLUSHING AND DISINFECTION/CHLORINATION.

7. ALL WATER MAINS SHALL BE STERILIZED IN ACCORDANCE WITH THE APPLICABLE SECTION OF THE LATEST AWWA SPECIFICATION C651 AND THE CITY OF PALM BAY UTILITY DEPARTMENT SPECIFICATIONS.

8. ALL PVC WATER MAIN, 4" TO 8" DIAMETER PIPING, SHALL CONFORM TO ASTM D2241 AND ASTM 1784. PIPE SHALL BE AWWA C-900 DR-18. JOINTS SHALL BE RUBBER GASKETED PUSH-ON CONFORMING TO ASTM D1869.

9. POTABLE WATER MAINS WILL BE PVC SDR 21 (200 PSI) FOR PIPES LESS THEN 4". SCHEDULE 40 AND SCHEDULE 80 PIPING MATERIAL ARE ALSO ACCEPTABLE FOR PIPES SIZES LESS THAN 4". THE ABOVE TYPE INSTALLATIONS MUST BEAR THE "NFS" STAMP FOR COMPATIBILITY WITH POTABLE WATER USE.

10. ALL POLYVINYL CHLORIDE PIPE SHALL BE LAID WITH AN INSULATED 12 GAUGE A.W.G. SOLID STRAND COPPER WIRE WOUND AROUND THE PIPE FORMING ONE COMPLETE SPIRAL PER JOINT OF PIPE. THIS WIRE IS TO BE CONTINUOUS WITH SPLICES MADE ONLY BY METHODS APPROVED BY THE ENGINEER. THIS WIRE IS TO BE SECURED TO ALL VALVES, TEES AND ELBOWS.

11. ALL POTABLE WATER WORK SHALL CONFORM WITH APPLICABLE THE CITY OF PALM BAY UTILITY DEPARTMENT STANDARDS AND SPECIFICATIONS.

POTABLE WATER TESTING AND INSPECTION

1. ALL COMPONENTS OF THE WATER SYSTEM, INCLUDING FITTINGS, HYDRANTS, CONNECTIONS, AND VALVES SHALL REMAIN UNCOVERED UNTIL PROPERLY PRESSURE TESTED AND ACCEPTED BY THE OWNER'S ENGINEER. PRESSURE TESTS TO BE IN ACCORDANCE WITH THE CITY OF PALM BAY UTILITY DEPARTMENT SPECIFICATIONS. CONTRACTOR TO NOTIFY THE OWNER'S ENGINEER AND APPLICABLE AGENCY INSPECTORS 2 FULL BUSINESS DAYS IN ADVANCE OF PERFORMING TESTS.

2. CONTRACTOR TO PERFORM CHLORINATION AND BACTERIOLOGICAL SAMPLING, AND OBTAIN CLEARANCE OF DOMESTIC AND FIRE LINE WATER SYSTEM(S). COPIES OF ALL BACTERIOLOGICAL TEST RESULTS ARE TO BE SUBMITTED TO THE OWNER'S ENGINEER FOR CERTIFICATION PURPOSES.

3. ALL WATER MAINS SHALL BE PRESSURE TESTED IN ACCORDANCE WITH AWWA MANUAL M23, CONCERNING HYDROSTATIC TESTING OF PVC PIPING. OFF-SITE UTILITIES HYDROSTATIC TESTING TO BE WITNESSED BY THE CITY OF PALM BAY UTILITY DEPARTMENT INSPECTOR.

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FLORIDA LICENSE NUMBER
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DATE: 8/21/2025

KHA PROJECT
249188006
DATE
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SCALE AS SHOWN
DESIGNED BY BMG
DRAWN BY BMG
CHECKED BY DER

GENERAL NOTES

7-11 PALM BAY

CITY OF PALM BAY FLORIDA

SHEET NUMBER
C1.1

STORMWATER POLLUTION PREVENTION PLAN

SITE DESCRIPTION

PROJECT NAME AND LOCATION

7-11 PALM BAY
PARCEL ID #: 28-36-20-00-750
CITY OF PALM BAY, FLORIDA

*SEE COVER SHEET FOR LOCATION MAP

DEVELOPER NAME AND ADDRESS

BLACKFIN PARTNERS INVESTMENTS, INC.
4440 PGA BOULEVARD, SUITE 600
PALM BEACH GARDENS, FL 33410
CONTACT: SETH SWISHER
PHONE: (727) 259-5729
EMAIL: SSWISHER@BLACKFINPARTNERS.COM

PROJECT DESCRIPTION

THE PROPOSED PROJECT WILL CONSIST OF DEVELOPING A VACANT SITE WITH A 4,853 SF CONVENIENCE STORE, 6 FUELING STATIONS, CAR WASH AND ASSOCIATED INFRASTRUCTURE.

PROJECT AREA: 2.00 ACRES
CONTRIBUTING DRAINAGE AREA: 2.21 ACRES

LONGITUDE : W 80° 44' 14.80" LATITUDE: N 28° 01' 54.00"

ULTIMATE RECEIVING WATERS: MELBOURNE TILLMAN WATER CONTROL DISTRICT (MTWCD) CANAL 57

ACTIVITIES THAT REQUIRE EROSION CONTROL

PROVIDING A STABILIZED CONSTRUCTION ENTRANCE, PERIMETER, AND OTHER EROSION AND SEDIMENT CONTROLS; EXCAVATION FOR THE RETENTION POND; SITE GRADING; INSTALLATION OF STORM WATER, SANITARY SEWER, AND WATER STRUCTURES; CURB, ROADWAYS, AND PARKING FACILITIES.

*SEE PLANS FOR THE LOCATION OF TEMPORARY SEDIMENT BARRIERS AND OTHER EROSION CONTROL METHODS.

SOIL PARAMETERS

SOIL TYPES:

SERIES NAME	HYDROLOGIC GROUP
PINEDA SAND, 0-2% SLOPES	C/D

SEQUENCE OF MAJOR ACTIVITIES

THE ORDER OF CONSTRUCTION IS AS FOLLOWS:

1. PROVIDE STABILIZED CONSTRUCTION ENTRANCE
2. INSTALL SILT FENCES AND OTHER EROSION CONTROL METHODS
3. CLEAR SITE AND GRUB IN ACCORDANCE WITH DEMOLITION PLAN
4. CONSTRUCT EARTH DIKE AND SEDIMENT BASIN
5. FINISH CLEARING AND GRUBBING
6. REMOVE AND STORE TOPSOIL
7. PROVIDE INITIAL GRADING AS REQUIRED
8. STABILIZE ALL DISTURBED AREAS AS SOON AS POSSIBLE
9. INSTALL UTILITIES, STORM SEWER, CURB AND GUTTER
10. INSTALL BASE TO ROAD AND PARKING AREA
11. FINISH GRADING ENTIRE SITE
12. CONSTRUCT FINAL PAVING
13. REMOVE ACCUMULATED SEDIMENT
14. REMOVE ANY ITEMS THAT ARE NOT REQUIRED

TIMING OF CONTROL MEASURES

THE INSTALLATION OF SILT FENCE (AND OTHER EROSION CONTROL MEASURES), A STABILIZED ENTRANCE AND SEDIMENT BASIN SHALL OCCUR PRIOR TO CLEARING AND GRUBBING ACTIVITY. AFTER CONSTRUCTION IS COMPLETE, THE ACCUMULATED SEDIMENT SHALL BE REMOVED AND THE AREAS SHALL BE REGRADED AND PERMANENTLY STABILIZED AS SHOWN ON THE PLANS.

EROSION AND SEDIMENT CONTROLS

BEST MANAGEMENT PRACTICES SHALL BE USED FOR THIS PROJECT TO CONTROL EROSION AND TURBIDITY CAUSED BY STORM WATER RUN-OFF. THE LOCATION AND DETAILS OF EROSION CONTROL METHODS ARE SHOWN ON THE PLANS. THE CONTRACTOR IS RESPONSIBLE FOR PLACING AND MAINTAINING THESE CONTROL METHODS AS SHOWN ON THE PLANS OR AS REQUIRED. HE/SHE SHALL ALSO PROVIDE THE REQUIRED EROSION PROTECTION AS REQUIRED BY LOCAL, STATE AND FEDERAL LAW.

STORM WATER MANAGEMENT

STORMWATER COLLECTION SHALL BE PROVIDED BY DITCH BOTTOM INLETS. THE RUNOFF FROM THE SITE WILL DISCHARGE TO THE PROPOSED STORMWATER POND. THE POND IS DESIGNED IN ACCORDANCE WITH SJRWMD AND MTWCD SPECIFICATIONS AND CITY OF PALM BAY LAND DEVELOPMENT CODE.

STABILIZATION PRACTICES:

TEMPORARY STABILIZATION - TOPSOIL STOCK PILES AND DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY TEMPORARILY OR PERMANENTLY CEASE, SHALL BE STABILIZED WITH TEMPORARY SEED AND MULCH WITHIN 7 DAYS OF THE LAST CONSTRUCTION ACTIVITY IN THAT AREA. THE TEMPORARY SEED REQUIRED CAN BE FOUND IN TABLE 1.65 A OF THE FLORIDA DEVELOPMENT MANUAL. PRIOR TO SEEDING, WHERE SOILS ARE ACIDIC 2 TONS OF PULVERIZED AGRICULTURAL LIMESTONE SHOULD BE ADDED PER ACRE AND 450 POUNDS OF 10-20-20 FERTILIZER SHALL BE APPLIED TO EACH ACRE. AFTER SEEDING, EACH AREA SHALL BE IMMEDIATELY MULCHED WITH STRAW OR EQUIVALENT EQUAL. AREAS OF THE SITE WHICH ARE TO BE PAVED SHALL BE TEMPORARILY STABILIZED BY APPLYING GEOTEXTILE AND STONE SUB-BASE UNTIL BITUMINOUS PAVEMENT CAN BE APPLIED.

PERMANENT STABILIZATION - DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES PERMANENTLY CEASE SHALL BE STABILIZED WITH PERMANENT SEED NO LATER THAN 14 DAYS AFTER THE LAST CONSTRUCTION ACTIVITY. THE APPROPRIATE PERMANENT SEED MIX CAN BE FOUND IN TABLES 1.66A, 1.66B AND 1.66C OF THE FLORIDA DEVELOPMENT MANUAL. PRIOR TO SEEDING, 2 TONS/ACRE OF FINELY GROUND AGRICULTURAL LIMESTONE AND THE PROPER FERTILIZER BASED ON THE TYPE OF SEEDING SHALL BE APPLIED TO EACH ACRE TO PROVIDE PLANT NUTRIENTS. AFTER SEEDING, EACH AREA SHALL BE MULCHED IMMEDIATELY.

STRUCTURAL PRACTICES:

EARTH DIKE - IF REQUIRED, AN EARTH DIKE SHALL BE CONSTRUCTED ALONG THE SITE PERIMETER. A PORTION OF THE DIKE SHALL DIVERT RUN-ON AROUND THE CONSTRUCTION SITE. THE REMAINING PORTION OF THE DIKE SHALL COLLECT RUNOFF FROM THE DISTURBED AREA AND DIRECT THE RUNOFF TO THE SEDIMENT BASIN.

SEDIMENT BASIN - A SEDIMENT BASIN SHALL BE CONSTRUCTED IN THE COMMON DRAINAGE AREA FOR THE SITE. ALL SEDIMENT COLLECTED IN THE BASIN MUST BE REMOVED FROM THE BASIN UPON COMPLETION OF CONSTRUCTION. SEDIMENT FROM THE BASIN MAY BE USED AS FILL ON THE SITE IF IT IS SUITABLE SOIL.

WASTE DISPOSAL

WASTE MATERIALS - ALL WASTE MATERIALS SHALL BE COLLECTED AND STORED IN A METAL DUMPSTER WITH A SECURE LID IN ACCORDANCE WITH ALL LOCAL AND STATE LAWS. ALL TRASH AND CONSTRUCTION DEBRIS FROM THE SITE SHALL BE DEPOSITED IN THE DUMPSTER. THE SUPERINTENDENT SHALL COORDINATE WITH THE LOCAL UTILITIES TO HAVE THE DUMPSTER EMPTIED AT LEAST TWICE A WEEK AND THE WASTE TAKEN TO AN APPROPRIATE LANDFILL. NO CONSTRUCTION WASTE MATERIALS SHALL BE BURIED ON SITE. THE SUPERINTENDENT SHALL ORGANIZE TRAINING FOR THE EMPLOYEES IN THE PROPER PRACTICES WHEN DEALING WITH WASTE MATERIALS. THE SUPERINTENDENT SHALL BE RESPONSIBLE FOR POSTING AND ENFORCING WASTE MATERIAL PROCEDURES.

HAZARDOUS WASTE - HAZARDOUS WASTE MATERIALS SHALL BE DISPOSED OF IN ACCORDANCE WITH ALL LOCAL AND STATE LAWS OR AS DIRECTED BY THE MANUFACTURER. THE SUPERINTENDENT SHALL ORGANIZE THE PROPER TRAINING FOR EMPLOYEES IN THE PROPER PRACTICES WHEN DEALING WITH HAZARDOUS WASTE MATERIALS. THESE PROCEDURES SHALL BE POSTED ON THE SITE. THE PERSON WHO MANAGES THE SITE SHALL BE RESPONSIBLE FOR ENFORCING THE PROCEDURES.

SANITARY WASTE - SANITARY WASTE SHALL BE COLLECTED AND DISPOSED OF IN ACCORDANCE WITH ALL LOCAL AND STATE LAWS. THE SUPERINTENDENT SHALL COORDINATE WITH THE LOCAL UTILITY FOR COLLECTION OF THE SANITARY WASTE AT LEAST THREE TIMES A WEEK TO PREVENT SPILLAGE ONTO THE SITE.

OFF-SITE TRACKING

A STABILIZED CONSTRUCTION ENTRANCE SHALL BE PROVIDED TO REDUCE SEDIMENT TRACKING OFFSITE. THE MAJOR ROAD CONNECTED TO THE PROJECT SHALL BE CLEANED ONCE A DAY TO REMOVE ANY EXCESS MUD, DIRT OR ROCK RESULTING FROM CONSTRUCTION TRAFFIC. ALL TRUCKS HAULING MATERIALS OFFSITE SHALL BE COVERED WITH A TARPAULIN.

DUST & DEBRIS CONTROL

THE CONTRACTOR SHALL BE RESPONSIBLE FOR DUST CONTROL WITHIN THE CONSTRUCTION LIMITS AS WELL AS ALONG HAUL ROUTES AND ROADWAYS USED BY THE EQUIPMENT AND VEHICLES. THE CONTRACTOR SHALL ENSURE THAT EXCESSIVE DUST IS NOT TRANSPORTED BEYOND THE LIMITS OF CONSTRUCTION IN POPULATED AREAS. THE CONTRACTOR MAY CONTROL DUST FOR EMBANKMENTS OR OTHER CLEARED OR UNSURFACED AREAS BY APPLYING WATER. INSTALL MULCH, SEED, SOD, OR TEMPORARY PAVING AS EARLY AS PRACTICAL. CONTROL DUST DURING STORAGE AND HANDLING OF DUSTY MATERIALS BY WETTING, COVERING, OR OTHER MEANS AS APPROVED BY THE ENGINEER. CONTRACTOR SHALL ENFORCE REDUCED VEHICLE SPEEDS ON UNPAVED ROADS AND IF NECESSARY PROHIBIT CONSTRUCTION GRADING WHEN WIND GUSTS EXCEED 25 MPH, OR OTHERWISE DIRECTED BY E.O.R. OR COUNTY INSPECTOR.

ITEMS REQUIRING POLLUTION PREVENTION

THE FOLLOWING ITEMS ARE EXPECTED TO BE PRESENT ON THE PROJECT SITE:

-ASPHALT
-CONCRETE
-FERTILIZERS
-METAL PIECES
-PETROLEUM BASED PRODUCTS
-TAR
-CLEANING SUPPLIES
-DETERGENTS
-MASONARY BLOCK/BRICKS
-PAINT
-WOOD

THE FOLLOWING ARE NON-STORM WATER SOURCES THAT WILL BE ENCOUNTERED AT THE SITE AND SHOULD BE DIRECTED TO THE SEDIMENT BASIN PRIOR TO DISCHARGE:

-UNCONTAMINATED GROUNDWATER EXPOSED DURING EXCAVATION
-WATER FROM WATER LINE FLUSHING
-PAVEMENT WASH WATERS (WHERE NO SPILLS OR LEAKS OF TOXIC OR HAZARDOUS MATERIALS HAVE OCCURRED).

SPILL PREVENTION AND CONTROL

THE FOLLOWING ARE THE MATERIAL MANAGEMENT PRACTICES THAT WILL BE USED TO REDUCE THE RISK OF SPILLS OR OTHER ACCIDENTAL EXPOSURE OF MATERIALS AND SUBSTANCES TO STORM WATER RUNOFF.

GOOD HOUSEKEEPING

SUPERINTENDENT SHALL INSPECT PROJECT AREA DAILY FOR PROPER STORAGE, USE, AND DISPOSAL OF CONSTRUCTION MATERIALS.

STORE ONLY ENOUGH MATERIAL ON SITE FOR PROJECT COMPLETION.

ALL SUBSTANCES SHOULD BE USED BEFORE DISPOSAL OF CONTAINER.

ALL CONSTRUCTION MATERIALS STORED SHALL BE ORGANIZED AND IN THE PROPER CONTAINER AND IF POSSIBLE, STORED UNDER A ROOF OR PROTECTIVE COVER.

PRODUCTS SHALL NOT BE MIXED UNLESS DIRECTED BY THE MANUFACTURER.

ALL PRODUCTS SHALL BE USED AND DISPOSED OF ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.

HAZARDOUS PRODUCTS

MATERIALS SHOULD BE KEPT IN ORIGINAL CONTAINER WITH LABELS UNLESS THE ORIGINAL CONTAINERS CANNOT BE RESEALED. IF ORIGINAL CONTAINERS CANNOT BE USED, LABELS AND PRODUCT INFORMATION SHALL BE SAVED.

PROPER DISPOSAL PRACTICES SHALL ALWAYS BE FOLLOWED IN ACCORDANCE WITH MANUFACTURER AND LOCAL/STATE REGULATIONS.

PRODUCT SPECIFIC PRACTICES

PETROLEUM PRODUCTS MUST BE STORED IN PROPER CONTAINERS AND CLEARLY LABELED. VEHICLES CONTAINING PETROLEUM PRODUCTS SHALL BE PERIODICALLY INSPECTED FOR LEAKS. PRECAUTIONS SHALL BE TAKEN TO AVOID LEAKAGE OF PETROLEUM PRODUCTS ON SITE.

THE MINIMUM AMOUNT OF FERTILIZER SHALL BE USED AND MIXED INTO THE SOIL IN ORDER TO LIMIT EXPOSURE TO STORM WATER. FERTILIZERS SHALL BE STORED IN A COVERED SHED. THE CONTENTS OF ANY PARTIALLY USED BAGS OF FERTILIZER SHALL BE TRANSFERRED TO A SEALABLE PLASTIC BIN TO AVOID SPILLS.

PAINT CONTAINERS SHALL BE SEALED AND STORED WHEN NOT IN USE. EXCESS PAINT MUST BE DISPOSED OF IN AN APPROVED MANNER.

CONCRETE TRUCKS SHALL NOT BE ALLOWED TO WASH OUT OR DISCHARGE SURPLUS CONCRETE OR DRUM WASH WATER ON THE SITE.

SPILL CONTROL PRACTICES

IN ADDITION TO THE GOOD HOUSEKEEPING AND MATERIAL MANAGEMENT PRACTICES DISCUSSED IN THE PREVIOUS SECTIONS OF THIS PLAN, THE FOLLOWING PRACTICES SHALL BE FOLLOWED FOR SPILL PREVENTION AND CLEANUP:

-SPILL CLEANUP INFORMATION SHALL BE POSTED ON SITE TO INFORM EMPLOYEES ABOUT CLEANUP PROCEDURES AND RESOURCES.

-THE FOLLOWING CLEAN-UP EQUIPMENT MUST BE KEPT ON-SITE NEAR THE MATERIAL STORAGE AREA: GLOVES, MOPS, RAGS, BROOMS, DUST PANS, SAND, SAWDUST, LIQUID ABSORBER, GOGGLES, AND TRASH CONTAINERS.

-ALL SPILLS SHALL BE CLEANED UP AS SOON AS POSSIBLE.

-WHEN CLEANING A SPILL, THE AREA SHOULD BE WELL VENTILATED AND THE EMPLOYEE SHALL WEAR PROPER PROTECTIVE COVERING TO PREVENT INJURY.

-TOXIC SPILLS MUST BE REPORTED TO THE PROPER AUTHORITY REGARDLESS OF THE SIZE OF THE SPILL.

-AFTER A SPILL, THE PREVENTION PLAN SHALL BE REVIEWED AND CHANGED TO PREVENT FURTHER SIMILAR SPILLS FROM OCCURRING. THE CAUSE OF THE SPILL, MEASURES TO PREVENT IT, AND HOW TO CLEAN THE SPILL UP SHALL BE RECORDED.

-THE SUPERINTENDENT SHALL BE THE SPILL PREVENTION AND CLEANUP COORDINATOR AND IS RESPONSIBLE FOR THE DAY TO DAY SITE OPERATIONS. THE SUPERINTENDENT ALSO OVERSEES THE SPILL PREVENTION PLAN AND SHALL BE RESPONSIBLE FOR EDUCATING THE EMPLOYEES ABOUT SPILL PREVENTION AND CLEANUP PROCEDURES.

MAINTENANCE AND INSPECTION PRACTICES

THE FOLLOWING ARE MAINTENANCE AND INSPECTION PRACTICES THAT SHALL BE COMPLETED BY THE CONTRACTOR:

-ALL SEDIMENT AND EROSION CONTROL METHODS SHALL BE CHECKED DAILY AND AFTER EACH 0.5 INCH OR GREATER RAINFALL BY THE SUPERINTENDENT OR SOMEONE UNDER HIS/HER DIRECT SUPERVISION.

-ALL SEDIMENT AND EROSION CONTROL METHODS SHALL BE KEPT IN GOOD CONDITION. REPAIRS MUST BE MADE WITHIN 24 HOURS OF REPORT.

-THE SILT FENCE SHALL BE INSPECTED PERIODICALLY FOR HEIGHT OF SEDIMENT AND CONDITION OF FENCE.

-THE SILT FENCE SHALL BE CLEARED OF SEDIMENT WHEN SEDIMENT MEASURES ONE-THIRD THE HEIGHT OF THE FENCE.

-THE SEDIMENT BASINS/DITCHES SHALL BE CHECKED MONTHLY FOR DEPTH OF SEDIMENT. THEY SHALL BE CLEANED WHEN SEDIMENT REACHES 10% OF TOTAL CAPACITY AND AFTER CONSTRUCTION IS COMPLETE.

-DIVERSION DIKES SHALL BE INSPECTED MONTHLY. ANY BREACHES SHALL BE PROMPTLY REPAIRED.

-ALL SEEDING SHALL BE CHECKED FOR PROPER GROWTH AND UNIFORMITY. UNSTABALIZED AREAS SHALL BE RE-SODDED.

-A MAINTENANCE REPORT SHALL BE COMPLETED DAILY AFTER EACH INSPECTION OF THE SEDIMENT AND EROSION CONTROL METHODS. THE REPORTS SHALL BE FILED IN AN ORGANIZED MANNER AND RETAINED ON-SITE DURING CONSTRUCTION. AFTER CONSTRUCTION IS COMPLETED, THE REPORTS SHALL BE SAVED FOR AT LEAST THREE YEARS. THE REPORTS SHALL BE AVAILABLE FOR ANY AGENCY THAT HAS JURISDICTION OVER EROSION CONTROL.

-THE SUPERINTENDENT SHALL ORGANIZE THE TRAINING FOR INSPECTION PROCEDURES AND PROPER EROSION CONTROL METHODS FOR EMPLOYEES THAT COMPLETE INSPECTIONS AND REPORTS.

POLLUTION PREVENTION PLAN CERTIFICATION

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHERED AND EVALUATED THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.

SIGNED: ____________________________________ DATE:_________________

DEREK E. RAMSBURG, P.E.
FLORIDA REGISTRATION NUMBER: 88965
PROFESSIONAL ENGINEER

CONTRACTOR'S CERTIFICATION

I CERTIFY UNDER PENALTY OF LAW THAT I UNDERSTAND, SHALL COMPLY WITH, THE TERMS AND CONDITIONS OF THE STATE OF FLORIDA GENERIC PERMIT FOR STORMWATER DISCHARGE FORM LARGE AND SMALL CONSTRUCTION ACTIVITIES AND THIS STORMWATER POLLUTION PREVENTION PLAN PREPARED THEREUNDER.

SIGNATURE AND DATE	NAME AND TITLE, COMPANY / ADDRESS AND TELEPHONE NUMBER	RESPONSIBILITY

No.	REVISIONS	DATE	BY

Kimley»Horn

200 S. ORANGE AVENUE, SUITE 600, ORLANDO, FL
PHONE: (407) 898-1511
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LICENSED PROFESSIONAL
DEREK E. RAMSBURG, P.E.
FLORIDA LICENSE NUMBER 88965
DATE: 8/21/2025

KHA PROJECT	249188006
DATE	8/21/2025
SCALE	AS SHOWN
DESIGNED BY	BMG
DRAWN BY	BMG
CHECKED BY	DER

STORMWATER
POLLUTION
PREVENTION PLAN

7-11 PALM BAY
CITY OF PALM BAY FLORIDA

SHEET NUMBER
C2.0

Plotted By: Guidry, Blake Sheet Set: 7-11 PALM BAY Layout: C3.0 August 21, 2025 12:48:13pm K:\ORL_Civil\249188006-7-11 Palm Bay\CADD\CONST\PlanSheets\C3.0 EXISTING CONDITIONS & DEMO PLAN.dwg
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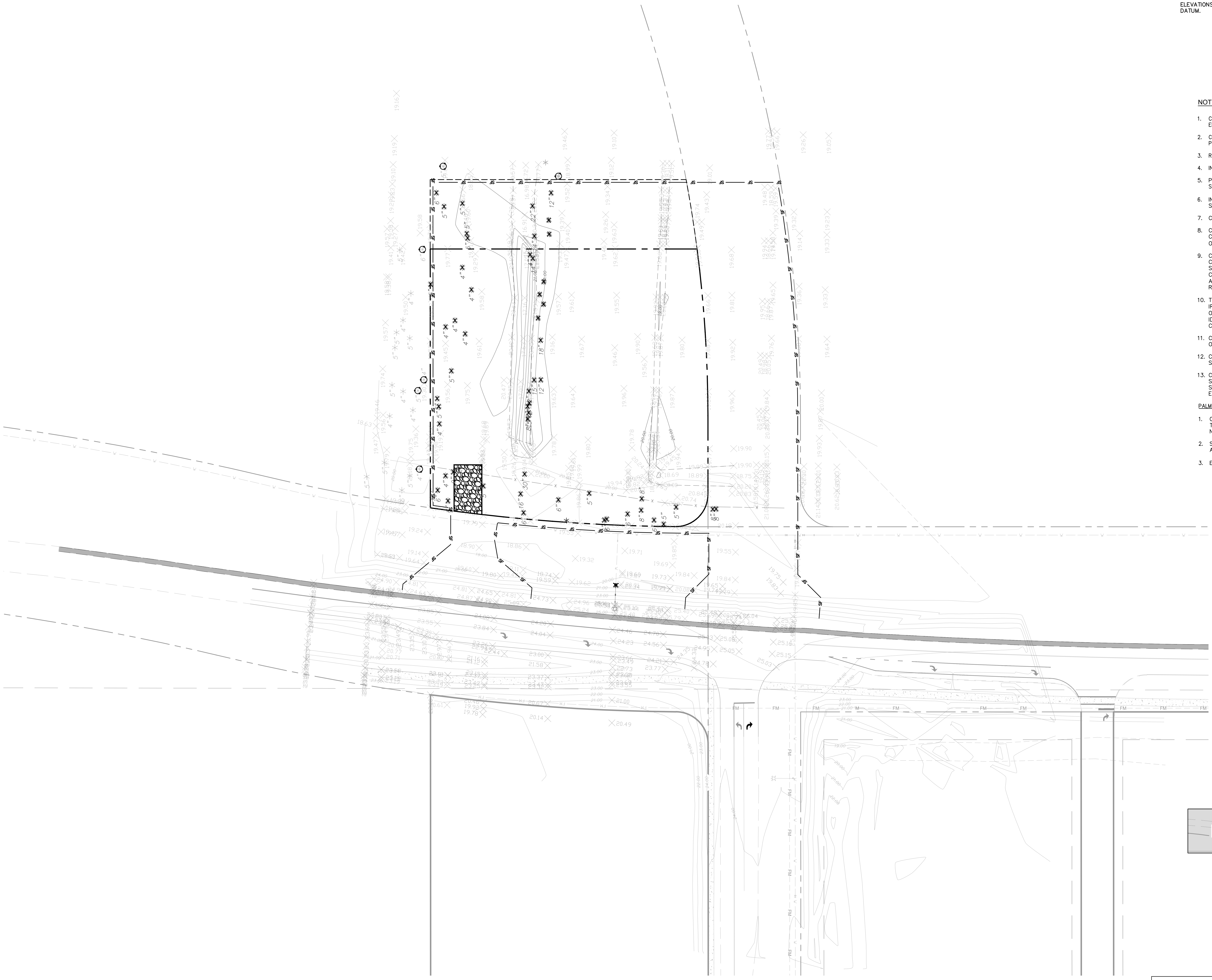

VERTICAL DATUM:

ELEVATIONS SHOWN ARE BASED ON NGVD 29 DATUM.

NORTH

GRAPHIC SCALE IN FEET
0 25 50 100

NOTES:

1. CONTRACTOR TO COORDINATE WITH UTILITY COMPANY FOR DEMOLITION REQUIREMENTS OF ELECTRICAL SYSTEMS.
2. CONTRACTOR SHALL UTILIZE BEST MANAGEMENT PRACTICES AS NEEDED TO PREVENT SYSTEM POLLUTION DURING TIME OF CONSTRUCTION.
3. REFER TO SWPPP SHEET C2.0 FOR ADDITIONAL NOTES AND DETAILS.
4. INSTALL AND MAINTAIN SILT FENCE AT LIMITS OF CONSTRUCTION. SEE DETAIL SHEET C7.0.
5. PROVIDE SOIL TRACKING PREVENTION DEVICE AT ALL CONSTRUCTION ACCESS POINTS. SEE DETAIL SHEET C7.1.
6. INSTALL AND MAINTAIN FILTER FABRIC UNDER GRATES OF EXISTING/PROPOSED INLETS, SEE SHEET C7.1.
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PALM BAY NOTES:

1. CONTRACTOR SHALL UTILIZE DITCHES, PIPES AND/OR PUMPS AS NECESSARY TO MAINTAIN THE EXISTING DRAINAGE DURING ALL PHASES OF CONSTRUCTION. EXISTING DRAINAGE SHALL NOT BE BLOCKED OR ADVERSELY AFFECTED DURING CONSTRUCTION.
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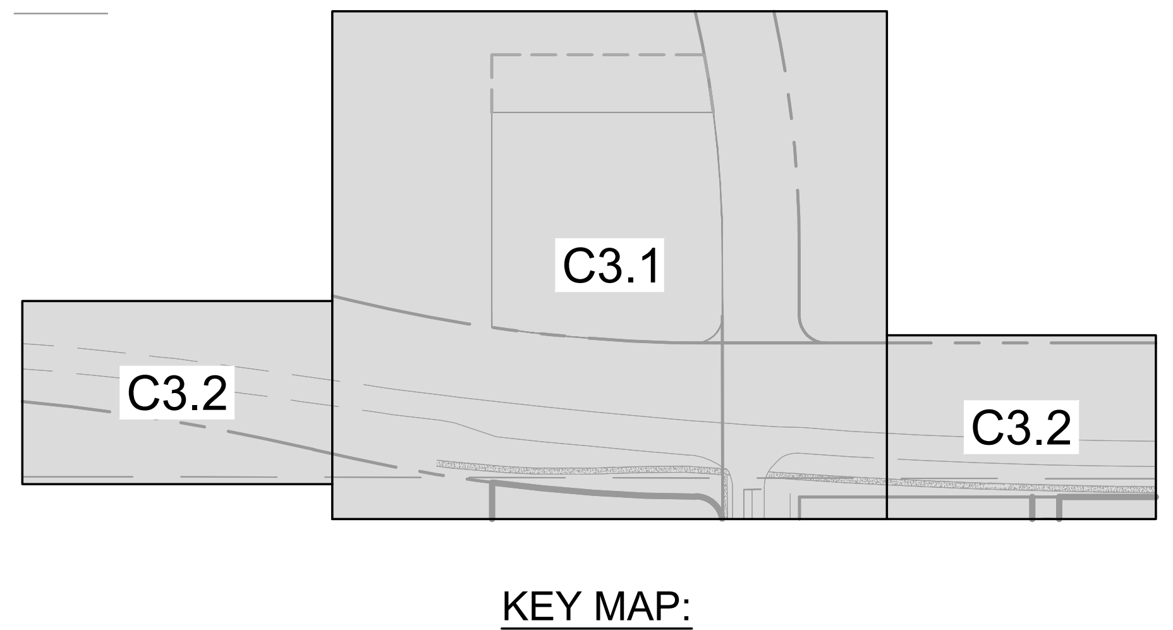
3. EASEMENT MUST BE RECORDED PRIOR TO RECEIVING A CERTIFICATE OF OCCUPANCY (C.O.O.).

LEGEND

▬▬ ▬ ▬ ▬▬	PROPERTY LINE (TYP.)
—SF—SF—SF—	TYPE III SILT FENCE (SEE DETAIL SHEET ####)
—x—x—	EXISTING FENCE
—FM—FM—	EXISTING SANITARY FORCE MAIN
—W—W—W—	EXISTING WATER MAIN
☼	EXISTING FIRE HYDRANT
▨	INLET PROTECTION (SEE DETAIL, SHEET ####)
▩	SOIL TRACKING PREVENTION DEVICE (SEE DETAIL, SHEET ####)
✳	EXISTING TREE TO REMAIN
✗	EXISTING TREE TO BE REMOVED
○	TREE PROTECTION (TYP.)



KEY MAP:
1" = 250'

Always call 811 two full business days before you dig to have underground utilities located and marked.

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No.	REVISIONS	DATE	BY

Kimley»Horn
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LICENSED PROFESSIONAL
DEREK E. RAMSBURG, P.E.
FLORIDA LICENSE NUMBER
88905
DATE: 8/21/2025

KHA PROJECT	249188006
DATE	8/21/2025
SCALE	AS SHOWN
DESIGNED BY	BMG
DRAWN BY	BMG
CHECKED BY	DER

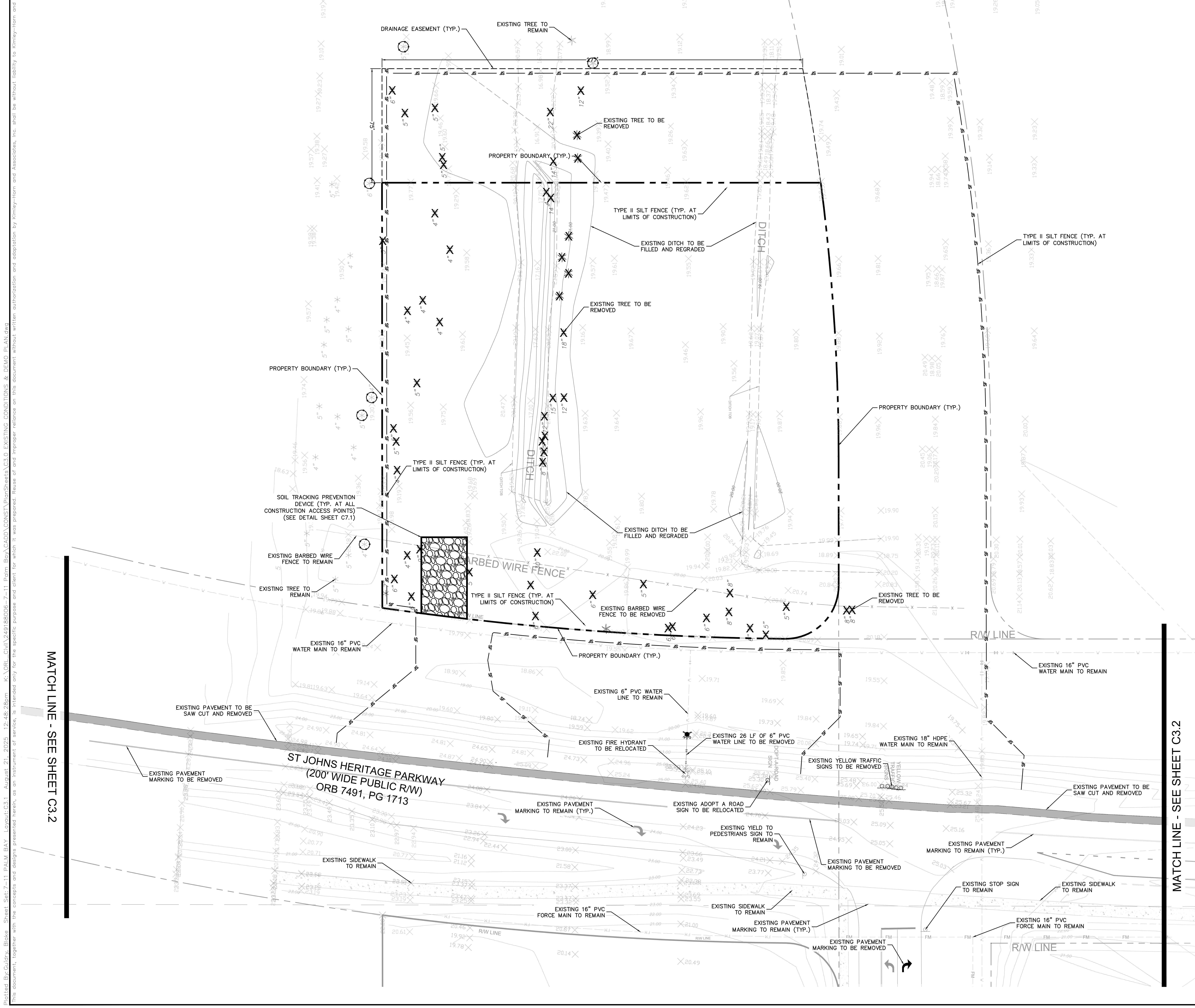
OVERALL EXISTING CONDITIONS & DEMOLITION PLAN

7-11 PALM BAY

CITY OF PALM BAY FLORIDA

SHEET NUMBER
C3.0

Plotted By:Guidry, Blake Sheet Set:7-11 PALM BAY Layout:C3.1 August 21, 2025 12:48:25pm K:\ORL_Civil\249188006-7-11 Palm Bay\CADD\CONST\PlanSheets\C3.0 EXISTING CONDITIONS & DEMO PLAN.dwg


DRAINAGE EASEMENT (TYP.)
EXISTING TREE TO REMAIN
EXISTING TREE TO BE REMOVED
PROPERTY BOUNDARY (TYP.)
TYPE II SILT FENCE (TYP. AT LIMITS OF CONSTRUCTION)
EXISTING DITCH TO BE FILLED AND REGRADED
DITCH
EXISTING TREE TO BE REMOVED
PROPERTY BOUNDARY (TYP.)
PROPERTY BOUNDARY (TYP.)
TYPE II SILT FENCE (TYP. AT LIMITS OF CONSTRUCTION)
DITCH
SOIL TRACKING PREVENTION DEVICE (TYP. AT ALL CONSTRUCTION ACCESS POINTS) (SEE DETAIL SHEET C7.1)
EXISTING DITCH TO BE FILLED AND REGRADED
EXISTING BARBED WIRE FENCE TO REMAIN
BARBED WIRE FENCE
EXISTING TREE TO REMAIN
TYPE II SILT FENCE (TYP. AT LIMITS OF CONSTRUCTION)
EXISTING BARBED WIRE FENCE TO BE REMOVED
EXISTING TREE TO BE REMOVED
EXISTING 16" PVC WATER MAIN TO REMAIN
PROPERTY BOUNDARY (TYP.)
R/W LINE
EXISTING 16" PVC WATER MAIN TO REMAIN
EXISTING 6" PVC WATER LINE TO REMAIN
EXISTING PAVEMENT TO BE SAW CUT AND REMOVED
EXISTING FIRE HYDRANT TO BE RELOCATED
EXISTING 26 LF OF 6" PVC WATER LINE TO BE REMOVED
EXISTING YELLOW TRAFFIC SIGNS TO BE REMOVED
EXISTING 18" HDPE WATER MAIN TO REMAIN
ADOPT-A-ROAD SIGN
YELLOW TRAFFIC SIGNS
EXISTING PAVEMENT MARKING TO BE REMOVED
ST JOHNS HERITAGE PARKWAY (200' WIDE PUBLIC R/W) ORB 7491, PG 1713
EXISTING PAVEMENT MARKING TO REMAIN (TYP.)
EXISTING ADOPT A ROAD SIGN TO BE RELOCATED
EXISTING YIELD TO PEDESTRIANS SIGN TO REMAIN
EXISTING PAVEMENT TO BE SAW CUT AND REMOVED
EXISTING PAVEMENT MARKING TO REMAIN (TYP.)
EXISTING SIDEWALK TO REMAIN
EXISTING PAVEMENT MARKING TO BE REMOVED
EXISTING STOP SIGN TO REMAIN
EXISTING SIDEWALK TO REMAIN
EXISTING 16" PVC FORCE MAIN TO REMAIN
EXISTING SIDEWALK TO REMAIN
EXISTING PAVEMENT MARKING TO REMAIN (TYP.)
EXISTING 16" PVC FORCE MAIN TO REMAIN
EXISTING PAVEMENT MARKING TO BE REMOVED
R/W LINE
R/W LINE
MATCH LINE - SEE SHEET C3.2
MATCH LINE - SEE SHEET C3.2
GRAPHIC SCALE IN FEET
0 15 30 60
NORTH

VERTICAL DATUM:

ELEVATIONS SHOWN ARE REFERENCED TO NGVD29 DATUM.

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LEGEND

▬ ▪ ▪ ▬	PROPERTY LINE (TYP.)
— SF — SF — SF —	TYPE III SILT FENCE (SEE DETAIL SHEET ####)
— x — x —	EXISTING FENCE
— FM — FM —	EXISTING SANITARY FORCE MAIN
— W — W — W —	EXISTING WATER MAIN
✳	EXISTING FIRE HYDRANT
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✕	EXISTING TREE TO BE REMOVED
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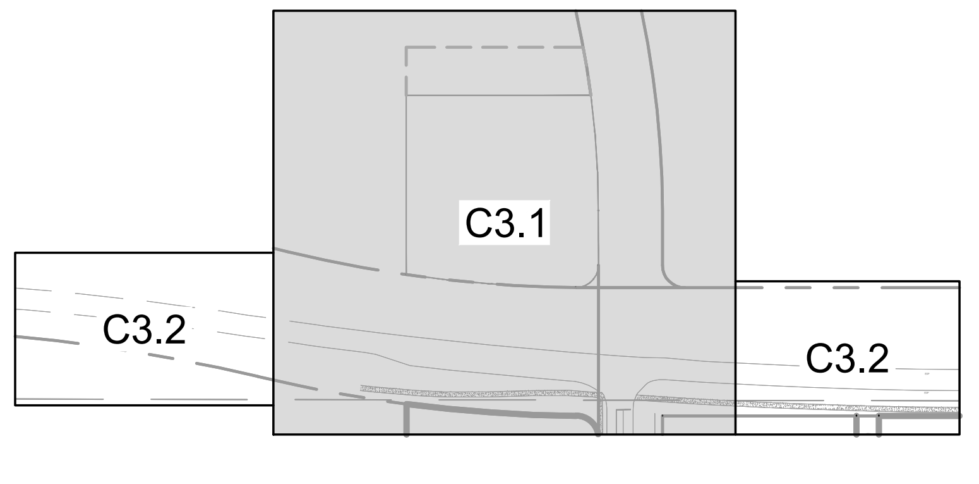

KEY MAP:

1" = 300'

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LICENSED PROFESSIONAL
DEREK E. RAMSBURG, P.E.
FLORIDA LICENSE NUMBER
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DATE: 8/21/2025

KHA PROJECT	249188006
DATE	8/21/2025
SCALE	AS SHOWN
DESIGNED BY	BMG
DRAWN BY	BMG
CHECKED BY	DER

EXISTING CONDITIONS & DEMOLITION PLAN

7-11 PALM BAY

CITY OF PALM BAY FLORIDA

SHEET NUMBER
C3.1

Plotted By: Guidry, Blake Sheet Set: 7-11 PALM BAY Layout: C3.2 August 21, 2025 12:48:43pm K:\ORL_Civil\249188006-7-11 Palm Bay\CADD\CONST\PlanSheets\C3.0 EXISTING CONDITIONS & DEMO PLAN.dwg
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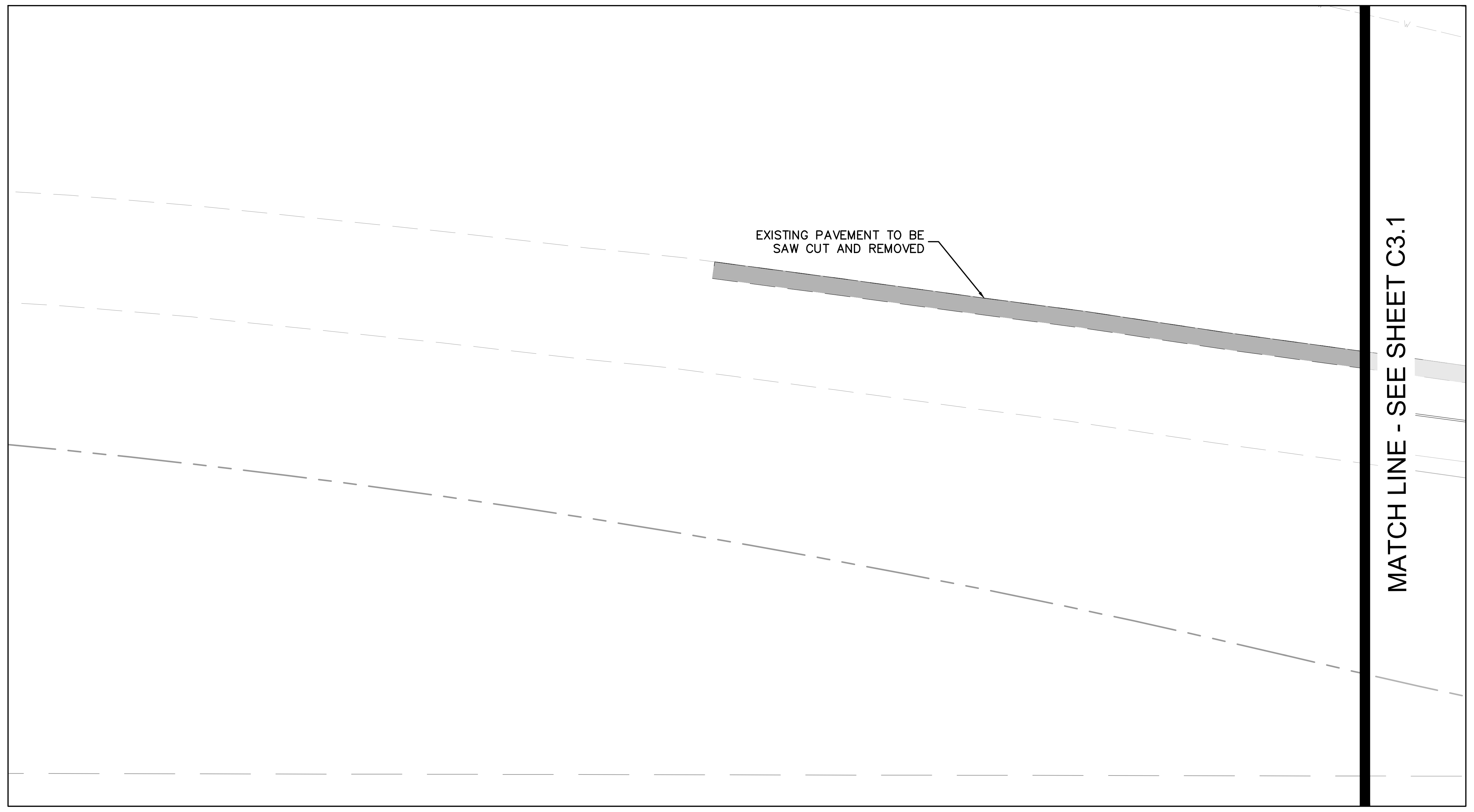
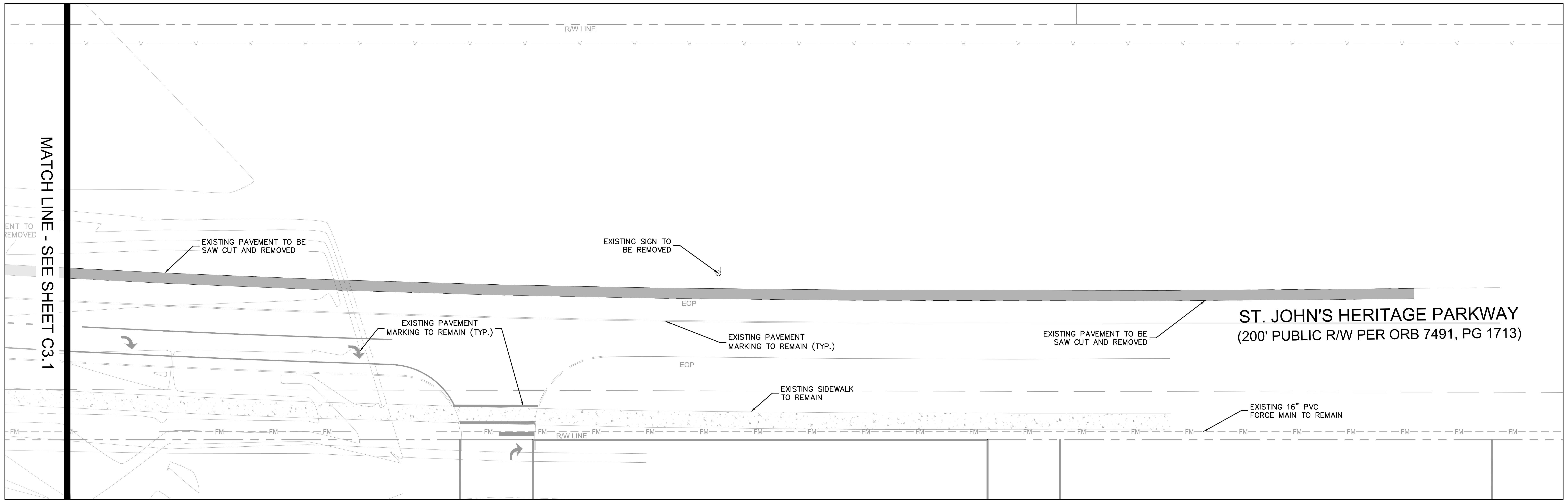
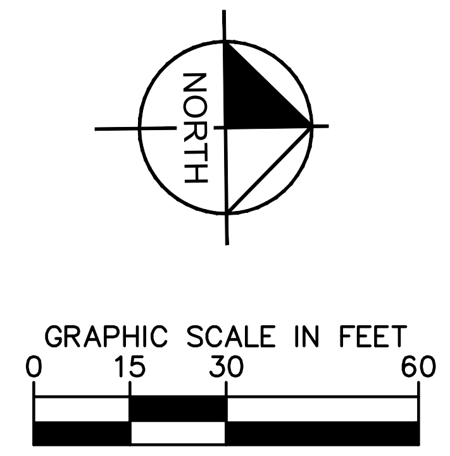

EXISTING PAVEMENT TO BE SAW CUT AND REMOVED
MATCH LINE - SEE SHEET C3.1


R/W LINE
MATCH LINE - SEE SHEET C3.1
ENT TO REMOVED
EXISTING PAVEMENT TO BE SAW CUT AND REMOVED
EXISTING SIGN TO BE REMOVED
EOP
EXISTING PAVEMENT MARKING TO REMAIN (TYP.)
EXISTING PAVEMENT MARKING TO REMAIN (TYP.)
EXISTING PAVEMENT TO BE SAW CUT AND REMOVED
ST. JOHN'S HERITAGE PARKWAY
(200' PUBLIC R/W PER ORB 7491, PG 1713)
EOP
EXISTING SIDEWALK TO REMAIN
EXISTING 16" PVC FORCE MAIN TO REMAIN
FM
R/W LINE

VERTICAL DATUM:

ELEVATIONS SHOWN ARE BASED ON NGVD 29 DATUM.


NORTH
GRAPHIC SCALE IN FEET
0
15
30
60

NOTES:

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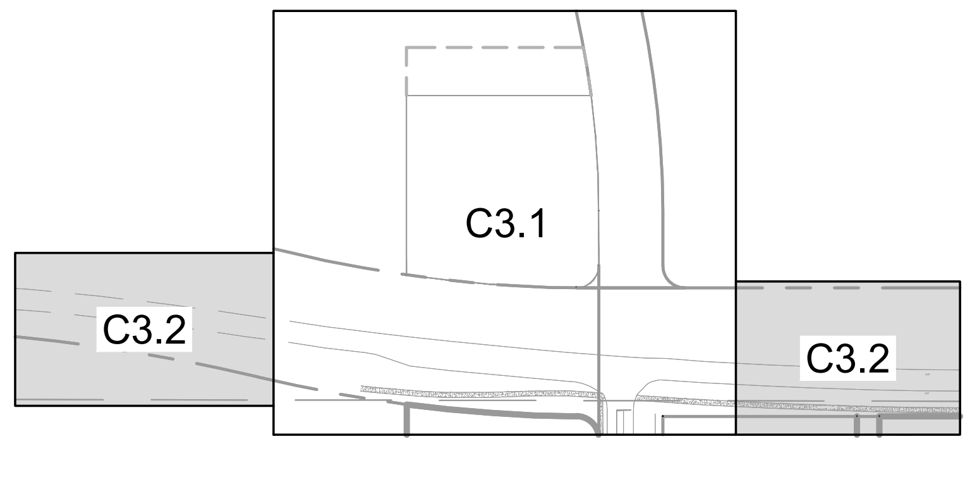
10. THERE MAY BE ON-SITE UNDERGROUND UTILITIES (INCLUDING BUT NOT LIMITED TO IRRIGATION, SANITARY SEWER, POTABLE WATER LINES, NATURAL GAS LINES, FIBER OPTIC, ELECTRIC, TELEPHONE AND CABLE LINES) THAT WERE NOT LOCATED OR IDENTIFIED BY THE PROJECT SURVEYOR. PRIOR TO CONSTRUCTION START, CONTRACTOR SHALL FIELD VERIFY ALL EXISTING ON-SITE UTILITIES.
11. CONTRACTOR TO COORDINATE WITH UTILITY COMPANY FOR DEMOLITION REQUIREMENTS OF ELECTRICAL SYSTEMS.
12. CONTRACTOR SHALL UTILIZE BEST MANAGEMENT PRACTICES AS NEEDED TO PREVENT SYSTEM POLLUTION DURING TIME OF CONSTRUCTION.
13. CONTRACTOR SHALL FIELD VERIFY THAT THE SHOULDER BASE IS FULL DEPTH. IF SHOULDER BASE IS NOT FULL DEPTH, THE EXISTING SHOULDER BASE AND PAVEMENT SHALL BE REMOVED AND REPLACED AT THE PAVEMENT CONNECTION TO MATCH EXISTING.

PALM BAY NOTES:

1. CONTRACTOR SHALL UTILIZE DITCHES, PIPES AND/OR PUMPS AS NECESSARY TO MAINTAIN THE EXISTING DRAINAGE DURING ALL PHASES OF CONSTRUCTION. EXISTING DRAINAGE SHALL NOT BE BLOCKED OR ADVERSELY AFFECTED DURING CONSTRUCTION.
2. SIGNAGE IN THE RIGHT OF WAY OR PERMITTED DRIVEWAY REMOVED SHALL BE REPLACED IN ACCORDANCE TO CITY SITE PLAN REQUIREMENTS AND MEET CITY AND MUTCD SPECIFICATIONS.
3. EASEMENT MUST BE RECORDED PRIOR TO RECEIVING A CERTIFICATE OF OCCUPANCY (C.O.O.).

LEGEND

▬ ▬ ▬	PROPERTY LINE (TYP.)
—SF—SF—SF—	TYPE III SILT FENCE (SEE DETAIL SHEET ####)
—X—X—	EXISTING FENCE
—FM—FM—	EXISTING SANITARY FORCE MAIN
—W—W—W—	EXISTING WATER MAIN
HYD	EXISTING FIRE HYDRANT
▨	INLET PROTECTION (SEE DETAIL, SHEET ####)
▦	SOIL TRACKING PREVENTION DEVICE (SEE DETAIL, SHEET ####)
✳	EXISTING TREE TO REMAIN
✕	EXISTING TREE TO BE REMOVED
○	TREE PROTECTION (TYP.)



KEY MAP:
1" = 300'

Always call 811 two full business days before you dig to have underground utilities located and marked.

Sunshine811.com

REVISIONS	DATE	BY
No.		

Kimley»Horn

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200 S. ORANGE AVENUE, SUITE 600, ORLANDO, FL
PHONE: (407) 898-1511
WWW.KIMLEY-HORN.COM REGISTRY No. 35106

LICENSED PROFESSIONAL
DEREK E. RAMSBURG, P.E.
FLORIDA LICENSE NUMBER
88905
DATE: 8/21/2025

KHA PROJECT	249188006
DATE	8/21/2025
SCALE	AS SHOWN
DESIGNED BY	BMG
DRAWN BY	BMG
CHECKED BY	DER

EXISTING CONDITIONS & DEMOLITION PLAN

7-11 PALM BAY

CITY OF PALM BAY
FLORIDA

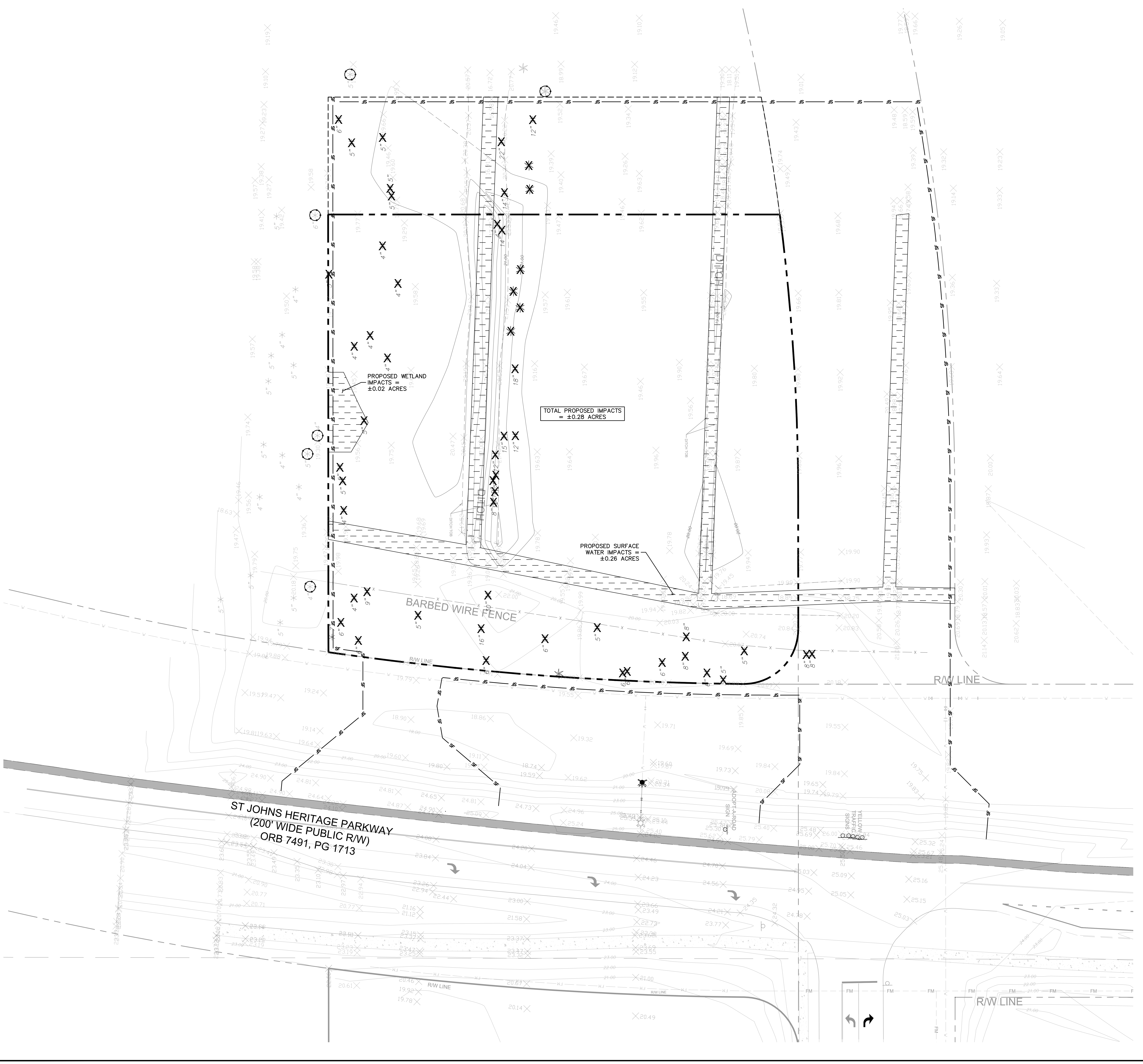
SHEET NUMBER
C3.2

Plotted By: Guidry, Blake Sheet Set: 7-11 PALM BAY Layout: C3.3 August 21, 2025 12:48:55pm K:\ORL_Civil\249188006-7-11 Palm Bay\CADD\CONST\PlanSheets\C3.0 EXISTING CONDITIONS & DEMO PLAN.dwg
This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

VERTICAL DATUM:
ELEVATIONS SHOWN ARE BASED ON NGVD 29 DATUM.

NORTH

GRAPHIC SCALE IN FEET
0 15 30 60


PROPOSED WETLAND IMPACTS = ±0.02 ACRES
TOTAL PROPOSED IMPACTS = ±0.28 ACRES
PROPOSED SURFACE WATER IMPACTS = ±0.26 ACRES
DITCH
BARBED WIRE FENCE
R/W LINE
ST JOHNS HERITAGE PARKWAY
(200' WIDE PUBLIC R/W)
ORB 7491, PG 1713
ADOPT A ROAD SIGN
YELLOW TRAFFIC SIGNS
FM

NOTES:

1. CONTRACTOR TO COORDINATE WITH UTILITY COMPANY FOR DEMOLITION REQUIREMENTS OF ELECTRICAL SYSTEMS.
2. CONTRACTOR SHALL UTILIZE BEST MANAGEMENT PRACTICES AS NEEDED TO PREVENT SYSTEM POLLUTION DURING TIME OF CONSTRUCTION.
3. REFER TO SWPPP SHEET C2.0 FOR ADDITIONAL NOTES AND DETAILS.
4. INSTALL AND MAINTAIN SILT FENCE AT LIMITS OF CONSTRUCTION. SEE DETAIL SHEET C7.0.
5. PROVIDE SOIL TRACKING PREVENTION DEVICE AT ALL CONSTRUCTION ACCESS POINTS. SEE DETAIL SHEET C7.1.
6. INSTALL AND MAINTAIN FILTER FABRIC UNDER GRATES OF EXISTING/PROPOSED INLETS, SEE SHEET C7.1.
7. CONTRACTOR TO ENSURE ADEQUATE COVER REMAINS OVER ALL EXISTING UTILITIES.
8. CONTRACTOR TO VERIFY EXISTING COVER OVER ALL UTILITIES BEFORE START OF CONSTRUCTION AND TO COORDINATE WITH THE ENGINEER OF RECORD PRIOR TO START OF CONSTRUCTION IF DESIGN DOES NOT PROVIDE 36" COVER.
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PALM BAY NOTES:

1. CONTRACTOR SHALL UTILIZE DITCHES, PIPES AND/OR PUMPS AS NECESSARY TO MAINTAIN THE EXISTING DRAINAGE DURING ALL PHASES OF CONSTRUCTION. EXISTING DRAINAGE SHALL NOT BE BLOCKED OR ADVERSELY AFFECTED DURING CONSTRUCTION.
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3. EASEMENT MUST BE RECORDED PRIOR TO RECEIVING A CERTIFICATE OF OCCUPANCY (C.O.O.).

LEGEND

━ ━ ━	PROPERTY LINE (TYP.)
— SF — SF — SF —	TYPE III SILT FENCE (SEE DETAIL SHEET ####)
— X — X —	EXISTING FENCE
— FM — FM —	EXISTING SANITARY FORCE MAIN
— W — W — W —	EXISTING WATER MAIN
HYD	EXISTING FIRE HYDRANT
▨	INLET PROTECTION (SEE DETAIL, SHEET ####)
▦	SOIL TRACKING PREVENTION DEVICE (SEE DETAIL, SHEET ####)
✳	EXISTING TREE TO REMAIN
✖	EXISTING TREE TO BE REMOVED
○	TREE PROTECTION (TYP.)

No.	REVISIONS	DATE	BY

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LICENSED PROFESSIONAL
DEREK E. RAMSBURG, P.E.
FLORIDA LICENSE NUMBER 88965
DATE: 8/21/2025

KHA PROJECT	249188006
DATE	8/21/2025
SCALE	AS SHOWN
DESIGNED BY	BMG
DRAWN BY	BMG
CHECKED BY	DER

SURFACE WATER IMPACTS

7-11 PALM BAY

CITY OF PALM BAY FLORIDA

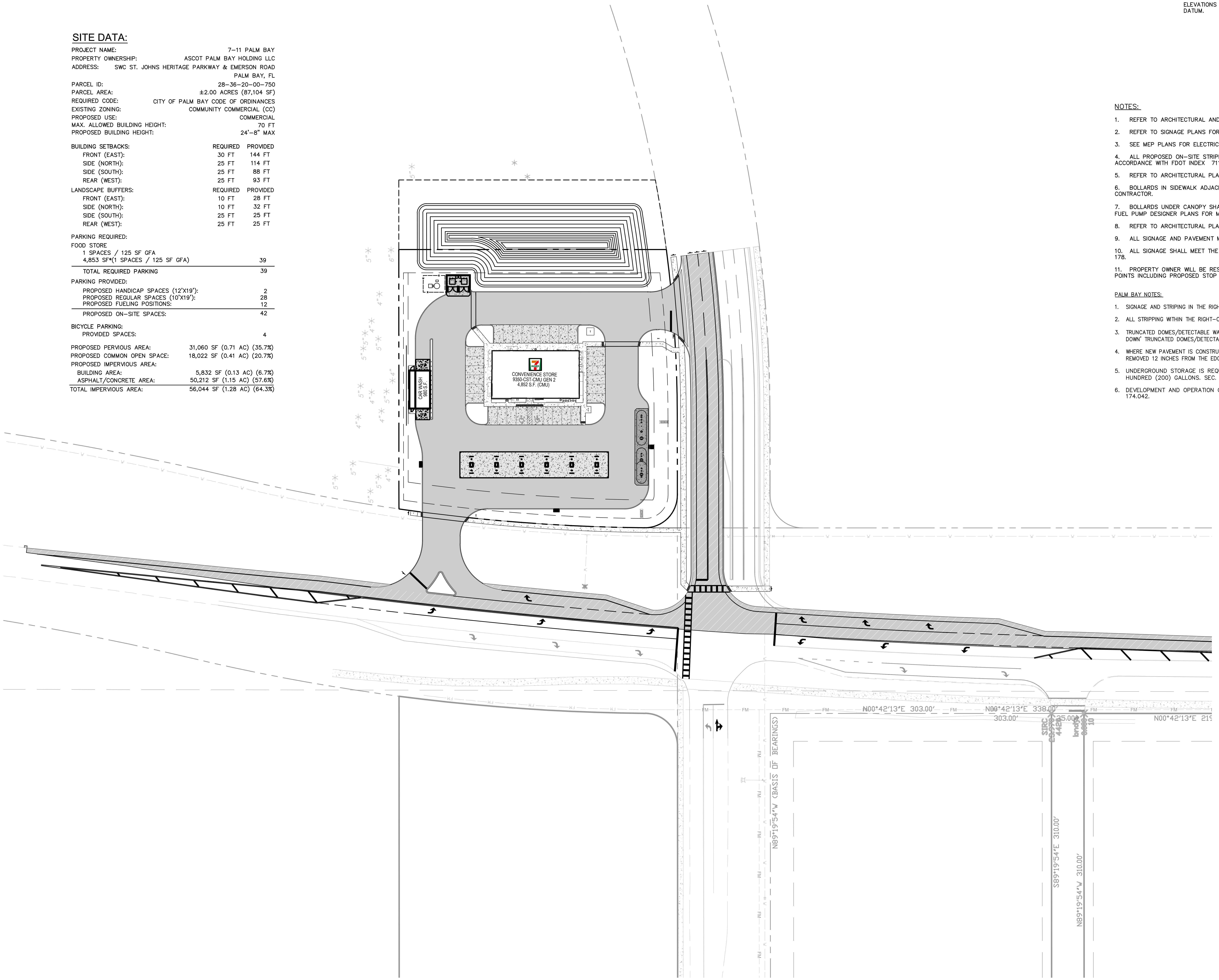
SHEET NUMBER
C3.3

SITE DATA:

PROJECT NAME:		7-11 PALM BAY
PROPERTY OWNERSHIP:		ASCOT PALM BAY HOLDING LLC
ADDRESS:		SWC ST. JOHNS HERITAGE PARKWAY & EMERSON ROAD PALM BAY, FL
PARCEL ID:		28-36-20-00-750
PARCEL AREA:		±2.00 ACRES (87,104 SF)
REQUIRED CODE:		CITY OF PALM BAY CODE OF ORDINANCES
EXISTING ZONING:		COMMUNITY COMMERCIAL (CC)
PROPOSED USE:		COMMERCIAL
MAX. ALLOWED BUILDING HEIGHT:		70 FT
PROPOSED BUILDING HEIGHT:		24'-8" MAX
BUILDING SETBACKS:	REQUIRED	PROVIDED
FRONT (EAST):	30 FT	144 FT
SIDE (NORTH):	25 FT	114 FT
SIDE (SOUTH):	25 FT	88 FT
REAR (WEST):	25 FT	93 FT
LANDSCAPE BUFFERS:	REQUIRED	PROVIDED
FRONT (EAST):	10 FT	28 FT
SIDE (NORTH):	10 FT	32 FT
SIDE (SOUTH):	25 FT	25 FT
REAR (WEST):	25 FT	25 FT
PARKING REQUIRED:		
FOOD STORE		
1 SPACES / 125 SF GFA		
4,853 SF*(1 SPACES / 125 SF GFA)		39
TOTAL REQUIRED PARKING		39
PARKING PROVIDED:		
PROPOSED HANDICAP SPACES (12'X19'):		2
PROPOSED REGULAR SPACES (10'X19'):		28
PROPOSED FUELING POSITIONS:		12
PROPOSED ON-SITE SPACES:		42
BICYCLE PARKING:		
PROVIDED SPACES:		4
PROPOSED PERVIOUS AREA:		31,060 SF (0.71 AC) (35.7%)
PROPOSED COMMON OPEN SPACE:		18,022 SF (0.41 AC) (20.7%)
PROPOSED IMPERVIOUS AREA:		
BUILDING AREA:		5,832 SF (0.13 AC) (6.7%)
ASPHALT/CONCRETE AREA:		50,212 SF (1.15 AC) (57.6%)
TOTAL IMPERVIOUS AREA:		56,044 SF (1.28 AC) (64.3%)

VERTICAL DATUM:

ELEVATIONS SHOWN ARE BASED ON NGVD 29 DATUM.



NOTES:

1. REFER TO ARCHITECTURAL AND STRUCTURAL PLANS TO VERIFY ALL BUILDING DIMENSIONS.

2. REFER TO SIGNAGE PLANS FOR MONUMENT SIGN DETAILS.

3. SEE MEP PLANS FOR ELECTRICAL DRAWINGS.

4. ALL PROPOSED ON-SITE STRIPING AND PAVEMENT MARKING WILL BE PAINTED UNLESS OTHERWISE NOTED AND IN ACCORDANCE WITH FDOT INDEX 711-001.

5. REFER TO ARCHITECTURAL PLANS FOR PROPOSED TRASH CAN LOCATIONS AND DESIGN.

6. BOLLARDS IN SIDEWALK ADJACENT TO BUILDING SHALL BE COVERED WITH RED PLASTIC COVERS TO BE SUPPLIED BY CONTRACTOR.

7. BOLLARDS UNDER CANOPY SHALL BE COVERED WITH GRAY PLASTIC COVERS TO BE SUPPLIED BY CONTRACTOR (SEE FUEL PUMP DESIGNER PLANS FOR MORE DETAIL).

8. REFER TO ARCHITECTURAL PLANS FOR SITE LIGHTING AND ELECTRICAL PLANS.

9. ALL SIGNAGE AND PAVEMENT MARKINGS SHALL MEET MUTCD AND FDOT STANDARDS.

10. ALL SIGNAGE SHALL MEET THE REQUIREMENTS OF CITY OF PALM BAY, FL CODE OF ORDINANCES TITLE XVII, CHAPTER 178.

11. PROPERTY OWNER WILL BE RESPONSIBLE FOR MAINTENANCE OF ALL STRIPING AT THE PROPOSED PROJECT ACCESS POINTS INCLUDING PROPOSED STOP BARS, PEDESTRIAN CROSSWALKS, AND DOUBLE YELLOW LANE STRIPES.

PALM BAY NOTES:

1. SIGNAGE AND STRIPING IN THE RIGHT OF WAY ENTRANCE SHALL BE THE RESPONSIBILITY OF THE OWNER TO OWN AND MAINTAIN.

2. ALL STRIPPING WITHIN THE RIGHT-OF-WAYS TO BE THERMOPLASTIC.

3. TRUNCATED DOMES/DETECTABLE WARNINGS IN THE CITY RIGHT OF WAY SHALL BE EMBEDDED PER FDOT SPECIFICATIONS(APL). 'BOLT DOWN' TRUNCATED DOMES/DETECTABLE WARNINGS ARE NOT ALLOWED.

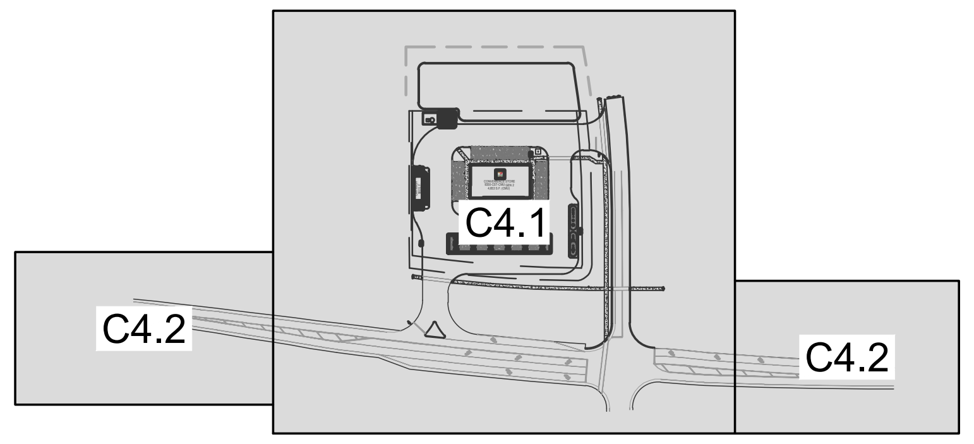
4. WHERE NEW PAVEMENT IS CONSTRUCTED ADJACENT TO EXISTING PAVEMENT, THE EXISTING ASPHALT SHALL BE SAW CUT AND REMOVED 12 INCHES FROM THE EDGE OF THE ASPHALT TO OFFSET THE ASPHALT/BASE COURSE JOINT.

5. UNDERGROUND STORAGE IS REQUIRED FOR ALL RECEPTACLES FOR COMBUSTIBLE MATERIALS IN EXCESS OF TWO HUNDRED (200) GALLONS. SEC. 174.041(E)

6. DEVELOPMENT AND OPERATION OF THE FUEL PUMPS AND ATTENDANT STORAGE TANKS SHALL COMPLY WITH SEC. 174.042.

LEGEND

━ ━ · · ━ ━	PROPERTY BOUNDARY
── ──	BUILDING SETBACK
— — —	LANDSCAPE SETBACK
ⓧ	PARKING SPACE COUNT
▨	PROPOSED STANDARD DUTY ASPHALT PAVEMENT (SEE SHEET C7.4)
▨	PROPOSED CITY OF PALM BAY SECTION (SEE SHEET C8.3)
▨	PROPOSED STANDARD DUTY CONCRETE PAVEMENT (SEE SHEET C7.4)
▨	PROPOSED HEAVY DUTY CONCRETE PAVEMENT (SEE SHEET C7.4)
▨	PROPOSED TANK SLAB CONCRETE PAVEMENT (SEE SHEET C7.4)
▨	PROPOSED CONCRETE SIDEWALK



KEY MAP:

1" = 300'

No.	REVISIONS	DATE	BY

Kimley»Horn

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LICENSED PROFESSIONAL
DEREK E. RAMSBURG, P.E.
FLORIDA LICENSE NUMBER 88905
DATE: 8/21/2025

KHA PROJECT	249188006
DATE	8/21/2025
SCALE	AS SHOWN
DESIGNED BY	BMG
DRAWN BY	BMG
CHECKED BY	DER

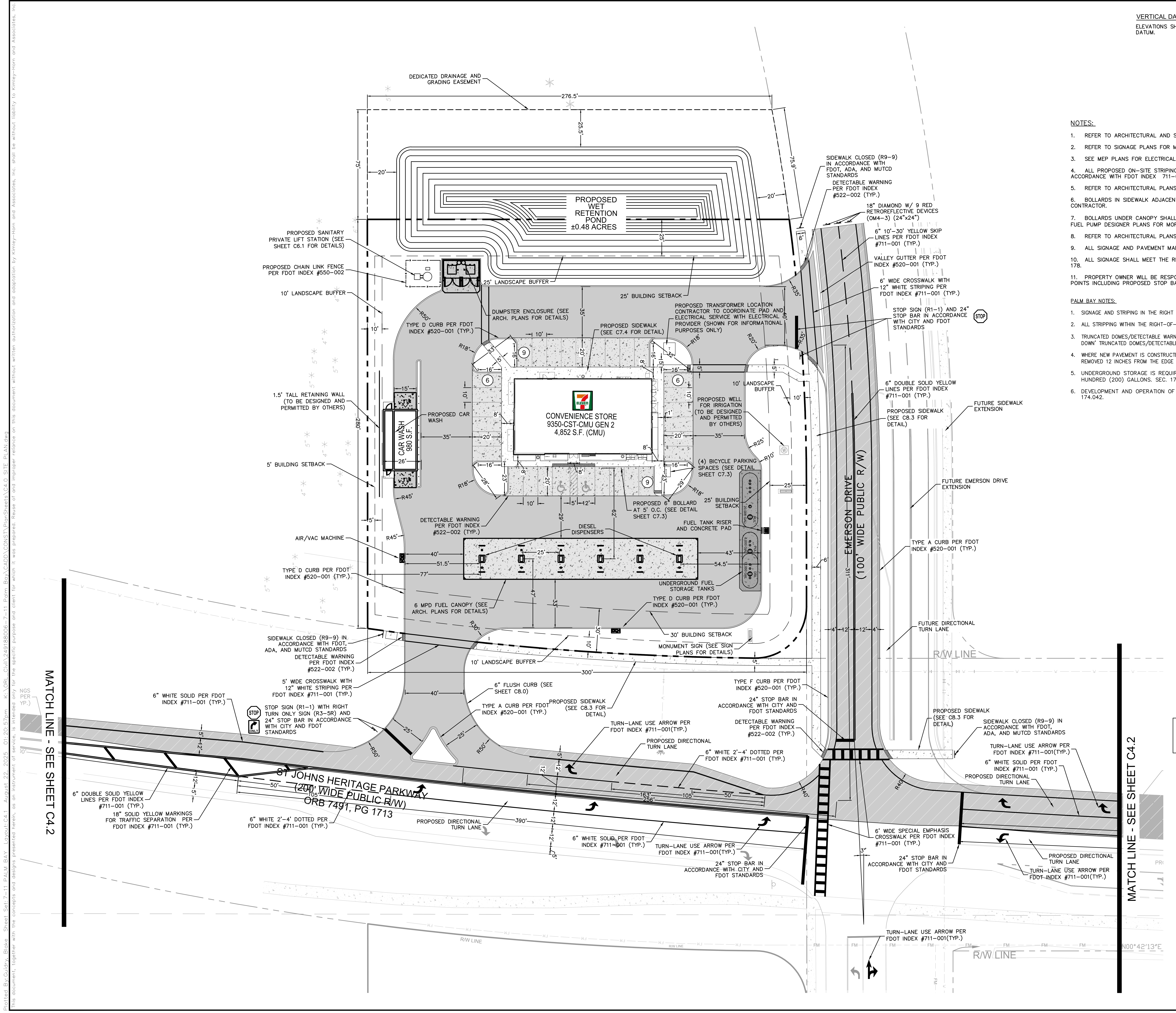
OVERALL SITE PLAN

7-11 PALM BAY

CITY OF PALM BAY FLORIDA

SHEET NUMBER
C4.0

VERTICAL DATUM:
ELEVATIONS SHOWN ARE BASED ON NGVD 29 DATUM.


NORTH
DEDICATED DRAINAGE AND GRADING EASEMENT
276.5'
25.5'
75'
75.9'
20'
PROPOSED WET RETENTION POND ±0.48 ACRES
25'
PROPOSED SANITARY PRIVATE LIFT STATION (SEE SHEET C6.1 FOR DETAILS)
PROPOSED CHAIN LINK FENCE PER FDOT INDEX #550-002
10' LANDSCAPE BUFFER
25' LANDSCAPE BUFFER
25' BUILDING SETBACK
DUMPSTER ENCLOSURE (SEE ARCH. PLANS FOR DETAILS)
TYPE D CURB PER FDOT INDEX #520-001 (TYP.)
PROPOSED SIDEWALK (SEE C7.4 FOR DETAIL)
PROPOSED TRANSFORMER LOCATION CONTRACTOR TO COORDINATE PAD AND ELECTRICAL SERVICE WITH ELECTRICAL PROVIDER (SHOWN FOR INFORMATIONAL PURPOSES ONLY)
R50'
R18'
R35'
R20'
1.5' TALL RETAINING WALL (TO BE DESIGNED AND PERMITTED BY OTHERS)
15'
PROPOSED CAR WASH
CAR WASH 980 S.F.
26'
35'
20'
CONVENIENCE STORE 9350-CST-CMU GEN 2 4,852 S.F. (CMU)
PROPOSED WELL FOR IRRIGATION (TO BE DESIGNED AND PERMITTED BY OTHERS)
10' LANDSCAPE BUFFER
10'
R25'
(4) BICYCLE PARKING SPACES (SEE DETAIL SHEET C7.3)
5' BUILDING SETBACK
R45'
R18'
23'
28'
29'
10'
12'
PROPOSED 6" BOLLARD AT 5' O.C. (SEE DETAIL SHEET C7.3)
25' BUILDING SETBACK
DETECTABLE WARNING PER FDOT INDEX #522-002 (TYP.)
DIESEL DISPENSERS
62'
FUEL TANK RISER AND CONCRETE PAD
AIR/VAC MACHINE
R45'
40'
51.5'
77'
43'
54.5'
TYPE D CURB PER FDOT INDEX #520-001 (TYP.)
UNDERGROUND FUEL STORAGE TANKS
47'
33'
6 MPD FUEL CANOPY (SEE ARCH. PLANS FOR DETAILS)
TYPE D CURB PER FDOT INDEX #520-001 (TYP.)
R30'
30'
30' BUILDING SETBACK
MONUMENT SIGN (SEE SIGN PLANS FOR DETAILS)
SIDEWALK CLOSED (R9-9) IN ACCORDANCE WITH FDOT, ADA, AND MUTCD STANDARDS
DETECTABLE WARNING PER FDOT INDEX #522-002 (TYP.)
10' LANDSCAPE BUFFER
300'
5' WIDE CROSSWALK WITH 12" WHITE STRIPING PER FDOT INDEX #711-001 (TYP.)
6" WHITE SOLID PER FDOT INDEX #711-001 (TYP.)
STOP BAR
STOP SIGN (R1-1) WITH RIGHT TURN ONLY SIGN (R3-5R) AND 24" STOP BAR IN ACCORDANCE WITH CITY AND FDOT STANDARDS
STOP
ONLY
6" FLUSH CURB (SEE SHEET C8.0)
TYPE A CURB PER FDOT INDEX #520-001 (TYP.)
PROPOSED SIDEWALK (SEE C8.3 FOR DETAIL)
R50'
25'
TURN-LANE USE ARROW PER FDOT INDEX #711-001(TYP.)
PROPOSED DIRECTIONAL TURN LANE
6" WHITE 2'-4' DOTTED PER FDOT INDEX #711-001 (TYP.)
MATCH LINE - SEE SHEET C4.2
6" DOUBLE SOLID YELLOW LINES PER FDOT INDEX #711-001 (TYP.)
18" SOLID YELLOW MARKINGS FOR TRAFFIC SEPARATION PER FDOT INDEX #711-001 (TYP.)
ST JOHNS HERITAGE PARKWAY (200' WIDE PUBLIC R/W) ORB 7491, PG 1713
6" WHITE 2'-4' DOTTED PER FDOT INDEX #711-001 (TYP.)
PROPOSED DIRECTIONAL TURN LANE
390'
6" WHITE SOLID PER FDOT INDEX #711-001 (TYP.)
TURN-LANE USE ARROW PER FDOT INDEX #711-001(TYP.)
24" STOP BAR IN ACCORDANCE WITH CITY AND FDOT STANDARDS
163'
256'
105'
50'
SIDEWALK CLOSED (R9-9) IN ACCORDANCE WITH FDOT, ADA, AND MUTCD STANDARDS
DETECTABLE WARNING PER FDOT INDEX #522-002 (TYP.)
18" DIAMOND W/ 9 RED RETROREFLECTIVE DEVICES (OM4-3) (24"x24")
6" 10'-30' YELLOW SKIP LINES PER FDOT INDEX #711-001 (TYP.)
VALLEY GUTTER PER FDOT INDEX #520-001 (TYP.)
6' WIDE CROSSWALK WITH 12" WHITE STRIPING PER FDOT INDEX #711-001 (TYP.)
STOP SIGN (R1-1) AND 24" STOP BAR IN ACCORDANCE WITH CITY AND FDOT STANDARDS
6" DOUBLE SOLID YELLOW LINES PER FDOT INDEX #711-001 (TYP.)
PROPOSED SIDEWALK (SEE C8.3 FOR DETAIL)
FUTURE SIDEWALK EXTENSION
FUTURE EMERSON DRIVE EXTENSION
EMERSON DRIVE (100' WIDE PUBLIC R/W)
311'
TYPE A CURB PER FDOT INDEX #520-001 (TYP.)
FUTURE DIRECTIONAL TURN LANE
R/W LINE
TYPE F CURB PER FDOT INDEX #520-001 (TYP.)
24" STOP BAR IN ACCORDANCE WITH CITY AND FDOT STANDARDS
DETECTABLE WARNING PER FDOT INDEX #522-002 (TYP.)
PROPOSED SIDEWALK (SEE C8.3 FOR DETAIL)
SIDEWALK CLOSED (R9-9) IN ACCORDANCE WITH FDOT, ADA, AND MUTCD STANDARDS
TURN-LANE USE ARROW PER FDOT INDEX #711-001(TYP.)
6" WHITE SOLID PER FDOT INDEX #711-001 (TYP.)
PROPOSED DIRECTIONAL TURN LANE
R40'
6' WIDE SPECIAL EMPHASIS CROSSWALK PER FDOT INDEX #711-001 (TYP.)
24" STOP BAR IN ACCORDANCE WITH CITY AND FDOT STANDARDS
PROPOSED DIRECTIONAL TURN LANE
TURN-LANE USE ARROW PER FDOT INDEX #711-001(TYP.)
TURN-LANE USE ARROW PER FDOT INDEX #711-001(TYP.)
R/W LINE
N00°42'13"E
MATCH LINE - SEE SHEET C4.2

GRAPHIC SCALE IN FEET
0 15 30 60

NOTES:

1. REFER TO ARCHITECTURAL AND STRUCTURAL PLANS TO VERIFY ALL BUILDING DIMENSIONS.
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6. BOLLARDS IN SIDEWALK ADJACENT TO BUILDING SHALL BE COVERED WITH RED PLASTIC COVERS TO BE SUPPLIED BY CONTRACTOR.
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PALM BAY NOTES:

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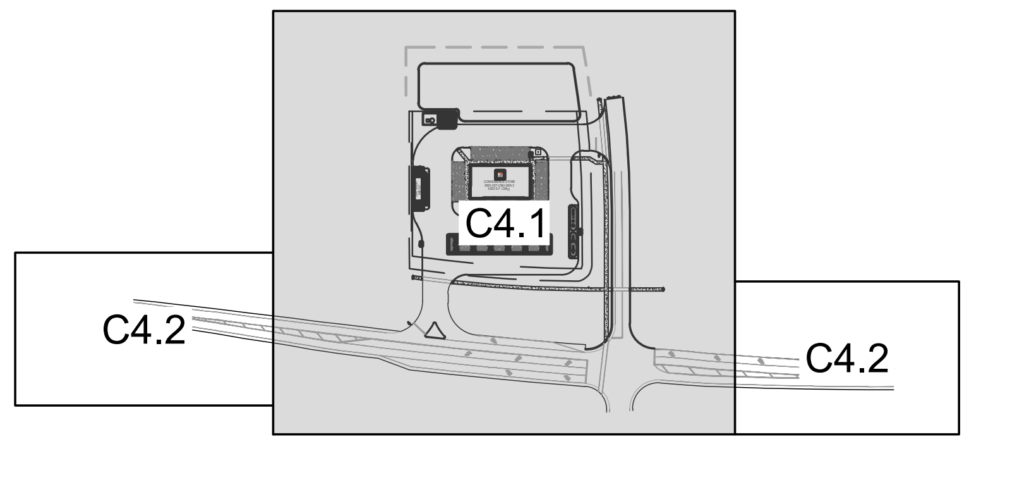
6. DEVELOPMENT AND OPERATION OF THE FUEL PUMPS AND ATTENDANT STORAGE TANKS SHALL COMPLY WITH SEC. 174.042.

LEGEND

▬ ▪ ▪ ▬	PROPERTY BOUNDARY
— —	BUILDING SETBACK
- - -	LANDSCAPE SETBACK
ⓧ	PARKING SPACE COUNT
▩	PROPOSED STANDARD DUTY ASPHALT PAVEMENT (SEE SHEET C7.0)
▨	PROPOSED CITY OF PALM BAY SECTION (SEE SHEET C8.3)
▩	PROPOSED STANDARD DUTY CONCRETE PAVEMENT (SEE SHEET C7.0)
▩	PROPOSED HEAVY DUTY CONCRETE PAVEMENT (SEE SHEET C7.0)
■	PROPOSED TANK SLAB CONCRETE PAVEMENT (SEE SHEET C7.4)
░	PROPOSED CONCRETE SIDEWALK



KEY MAP:
1" = 300'

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200 S. ORANGE AVENUE, SUITE 600, ORLANDO, FL
PHONE: (407) 898-1511
WWW.KIMLEY-HORN.COM REGISTRY No. 35106

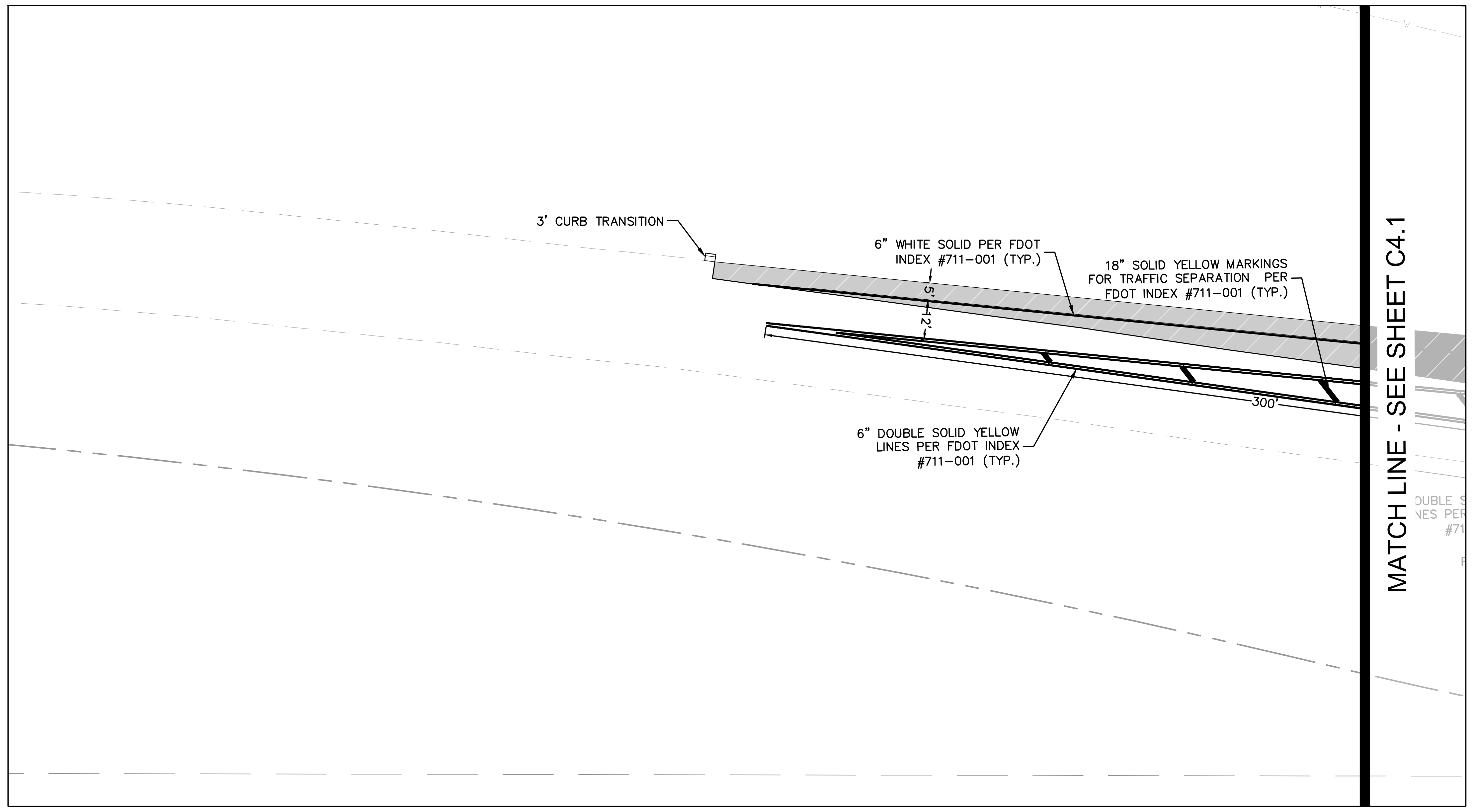
LICENSED PROFESSIONAL DEREK E. RAMSBURG, P.E.
FLORIDA LICENSE NUMBER 88905
DATE: 8/21/2025

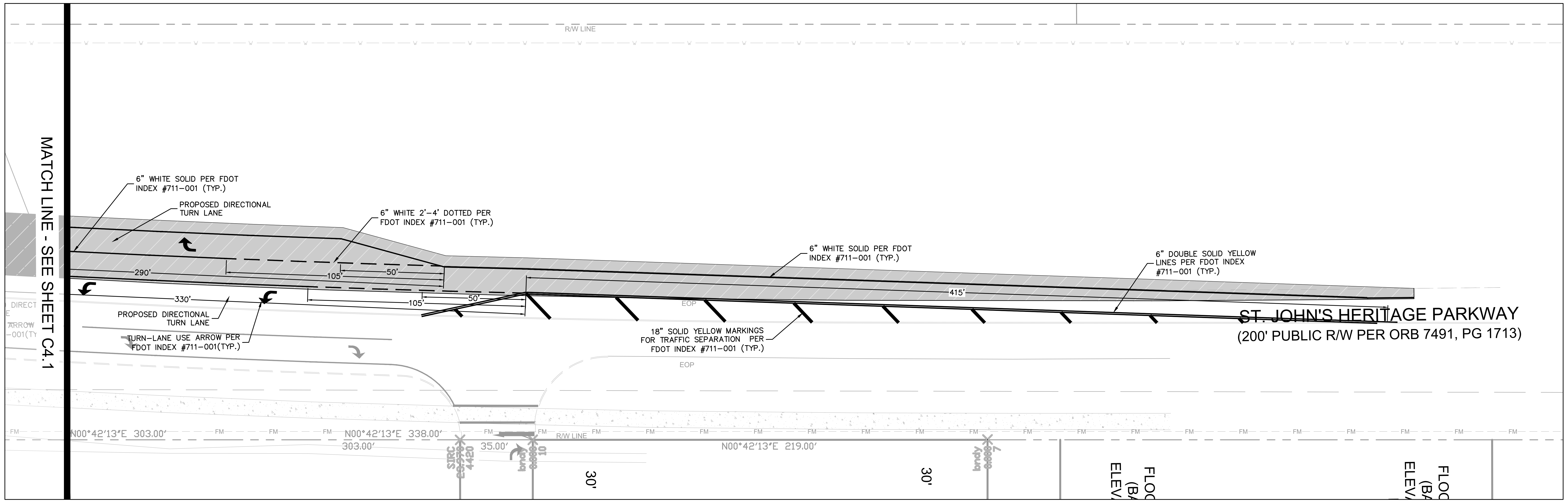
KHA PROJECT	249188006
DATE	8/21/2025
SCALE	AS SHOWN
DESIGNED BY	BMG
DRAWN BY	BMG
CHECKED BY	DER

SITE PLAN

7-11 PALM BAY
CITY OF PALM BAY FLORIDA

SHEET NUMBER
C4.1


3' CURB TRANSITION
6" WHITE SOLID PER FDOT INDEX #711-001 (TYP.)
18" SOLID YELLOW MARKINGS FOR TRAFFIC SEPARATION PER FDOT INDEX #711-001 (TYP.)
5
12
300'
6" DOUBLE SOLID YELLOW LINES PER FDOT INDEX #711-001 (TYP.)
MATCH LINE - SEE SHEET C4.1


R/W LINE
MATCH LINE - SEE SHEET C4.1
6" WHITE SOLID PER FDOT INDEX #711-001 (TYP.)
PROPOSED DIRECTIONAL TURN LANE
6" WHITE 2'-4' DOTTED PER FDOT INDEX #711-001 (TYP.)
290'
105'
50'
330'
105'
50'
415'
PROPOSED DIRECTIONAL TURN LANE
TURN-LANE USE ARROW PER FDOT INDEX #711-001(TYP.)
6" WHITE SOLID PER FDOT INDEX #711-001 (TYP.)
6" DOUBLE SOLID YELLOW LINES PER FDOT INDEX #711-001 (TYP.)
18" SOLID YELLOW MARKINGS FOR TRAFFIC SEPARATION PER FDOT INDEX #711-001 (TYP.)
ST. JOHN'S HERITAGE PARKWAY
(200' PUBLIC R/W PER ORB 7491, PG 1713)
EOP
EOP
FM
N00°42'13"E 303.00'
N00°42'13"E 338.00'
303.00'
35.00'
R/W LINE
N00°42'13"E 219.00'
SIRC
4420
10
30'
30'

VERTICAL DATUM:

ELEVATIONS SHOWN ARE BASED ON NGVD 29 DATUM.

NORTH

GRAPHIC SCALE IN FEET
0 15 30 60

NOTES:

1. REFER TO ARCHITECTURAL AND STRUCTURAL PLANS TO VERIFY ALL BUILDING DIMENSIONS.

2. REFER TO SIGNAGE PLANS FOR MONUMENT SIGN DETAILS.

3. SEE MEP PLANS FOR ELECTRICAL DRAWINGS.

4. ALL PROPOSED ON-SITE STRIPING AND PAVEMENT MARKING WILL BE PAINTED UNLESS OTHERWISE NOTED AND IN ACCORDANCE WITH FDOT INDEX 711-001.

5. REFER TO ARCHITECTURAL PLANS FOR PROPOSED TRASH CAN LOCATIONS AND DESIGN.

6. BOLLARDS IN SIDEWALK ADJACENT TO BUILDING SHALL BE COVERED WITH RED PLASTIC COVERS TO BE SUPPLIED BY CONTRACTOR.

7. BOLLARDS UNDER CANOPY SHALL BE COVERED WITH GRAY PLASTIC COVERS TO BE SUPPLIED BY CONTRACTOR (SEE FUEL PUMP DESIGNER PLANS FOR MORE DETAIL).

8. REFER TO ARCHITECTURAL PLANS FOR SITE LIGHTING AND ELECTRICAL PLANS.

9. ALL SIGNAGE AND PAVEMENT MARKINGS SHALL MEET MUTCD AND FDOT STANDARDS.

10. ALL SIGNAGE SHALL MEET THE REQUIREMENTS OF CITY OF PALM BAY, FL CODE OF ORDINANCES TITLE XVII, CHAPTER 178.

11. PROPERTY OWNER WILL BE RESPONSIBLE FOR MAINTENANCE OF ALL STRIPING AT THE PROPOSED PROJECT ACCESS POINTS INCLUDING PROPOSED STOP BARS, PEDESTRIAN CROSSWALKS, AND DOUBLE YELLOW LANE STRIPES.

PALM BAY NOTES:

1. SIGNAGE AND STRIPING IN THE RIGHT OF WAY ENTRANCE SHALL BE THE RESPONSIBILITY OF THE OWNER TO OWN AND MAINTAIN.

2. ALL STRIPPING WITHIN THE RIGHT-OF-WAYS TO BE THERMOPLASTIC.

3. TRUNCATED DOMES/DETECTABLE WARNINGS IN THE CITY RIGHT OF WAY SHALL BE EMBEDDED PER FDOT SPECIFICATIONS(APL). 'BOLT DOWN' TRUNCATED DOMES/DETECTABLE WARNINGS ARE NOT ALLOWED.

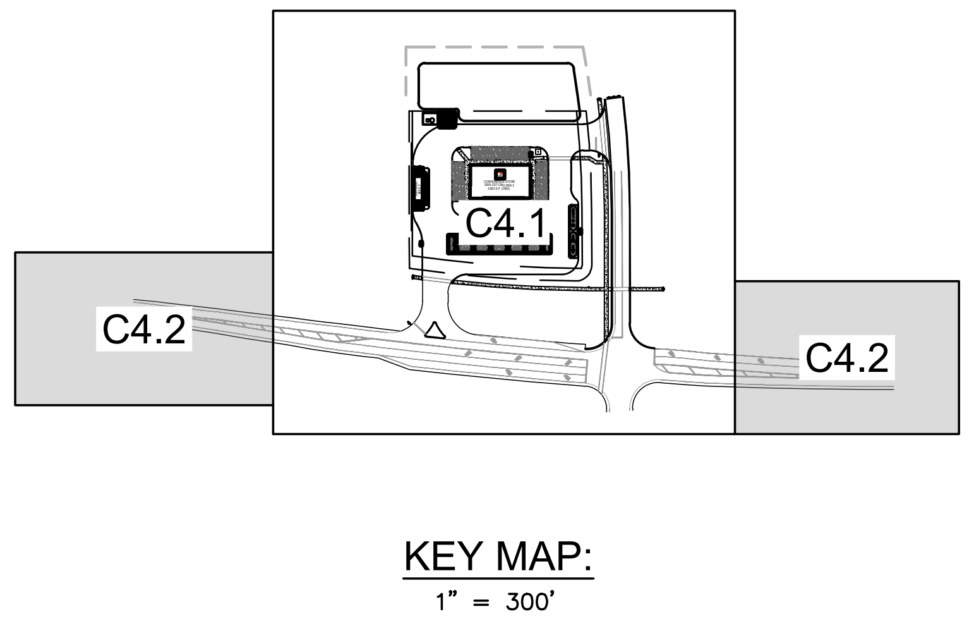
4. WHERE NEW PAVEMENT IS CONSTRUCTED ADJACENT TO EXISTING PAVEMENT, THE EXISTING ASPHALT SHALL BE SAW CUT AND REMOVED 12 INCHES FROM THE EDGE OF THE ASPHALT TO OFFSET THE ASPHALT/BASE COURSE JOINT.

5. UNDERGROUND STORAGE IS REQUIRED FOR ALL RECEPTACLES FOR COMBUSTIBLE MATERIALS IN EXCESS OF TWO HUNDRED (200) GALLONS. SEC. 174.041(E)

6. DEVELOPMENT AND OPERATION OF THE FUEL PUMPS AND ATTENDANT STORAGE TANKS SHALL COMPLY WITH SEC. 174.042.

LEGEND

━ ·· ━	PROPERTY BOUNDARY
— —	BUILDING SETBACK
- - -	LANDSCAPE SETBACK
ⓧ	PARKING SPACE COUNT
▨	PROPOSED STANDARD DUTY ASPHALT PAVEMENT (SEE SHEET C7.4)
▨	PROPOSED CITY OF PALM BAY SECTION (SEE SHEET C8.3)
▨	PROPOSED STANDARD DUTY CONCRETE PAVEMENT (SEE SHEET C7.4)
▨	PROPOSED HEAVY DUTY CONCRETE PAVEMENT (SEE SHEET C7.4)
▨	PROPOSED TANK SLAB CONCRETE PAVEMENT (SEE SHEET C7.4)
▨	PROPOSED CONCRETE SIDEWALK



KEY MAP:
1" = 300'

No.	REVISIONS	DATE	BY

Kimley»Horn

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CHECKED BY	DER

SITE PLAN

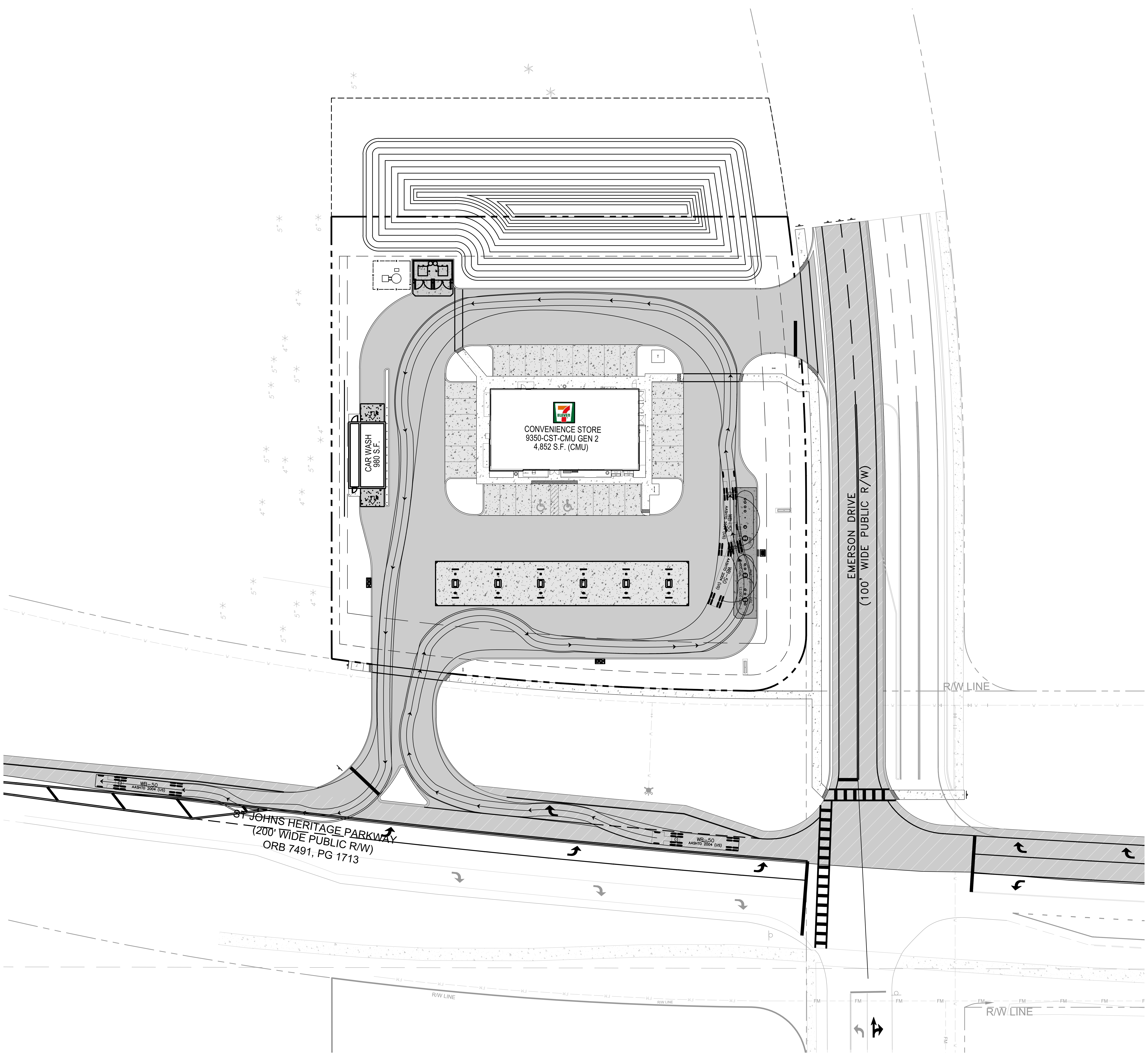
7-11 PALM BAY

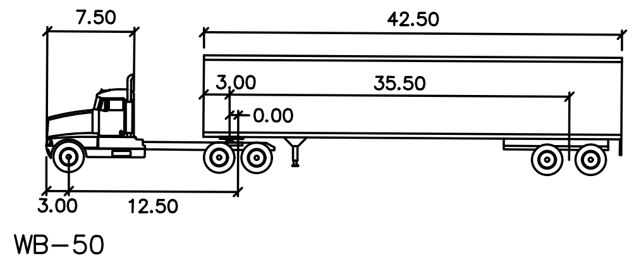
CITY OF PALM BAY FLORIDA

SHEET NUMBER
C4.2

VERTICAL DATUM:

ELEVATIONS SHOWN ARE BASED ON NGVD 29 DATUM.


NORTH
GRAPHIC SCALE IN FEET
0
15
30
60
CONVENIENCE STORE
9350-CST-CMU GEN 2
4,852 S.F. (CMU)
CAR WASH
980 S.F.
EMERSON DRIVE
(100' WIDE PUBLIC R/W)
ST JOHNS HERITAGE PARKWAY
(200' WIDE PUBLIC R/W)
ORB 7491, PG 1713
R/W LINE
R/W LINE
R/W LINE
WB-50
AASHTO 2004 (US)
WB-50
AASHTO 2004 (US)


7.50
42.50
3.00
35.50
0.00
3.00
12.50
WB-50

	feet		
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 17.7
Tractor Track	: 8.00	Articulating Angle	: 70.0
Trailer Track	: 8.50		

Always call 811 two full business days before you dig to have underground utilities located and marked.

Sunshine811.com

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FLORIDA LICENSE NUMBER
88905
DATE: 8/21/2025

KHA PROJECT
249188006
DATE
8/21/2025
SCALE AS SHOWN
DESIGNED BY BMG
DRAWN BY BMG
CHECKED BY DER

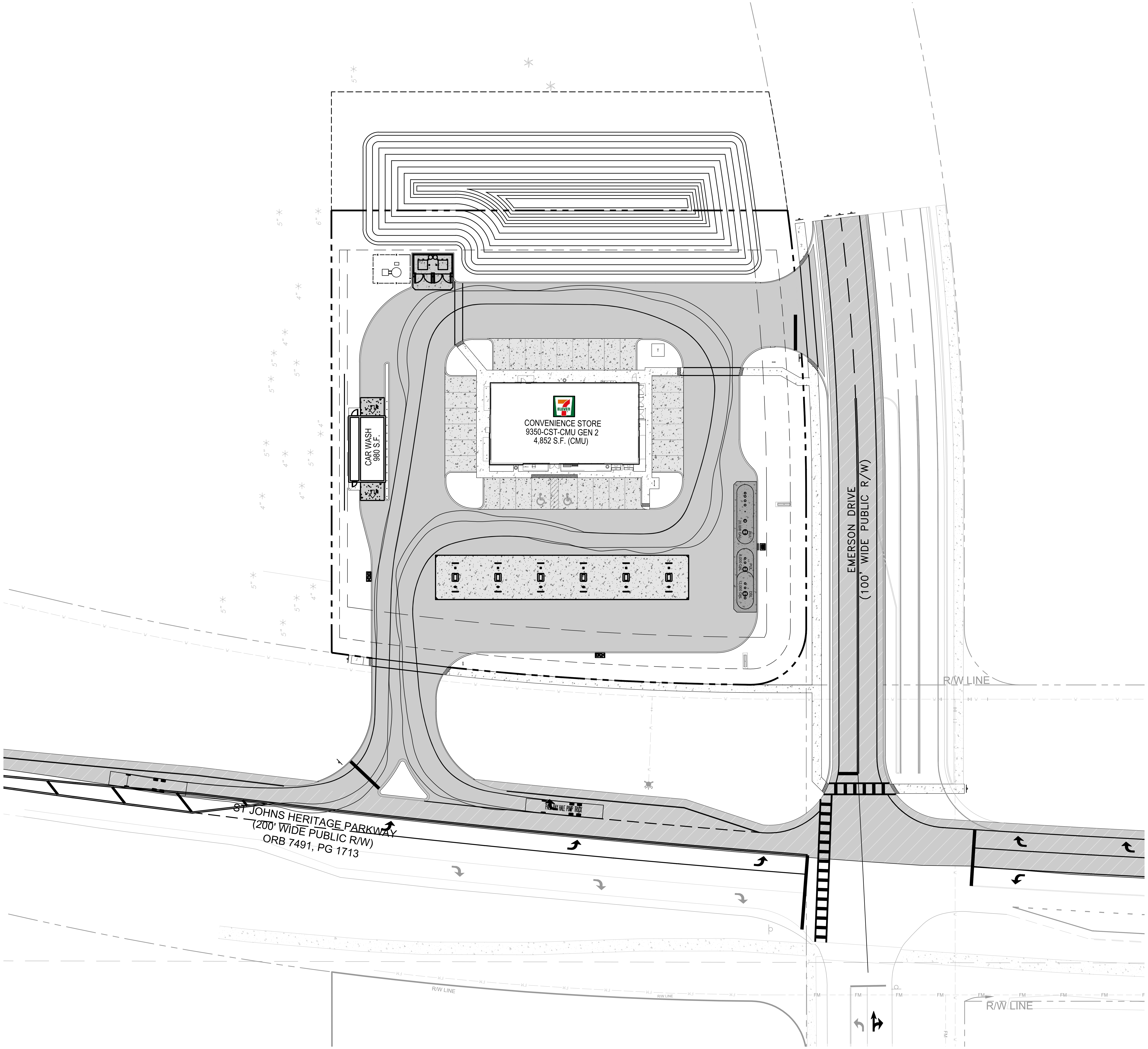
TRUCK ROUTING PLAN

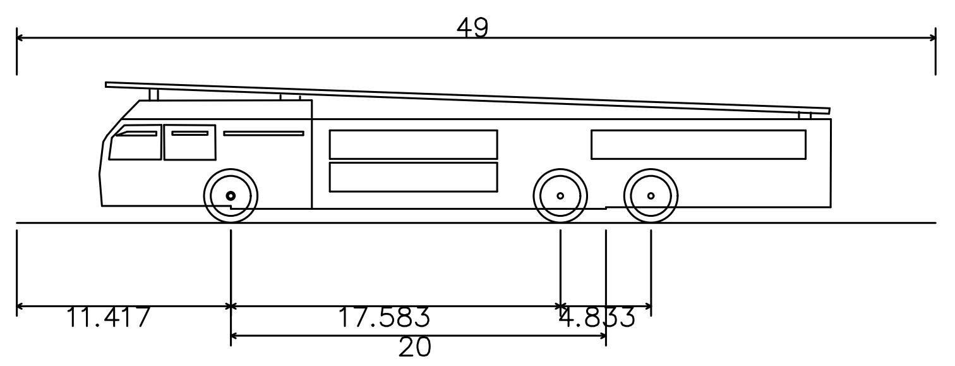
7-11 PALM BAY

CITY OF PALM BAY FLORIDA

SHEET NUMBER
C4.3

VERTICAL DATUM:
ELEVATIONS SHOWN ARE BASED ON NGVD 29 DATUM.


NORTH
GRAPHIC SCALE IN FEET
0
15
30
60
CONVENIENCE STORE
9350-CST-CMU GEN 2
4,852 S.F. (CMU)
CAR WASH
980 S.F.
EMERSON DRIVE
(100' WIDE PUBLIC R/W)
ST JOHNS HERITAGE PARKWAY
(200' WIDE PUBLIC R/W)
ORB 7491, PG 1713
R/W LINE
R/W LINE
R/W LINE
PALM BAY HALE PUMP TRUCK


49
11.417
17.583
4.833
20

PALM BAY HALE PUMP TRUCK

Overall Length	49.000ft
Overall Width	8.500ft
Overall Body Height	7.500ft
Min Body Ground Clearance	0.750ft
Track Width	8.167ft
Lock-to-lock time	5.00s
Max Wheel Angle	38.00°

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88965
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KHA PROJECT	249188006
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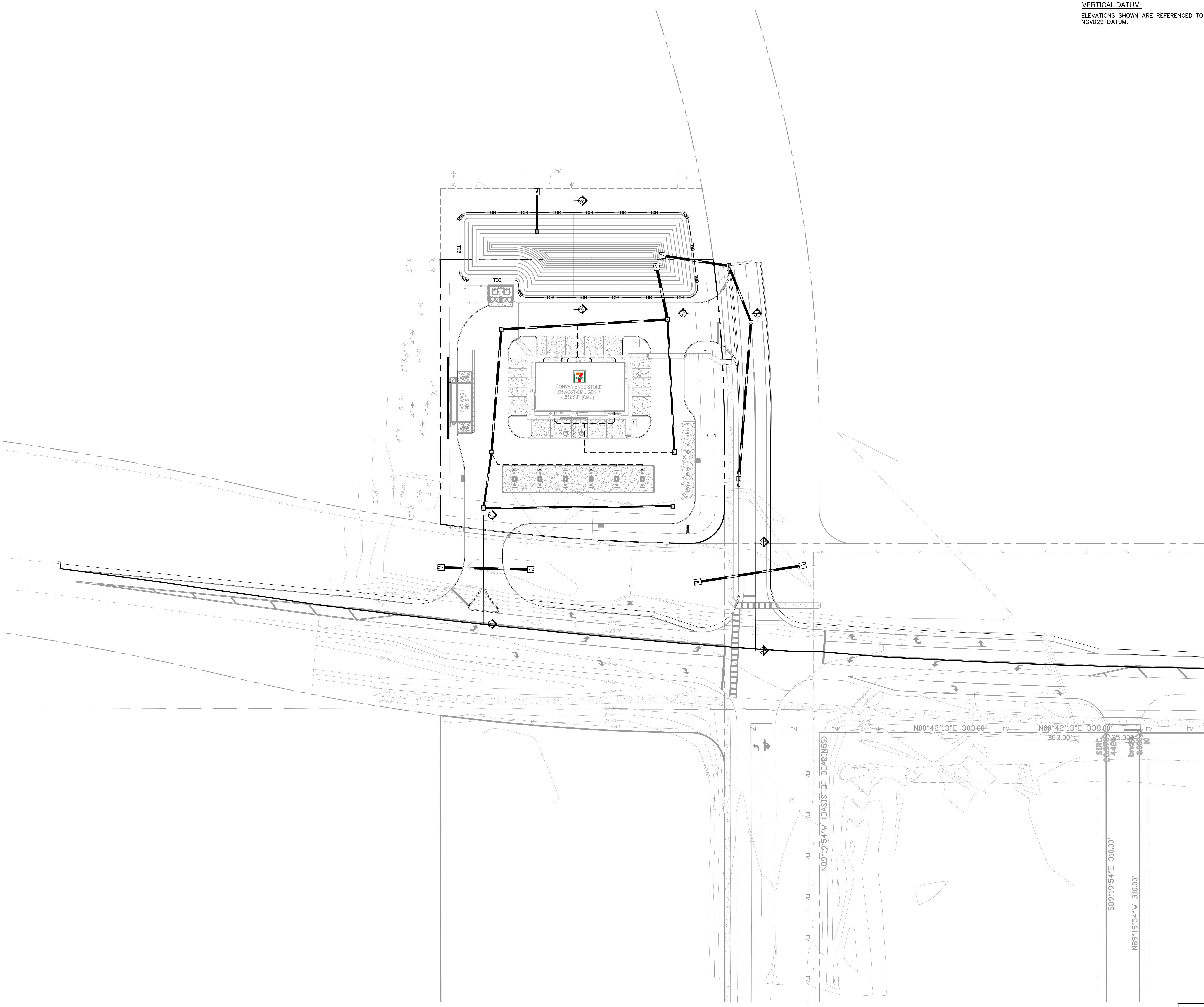
DRAWN BY	BMG
CHECKED BY	DER

FIRETRUCK ROUTING PLAN

7-11 PALM BAY

CITY OF PALM BAY
FLORIDA

SHEET NUMBER
C4.4



VERTICAL DATUM:

ELEVATIONS SHOWN ARE REFERENCED TO NGVD29 DATUM.

GRAPHIC SCALE IN FEET

0 25 50 100

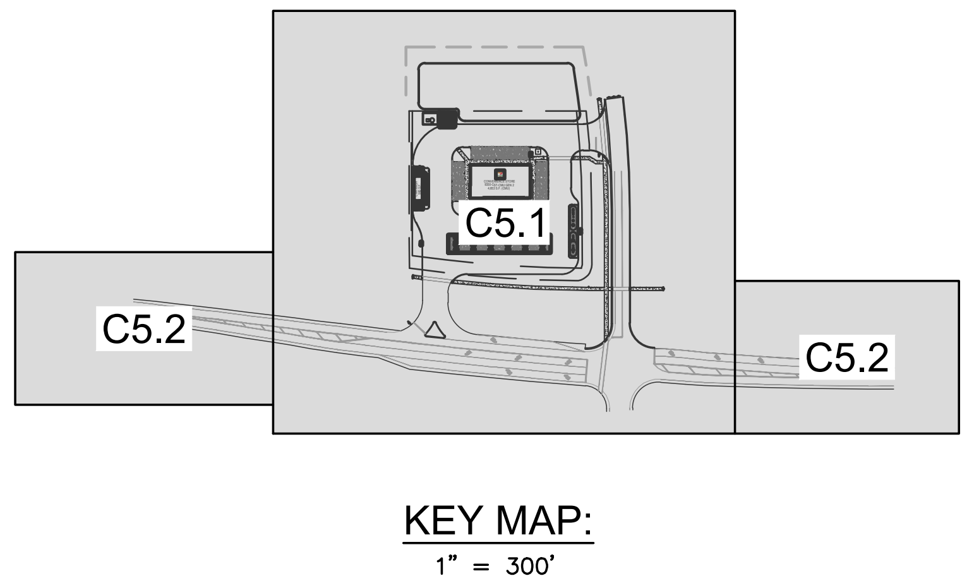
NORTH

NOTES:

1. ALL STORM PIPES LABELED "HDPE" SHALL BE ADS HIGH PERFORMANCE (HP) POLYPROPYLENE STORM SEWER PIPE.
2. CURB RAMPS ALONG PUBLIC STREETS AND IN THE PUBLIC RIGHT-OF-WAY SHALL BE CONSTRUCTED IN ACCORDANCE WITH FDOT STANDARDS AND SPECIFICAITONS.
3. PRIVATE CURB RAMPS ON THE SITE (I.E. OUTSIDE PUBLIC STREET RIGHT-OF-WAY) SHALL CONFORM TO ADA STANDARDS AND SHALL HAVE A DETECTABLE WARNING SURFACE THAT IS FULL WIDTH AND FULL DEPTH OF THE CURB RAMP, NOT INCLUDING FLARES.
4. ALL ACCESSIBLE ROUTES, GENERAL SITE AND BUILDING ELEMENTS, RAMPS, CURB RAMPS, STRIPING, AND PAVEMENT MARKINGS SHALL CONFORM TO ADA STANDARDS FOR ACCESSIBLE DESIGN, LATEST EDITION.
5. BEFORE PLACING PAVEMENT, CONTRACTOR SHALL VERIFY THAT SUITABLE ACCESSIBLE PEDESTRIAN ROUTES (PER ADA AND FHA) EXIST TO AND FROM EVERY DOOR AND ALONG SIDEWALKS, ACCESSIBLE PARKING SPACES, ACCESS AISLES, AND ACCESSIBLE ROUTES. IN NO CASE SHALL AN ACCESSIBLE RAMP SLOPE EXCEED 1 VERTICAL TO 12 HORIZONTAL. IN NO CASE SHALL SIDEWALK CROSS SLOPE EXCEED 2.0 PERCENT. IN NO CASE SHALL LONGITUDINAL SIDEWALK SLOPE EXCEED 5.0 PERCENT. ACCESSIBLE PARKING SPACES AND ACCESS AISLES SHALL NOT EXCEED 2.0 PERCENT SLOPE IN ANY DIRECTION.
6. CONTRACTOR SHALL TAKE FIELD SLOPE MEASUREMENTS ON FINISHED SUBGRADE AND FORM BOARDS PRIOR TO PLACING PAVEMENT TO VERIFY THAT ADA SLOPE REQUIREMENTS ARE PROVIDED. CONTRACTOR SHALL CONTACT ENGINEER PRIOR TO PAVING IF ANY EXCESSIVE SLOPES ARE ENCOUNTERED. NO CONTRACTOR CHANGE ORDERS WILL BE ACCEPTED FOR ADA SLOPE COMPLIANCE ISSUES.
7. ALL PEDESTRIAN SIDEWALKS, PATHWAYS, AND CROSSWALKS SHALL BE CONSTRUCTED NOT TO EXCEED MAX. 2.0% CROSS SLOPE, MAX. 5.0% RUNNING SLOPE.
8. ALL HANDICAP ACCESSIBLE PARKING SPACES SHALL BE CONSTRUCTED NOT TO EXCEED MAX. 2.0% CROSS SLOPE IN ALL DIRECTIONS.
9. PROPOSED GRADES TO MATCH EXISTING ELEVATIONS AT PROPERTY LINE
10. PRIOR TO THE CONSTRUCTION OF OR CONNECTION TO ANY STORM DRAIN, SANITARY SEWER, WATER MAIN OR ANY OTHER UTILITIES, THE CONTRACTOR SHALL EXCAVATE, VERIFY AND CALCULATE ALL POINTS OF CONNECTION AND ALL UTILITY CROSSINGS AND INFORM THE ENGINEER AND THE OWNER/ DEVELOPER OF ANY CONFLICT OR REQUIRED DEVIATIONS FROM THE PLAN. NOTIFICATION SHALL BE MADE A MINIMUM OF 72 HOURS PRIOR TO CONSTRUCTION. THE ENGINEER AND ITS CLIENTS SHALL BE HELD HARMLESS IN THE EVENT THAT THE CONTRACTOR FAILS TO MAKE SUCH NOTIFICATION. THE CITY OF PALM BAY SHALL BE NOTIFIED OF ANY AND ALL CHANGES TO THE DESIGN PLANS.
11. CONTRACTOR TO FIELD VERIFY ELEVATIONS AT ALL EXISTING SIDEWALK AND ROAD CONNECTION POINTS WITH ENGINEER OF RECORD BEFORE CONSTRUCTION OF ANY IMPROVEMENTS.
12. FOR EROSION CONTROL NOTES REFER TO SHEET C2.0.
13. ALL DRAINAGE PIPES SHALL BE FILTER FABRIC WRAPPED PER FDOT STANDARD PLAN #430-001.
14. CONTRACTOR TO ENSURE ADEQUATE COVER REMAINS OVER ALL EXISTING UTILITIES.
15. CONTRACTOR TO VERIFY EXISTING COVER OVER ALL UTILITIES BEFORE START OF CONSTRUCTION AND TO COORDINATE WITH THE ENGINEER OF RECORD PRIOR TO START OF CONSTRUCTION IF DESIGN DOES NOT PROVIDE 36" COVER.
16. ALL EXISTING VALVES, BOXES, MANHOLE LIDS, COVERS, AND SIMILAR APPURTENANCES MUST BE ADJUSTED ACCORDINGLY TO MATCH FINISHED GRADE.

LEGEND

▬ ▪ ▪ ▬	PROPERTY LINE
▬▬▬	PROPOSED STORM PIPE
Ⓓ	PROPOSED STORM MANHOLE
▣	PROPOSED STORM INLET
◺	PROPOSED MITERED END SECTION
XX.XX XX.XX	PROPOSED ELEV. TOP OF CURB PROPOSED ELEV. BOTT. OF CURB
XX.XX	PROPOSED SPOT ELEVATION
—140—	PROPOSED CONTOUR
▬▬▬	EXISTING STORM PIPE
Ⓓ	EXISTING STORM MANHOLE
▣	EXISTING STORM INLET



KEY MAP:

1" = 300'

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KHA PROJECT 249188006	DATE 8/21/2025
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CHECKED BY	DER

OVERALL PAVING, GRADING, AND DRAINAGE PLAN

7-11 PALM BAY

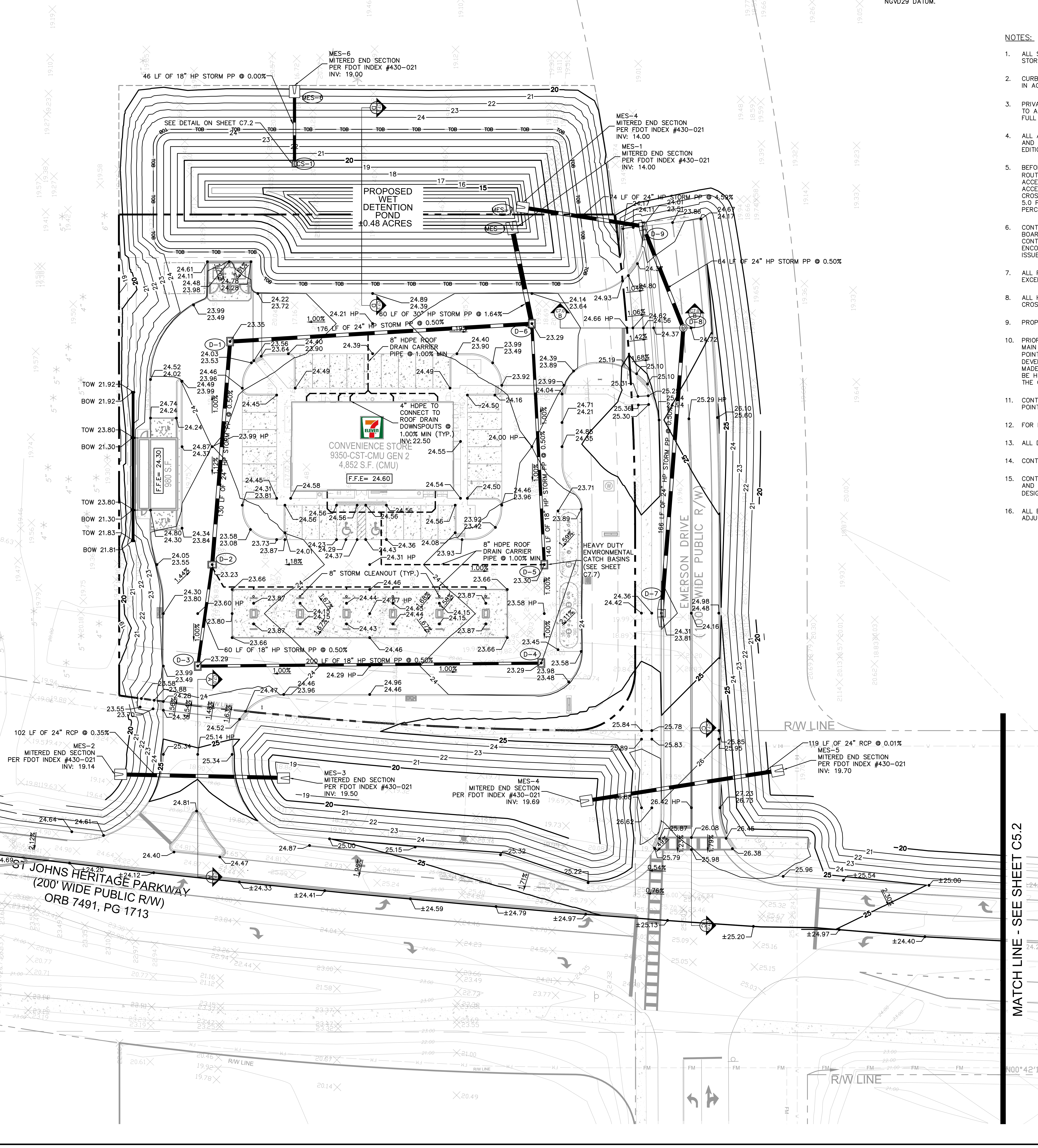
CITY OF PALM BAY FLORIDA

SHEET NUMBER
C5.0

STRUCTURE TABLE

STRUCTURE NAME:	DETAILS:
D-1	TYPE "D" INLET PER FDOT INDEX #425-052 TOP: 23.35 E. INV IN: 15.87 N. INV OUT: 15.87
D-2	TYPE "D" INLET PER FDOT INDEX #425-052 TOP: 23.23 E. INV IN: 16.52 N. INV IN: 16.52 W. INV OUT: 16.52
D-3	TYPE "D" INLET PER FDOT INDEX #425-052 TOP: 23.29 N. INV IN: 16.82 W. INV OUT: 16.82
D-4	TYPE "D" INLET PER FDOT INDEX #425-052 TOP: 23.29 S. INV OUT: 17.82
D-5	TYPE "D" INLET PER FDOT INDEX #425-052 TOP: 23.30 S. INV IN: 15.69 W. INV OUT: 15.69
D-6	TYPE "D" INLET PER FDOT INDEX #425-052 TOP: 23.29 E. INV IN: 14.99 S. INV IN: 14.99 W. INV OUT: 14.99
D-7	TYPE "6" CURB INLET PER FDOT INDEX #425-021 TOP: 23.81 W. INV OUT: 18.56
D-8	TYPE "P7" MANHOLE PER FDOT INDEX #425-021 TOP: 24.63 E. INV IN: 17.73 W. INV OUT: 17.73
D-9	TYPE "5" CURB INLET PER FDOT INDEX #425-021 TOP: 23.51 E. INV IN: 17.41 S. INV OUT: 17.41

MATCH LINE - SEE SHEET C5.2


MES-6
MITERED END SECTION
PER FDOT INDEX #430-021
INV: 19.00
46 LF OF 18" HP STORM PP @ 0.00%
SEE DETAIL ON SHEET C7.2
PROPOSED WET DETENTION POND ±0.48 ACRES
MES-4
MITERED END SECTION
PER FDOT INDEX #430-021
INV: 14.00
MES-1
MITERED END SECTION
PER FDOT INDEX #430-021
INV: 14.00
74 LF OF 24" HP STORM PP @ 4.59%
64 LF OF 24" HP STORM PP @ 0.50%
60 LF OF 30" HP STORM PP @ 1.64%
176 LF OF 24" HP STORM PP @ 0.50%
8" HDPE ROOF DRAIN CARRIER PIPE @ 1.00% MIN
4" HDPE TO CONNECT TO ROOF DRAIN DOWNSPOUTS @ 1.00% MIN (TYP.) INV: 22.50
CONVENIENCE STORE
9350-CST-CMU GEN 2
4,852 S.F. (CMU)
F.F.E= 24.60
F.F.E= 24.30
980 S.F.
130 LF OF 24" HP STORM PP @ 0.50%
140 LF OF 18" HP STORM PP @ 0.50%
166 LF OF 24" HP STORM PP @ 0.50%
8" HDPE ROOF DRAIN CARRIER PIPE @ 1.00% MIN
8" STORM CLEANOUT (TYP.)
HEAVY DUTY ENVIRONMENTAL CATCH BASINS (SEE SHEET C7.7)
60 LF OF 18" HP STORM PP @ 0.50%
200 LF OF 18" HP STORM PP @ 0.50%
EMERSON DRIVE (100' WIDE PUBLIC R/W)
D-1
D-2
D-3
D-4
D-5
D-6
D-7
D-8
D-9
TOW 21.92
BOW 21.92
TOW 23.80
BOW 21.30
TOW 23.80
BOW 21.30
TOW 21.83
BOW 21.81
102 LF OF 24" RCP @ 0.35%
MES-2
MITERED END SECTION
PER FDOT INDEX #430-021
INV: 19.14
MES-3
MITERED END SECTION
PER FDOT INDEX #430-021
INV: 19.50
MES-4
MITERED END SECTION
PER FDOT INDEX #430-021
INV: 19.69
119 LF OF 24" RCP @ 0.01%
MES-5
MITERED END SECTION
PER FDOT INDEX #430-021
INV: 19.70
R/W LINE
ST JOHNS HERITAGE PARKWAY
(200' WIDE PUBLIC R/W)
ORB 7491, PG 1713
MATCH LINE - SEE SHEET C5.2
N00°42'13"E

VERTICAL DATUM:
ELEVATIONS SHOWN ARE REFERENCED TO NGVD29 DATUM.

GRAPHIC SCALE IN FEET
0 15 30 60

NORTH

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12. FOR EROSION CONTROL NOTES REFER TO SHEET C2.0.
13. ALL DRAINAGE PIPES SHALL BE FILTER FABRIC WRAPPED PER FDOT STANDARD PLAN #430-001.
14. CONTRACTOR TO ENSURE ADEQUATE COVER REMAINS OVER ALL EXISTING UTILITIES.
15. CONTRACTOR TO VERIFY EXISTING COVER OVER ALL UTILITIES BEFORE START OF CONSTRUCTION AND TO COORDINATE WITH THE ENGINEER OF RECORD PRIOR TO START OF CONSTRUCTION IF DESIGN DOES NOT PROVIDE 36" COVER.
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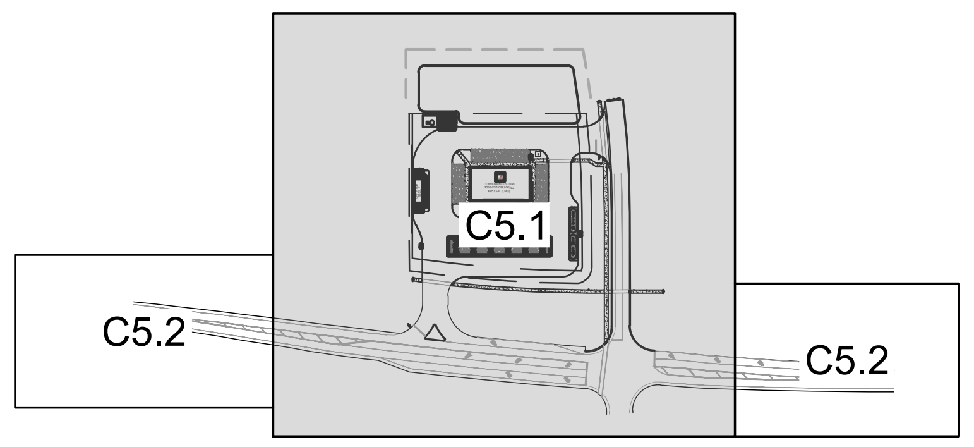
LEGEND

▬	PROPERTY LINE
▬	PROPOSED STORM PIPE
Ⓓ	PROPOSED STORM MANHOLE
▨	PROPOSED STORM INLET
◁	PROPOSED MITERED END SECTION
XX.XX XX.XX	PROPOSED ELEV. TOP OF CURB PROPOSED ELEV. BOTT. OF CURB
XX.XX	PROPOSED SPOT ELEVATION
—140—	PROPOSED CONTOUR
▬	EXISTING STORM PIPE
Ⓓ	EXISTING STORM MANHOLE
▨	EXISTING STORM INLET



KEY MAP:
1" = 300'

Always call 811 two full business days before you dig to have underground utilities located and marked.
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No.	REVISIONS	DATE	BY

Kimley»Horn
© 2025 KIMLEY-HORN AND ASSOCIATES, INC.
200 S. ORANGE AVENUE, SUITE 600, ORLANDO, FL
PHONE: (407) 898-1511
WWW.KIMLEY-HORN.COM REGISTRY No. 35106

LICENSED PROFESSIONAL
DEREK E. RAMSBURG, P.E.
FLORIDA LICENSE NUMBER
88965
DATE: 8/21/2025

KHA PROJECT
249188006
DATE
8/21/2025
SCALE AS SHOWN
DESIGNED BY BMG
DRAWN BY BMG
CHECKED BY DER

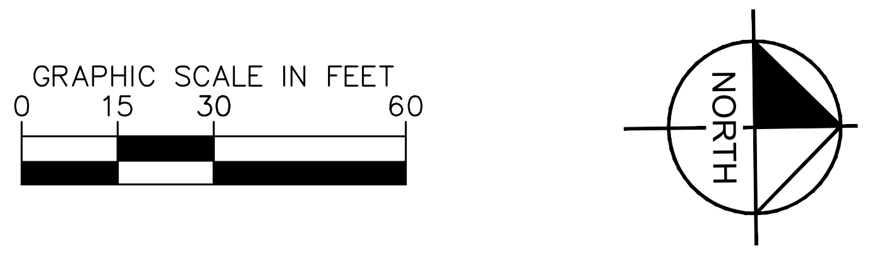
PAVING, GRADING, AND DRAINAGE PLAN

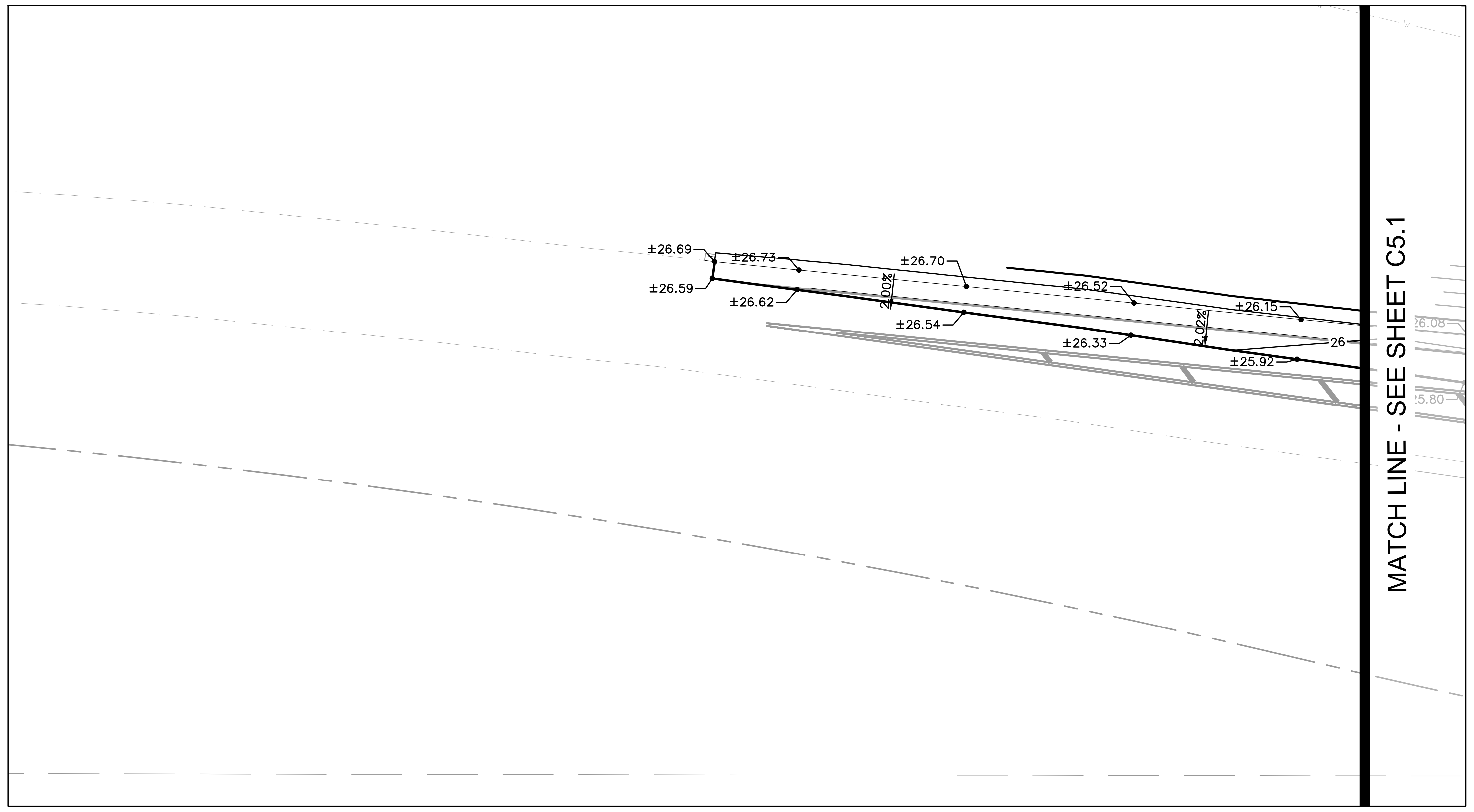
7-11 PALM BAY

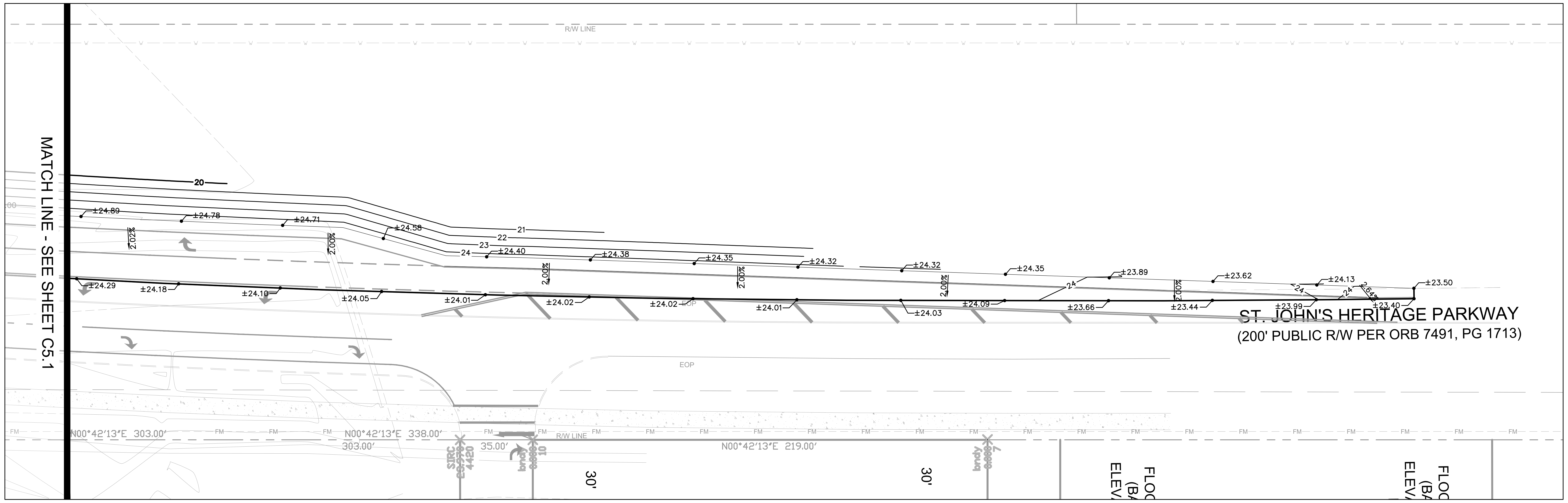
CITY OF PALM BAY FLORIDA

SHEET NUMBER
C5.1

VERTICAL DATUM:
ELEVATIONS SHOWN ARE REFERENCED TO NGVD29 DATUM.


GRAPHIC SCALE IN FEET
0
15
30
60
NORTH


MATCH LINE - SEE SHEET C5.1
±26.69
±26.59
±26.73
±26.62
±26.70
±26.54
±26.52
±26.33
±26.15
±25.92
2.00%
2.02%
26

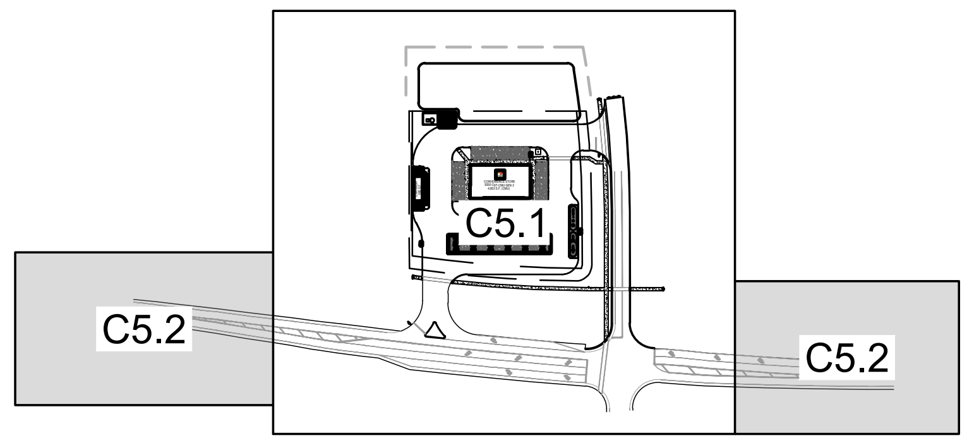

R/W LINE
MATCH LINE - SEE SHEET C5.1
20
21
22
23
24
±24.89
±24.78
±24.71
±24.58
±24.40
±24.38
±24.35
±24.32
±24.32
±24.35
±23.89
±23.62
±24.13
±23.50
±24.29
±24.18
±24.10
±24.05
±24.01
±24.02
±24.02
±24.01
±24.03
±24.09
±23.66
±23.44
±23.99
±23.40
2.02%
2.00%
ST. JOHN'S HERITAGE PARKWAY
(200' PUBLIC R/W PER ORB 7491, PG 1713)
EOP
N00°42'13"E 303.00'
N00°42'13"E 338.00'
303.00'
35.00'
N00°42'13"E 219.00'
R/W LINE
SIRC
4420
bndy
10
bndy
7
30'
30'
FM

NOTES:

1. ALL STORM PIPES LABELED "HDPE" SHALL BE ADS HIGH PERFORMANCE (HP) POLYPROPYLENE STORM SEWER PIPE.
2. CURB RAMPS ALONG PUBLIC STREETS AND IN THE PUBLIC RIGHT-OF-WAY SHALL BE CONSTRUCTED IN ACCORDANCE WITH FDOT STANDARDS AND SPECIFICAITONS.
3. PRIVATE CURB RAMPS ON THE SITE (I.E. OUTSIDE PUBLIC STREET RIGHT-OF-WAY) SHALL CONFORM TO ADA STANDARDS AND SHALL HAVE A DETECTABLE WARNING SURFACE THAT IS FULL WIDTH AND FULL DEPTH OF THE CURB RAMP, NOT INCLUDING FLARES.
4. ALL ACCESSIBLE ROUTES, GENERAL SITE AND BUILDING ELEMENTS, RAMPS, CURB RAMPS, STRIPING, AND PAVEMENT MARKINGS SHALL CONFORM TO ADA STANDARDS FOR ACCESSIBLE DESIGN, LATEST EDITION.
5. BEFORE PLACING PAVEMENT, CONTRACTOR SHALL VERIFY THAT SUITABLE ACCESSIBLE PEDESTRIAN ROUTES (PER ADA AND FHA) EXIST TO AND FROM EVERY DOOR AND ALONG SIDEWALKS, ACCESSIBLE PARKING SPACES, ACCESS AISLES, AND ACCESSIBLE ROUTES. IN NO CASE SHALL AN ACCESSIBLE RAMP SLOPE EXCEED 1 VERTICAL TO 12 HORIZONTAL. IN NO CASE SHALL SIDEWALK CROSS SLOPE EXCEED 2.0 PERCENT. IN NO CASE SHALL LONGITUDINAL SIDEWALK SLOPE EXCEED 5.0 PERCENT. ACCESSIBLE PARKING SPACES AND ACCESS AISLES SHALL NOT EXCEED 2.0 PERCENT SLOPE IN ANY DIRECTION.
6. CONTRACTOR SHALL TAKE FIELD SLOPE MEASUREMENTS ON FINISHED SUBGRADE AND FORM BOARDS PRIOR TO PLACING PAVEMENT TO VERIFY THAT ADA SLOPE REQUIREMENTS ARE PROVIDED. CONTRACTOR SHALL CONTACT ENGINEER PRIOR TO PAVING IF ANY EXCESSIVE SLOPES ARE ENCOUNTERED. NO CONTRACTOR CHANGE ORDERS WILL BE ACCEPTED FOR ADA SLOPE COMPLIANCE ISSUES.
7. ALL PEDESTRIAN SIDEWALKS, PATHWAYS, AND CROSSWALKS SHALL BE CONSTRUCTED NOT TO EXCEED MAX. 2.0% CROSS SLOPE, MAX. 5.0% RUNNING SLOPE.
8. ALL HANDICAP ACCESSIBLE PARKING SPACES SHALL BE CONSTRUCTED NOT TO EXCEED MAX. 2.0% CROSS SLOPE IN ALL DIRECTIONS.
9. PROPOSED GRADES TO MATCH EXISTING ELEVATIONS AT PROPERTY LINE
10. PRIOR TO THE CONSTRUCTION OF OR CONNECTION TO ANY STORM DRAIN, SANITARY SEWER, WATER MAIN OR ANY OTHER UTILITIES, THE CONTRACTOR SHALL EXCAVATE, VERIFY AND CALCULATE ALL POINTS OF CONNECTION AND ALL UTILITY CROSSINGS AND INFORM THE ENGINEER AND THE OWNER/ DEVELOPER OF ANY CONFLICT OR REQUIRED DEVIATIONS FROM THE PLAN. NOTIFICATION SHALL BE MADE A MINIMUM OF 72 HOURS PRIOR TO CONSTRUCTION. THE ENGINEER AND ITS CLIENTS SHALL BE HELD HARMLESS IN THE EVENT THAT THE CONTRACTOR FAILS TO MAKE SUCH NOTIFICATION. THE CITY OF PALM BAY SHALL BE NOTIFIED OF ANY AND ALL CHANGES TO THE DESIGN PLANS.
11. CONTRACTOR TO FIELD VERIFY ELEVATIONS AT ALL EXISTING SIDEWALK AND ROAD CONNECTION POINTS WITH ENGINEER OF RECORD BEFORE CONSTRUCTION OF ANY IMPROVEMENTS.
12. FOR EROSION CONTROL NOTES REFER TO SHEET C2.0.
13. ALL DRAINAGE PIPES SHALL BE FILTER FABRIC WRAPPED PER FDOT STANDARD PLAN #430-001.
14. CONTRACTOR TO ENSURE ADEQUATE COVER REMAINS OVER ALL EXISTING UTILITIES.
15. CONTRACTOR TO VERIFY EXISTING COVER OVER ALL UTILITIES BEFORE START OF CONSTRUCTION AND TO COORDINATE WITH THE ENGINEER OF RECORD PRIOR TO START OF CONSTRUCTION IF DESIGN DOES NOT PROVIDE 36" COVER.
16. ALL EXISTING VALVES, BOXES, MANHOLE LIDS, COVERS, AND SIMILAR APPURTENANCES MUST BE ADJUSTED ACCORDINGLY TO MATCH FINISHED GRADE.

LEGEND

▬ ▪ ▪ ▬	PROPERTY LINE
▬	PROPOSED STORM PIPE
Ⓓ	PROPOSED STORM MANHOLE
▣	PROPOSED STORM INLET
◫	PROPOSED MITERED END SECTION
XX.XX XX.XX	PROPOSED ELEV. TOP OF CURB PROPOSED ELEV. BOTT. OF CURB
XX.XX	PROPOSED SPOT ELEVATION
—140—	PROPOSED CONTOUR
▬	EXISTING STORM PIPE
Ⓓ	EXISTING STORM MANHOLE
▣	EXISTING STORM INLET



KEY MAP:
1" = 300'

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SCALE	AS SHOWN
DESIGNED BY	BMG
DRAWN BY	BMG
CHECKED BY	DER

PAVING, GRADING, AND DRAINAGE PLAN

7-11 PALM BAY

CITY OF PALM BAY FLORIDA

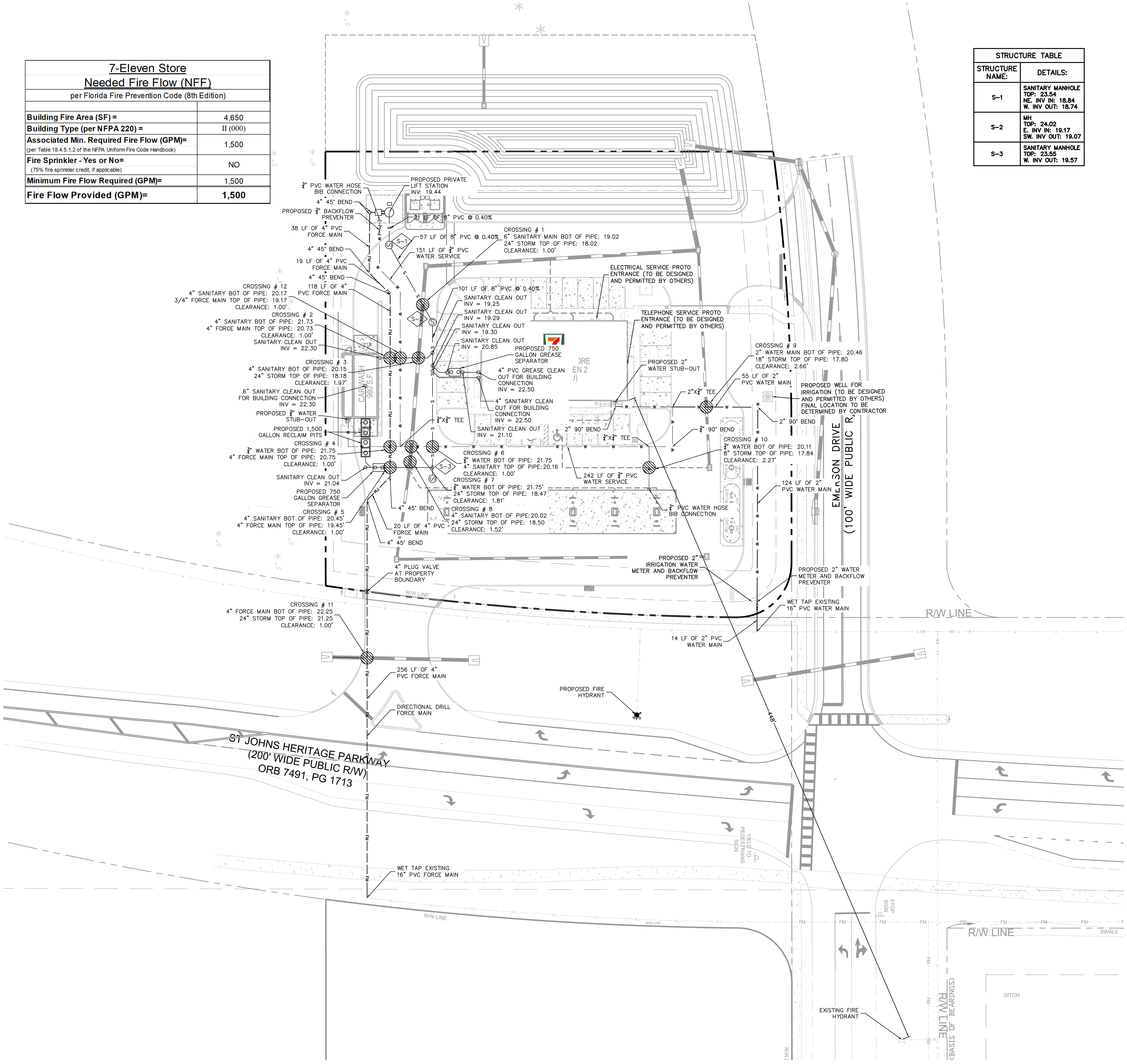
SHEET NUMBER
C5.2

Plotted By: Guidry, Blake Sheet Set: 7-11 PALM BAY Layout: C5.2 August 21, 2025 12:50:45pm K:\ORL_Civil\249188006-7-11 Palm Bay\CADD\CONST\PlanSheets\C5.0 PGD.dwg

7-Eleven Store
Needed Fire Flow (NFF)

per Florida Fire Prevention Code (8th Edition)

Building Fire Area (SF) =	4,650
Building Type (per NFPA 220) =	II (000)
Associated Min. Required Fire Flow (GPM)= (per Table 18.4.5.1.2 of the NFPA Uniform Fire Code Handbook)	1,500
Fire Sprinkler - Yes or No= (75% fire sprinkler credit, if applicable)	NO
Minimum Fire Flow Required (GPM)=	1,500
Fire Flow Provided (GPM)=	**1,500**



¾" PVC WATER HOSE BIB CONNECTION
PROPOSED PRIVATE LIFT STATION INV: 19.44
4" 45° BEND
PROPOSED ¾" BACKFLOW PREVENTER
21 LF OF 8" PVC @ 0.40%
38 LF OF 4" PVC FORCE MAIN
57 LF OF 8" PVC @ 0.40%
S-1
151 LF OF ¾" PVC WATER SERVICE
4" 45° BEND
19 LF OF 4" PVC FORCE MAIN
4" 45° BEND
118 LF OF 4" PVC FORCE MAIN
CROSSING # 1
6" SANITARY MAIN BOT OF PIPE: 19.02
24" STORM TOP OF PIPE: 18.02
CLEARANCE: 1.00'
CROSSING # 12
4" SANITARY BOT OF PIPE: 20.17
3/4" FORCE MAIN TOP OF PIPE: 19.17
CLEARANCE: 1.00'
CROSSING # 2
4" SANITARY BOT OF PIPE: 21.73
4" FORCE MAIN TOP OF PIPE: 20.73
CLEARANCE: 1.00'
SANITARY CLEAN OUT INV = 22.30
101 LF OF 8" PVC @ 0.40%
SANITARY CLEAN OUT INV = 19.25
SANITARY CLEAN OUT INV = 19.29
SANITARY CLEAN OUT INV = 19.30
SANITARY CLEAN OUT INV = 20.85
S-2
CROSSING # 3
4" SANITARY BOT OF PIPE: 20.15
24" STORM TOP OF PIPE: 18.18
CLEARANCE: 1.97'
CARWASH 980 S.F.
6" SANITARY CLEAN OUT FOR BUILDING CONNECTION INV = 22.30
PROPOSED 750 GALLON GREASE SEPARATOR
4" PVC GREASE CLEAN OUT FOR BUILDING CONNECTION INV = 22.50
4" SANITARY CLEAN OUT FOR BUILDING CONNECTION INV = 22.50
PROPOSED ¾" WATER STUB-OUT
¾"X¾" TEE
PROPOSED 1,500 GALLON RECLAIM PITS
SANITARY CLEAN OUT INV = 21.10
CROSSING # 4
¾" WATER BOT OF PIPE: 21.75
4" FORCE MAIN TOP OF PIPE: 20.75
CLEARANCE: 1.00'
CROSSING # 6
¾" WATER BOT OF PIPE: 21.75
4" SANITARY TOP OF PIPE: 20.16
CLEARANCE: 1.00'
S-3
SANITARY CLEAN OUT INV = 21.04
PROPOSED 750 GALLON GREASE SEPARATOR
CROSSING # 7
¾" WATER BOT OF PIPE: 21.75'
24" STORM TOP OF PIPE: 18.47
CLEARANCE: 1.81'
CROSSING # 5
4" SANITARY BOT OF PIPE: 20.45'
4" FORCE MAIN TOP OF PIPE: 19.45'
CLEARANCE: 1.00'
4" 45° BEND
CROSSING # 8
4" SANITARY BOT OF PIPE: 20.02
24" STORM TOP OF PIPE: 18.50
CLEARANCE: 1.52'
20 LF OF 4" PVC FORCE MAIN
4" 45° BEND
4" PLUG VALVE AT PROPERTY BOUNDARY
ELECTRICAL SERVICE PROTO ENTRANCE (TO BE DESIGNED AND PERMITTED BY OTHERS)
TELEPHONE SERVICE PROTO ENTRANCE (TO BE DESIGNED AND PERMITTED BY OTHERS)
PROPOSED 2" WATER STUB-OUT
CROSSING # 9
2" WATER MAIN BOT OF PIPE: 20.46
18" STORM TOP OF PIPE: 17.80
CLEARANCE: 2.66'
55 LF OF 2" PVC WATER MAIN
2"X¾" TEE
PROPOSED WELL FOR IRRIGATION (TO BE DESIGNED AND PERMITTED BY OTHERS) FINAL LOCATION TO BE DETERMINED BY CONTRACTOR
2" 90° BEND
2" 90° BEND
¾" 90° BEND
¾"X¾" TEE
CROSSING # 10
¾" WATER BOT OF PIPE: 20.11
8" STORM TOP OF PIPE: 17.84
CLEARANCE: 2.27'
242 LF OF ¾" PVC WATER SERVICE
124 LF OF 2" PVC WATER MAIN
¾" PVC WATER HOSE BIB CONNECTION
EMERSON DRIVE (100' WIDE PUBLIC R/W)
PROPOSED 2" IRRIGATION WATER METER AND BACKFLOW PREVENTER
PROPOSED 2" WATER METER AND BACKFLOW PREVENTER
WET TAP EXISTING 16" PVC WATER MAIN
R/W LINE
CROSSING # 11
4" FORCE MAIN BOT OF PIPE: 22.25
24" STORM TOP OF PIPE: 21.25
CLEARANCE: 1.00'
14 LF OF 2" PVC WATER MAIN
256 LF OF 4" PVC FORCE MAIN
PROPOSED FIRE HYDRANT
DIRECTIONAL DRILL FORCE MAIN
448'
ST JOHNS HERITAGE PARKWAY (200' WIDE PUBLIC R/W) ORB 7491, PG 1713
YIELD TO PEDESTRIANS SIGN
WET TAP EXISTING 16" PVC FORCE MAIN
STOP SIGN
R/W LINE
SWALE
R/W LINE (BASIS OF BEARINGS)
DITCH
EXISTING FIRE HYDRANT

STRUCTURE TABLE

STRUCTURE NAME:	DETAILS:
S-1	SANITARY MANHOLE TOP: 23.54 NE. INV IN: 18.84 W. INV OUT: 18.74
S-2	MH TOP: 24.02 E. INV IN: 19.17 SW. INV OUT: 19.07
S-3	SANITARY MANHOLE TOP: 23.55 W. INV OUT: 19.57

VERTICAL DATUM:

ELEVATIONS SHOWN ARE REFERENCED TO NGVD29 DATUM.

NORTH

GRAPHIC SCALE IN FEET
0 15 30 60

NOTES:

1. ALL ONSITE UTILITIES SHALL BE PRIVATELY OWNED AND MAINTAINED.
2. MAINTAIN A MINIMUM OF 3-FT OF COVER OVER ALL PROPOSED WATER LINES AND 3-FT MINIMUM OF COVER FOR WASTEWATER LINES.
3. REFER TO ADDITIONAL UTILITY NOTES AND DETAILS ON SHEETS C1.0 AND C1.1.
4. ALL WATER MAINS, AND DOMESTIC LINES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF PALM BAY UTILITY STANDARDS.
5. BEDDING AND BACKFILL SHALL BE INSTALLED PER CITY OF PALM BAY STANDARDS. GRANULAR BACKFILL IS REQUIRED UNDER PAVEMENT AND WITHIN 5 FEET OF PAVEMENT.
6. ALL SANITARY SEWER LINES SHALL BE GREEN C-900 PVC MEETING, ASTM D-3034 SDR 26.
7. CONTRACTOR SHALL COORDINATE ANY DISRUPTIONS TO EXISTING UTILITY SERVICES WITH ADJACENT PROPERTY OWNERS.
8. ALL ELECTRIC AND TELEPHONE EXTENSIONS INCLUDING SERVICE LINES SHALL BE CONSTRUCTED TO THE APPROPRIATE UTILITY COMPANY SPECIFICATIONS. ALL UTILITY DISCONNECTIONS SHALL BE COORDINATED WITH THE DESIGNATED UTILITY COMPANIES.
9. CONTRACTOR TO CALL "SUNSHINE STATE ONE CALL OF FLORIDA" (1-800-432-4770) TO COORDINATE FIELD LOCATIONS OF EXISTING UNDERGROUND UTILITIES BEFORE ORDERING MATERIALS OR COMMENCING CONSTRUCTION. NOTIFY ENGINEER OF ANY DISCREPANCIES IMMEDIATELY.
10. PRIOR TO THE CONSTRUCTION OF OR CONNECTION TO ANY STORM DRAIN, SANITARY SEWER, WATER MAIN OR ANY OTHER UTILITIES, THE CONTRACTOR SHALL EXCAVATE, VERIFY AND CALCULATE ALL POINTS OF CONNECTION AND ALL UTILITY CROSSINGS AND INFORM THE ENGINEER AND THE OWNER/ DEVELOPER OF ANY CONFLICT OR REQUIRED DEVIATIONS FROM THE PLAN. NOTIFICATION SHALL BE MADE A MINIMUM OF 72 HOURS PRIOR TO CONSTRUCTION. THE ENGINEER AND ITS CLIENTS SHALL BE HELD HARMLESS IN THE EVENT THAT THE CONTRACTOR FAILS TO MAKE SUCH NOTIFICATION. THE CITY OF PALM BAY SHALL BE NOTIFIED OF ANY AND ALL CHANGES TO THE DESIGN PLANS.
11. CONTRACTOR SHALL COMPLY COMPLETELY WITH THE LATEST STANDARDS OF OSHA DIRECTIVES OR ANY OTHER AGENCY HAVING JURISDICTION FOR EXCAVATION AND TRENCHING PROCEDURES. THE CONTRACTOR SHALL USE SUPPORT SYSTEMS, SLOPING, BENCHING AND OTHER MEANS OF PROTECTION. THIS IS TO INCLUDE, BUT NOT LIMITED FOR ACCESS AND EGRESS FROM ALL EXCAVATION AND TRENCHING. CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH PERFORMANCE CRITERIA AS REQUIRED BY OSHA.
12. CONTRACTOR TO AVOID DISRUPTION OF ANY ADJACENT TENANT'S TRAFFIC OPERATIONS, TO THE MAXIMUM EXTENT, DURING INSTALLATION OF UTILITIES. IF TRAFFIC IS TO BE OBSTRUCTED CONTRACTOR SHALL COORDINATE TRAFFIC CONTROL PLAN WITH THE LOCAL MUNICIPALITY.
13. ALL DIMENSIONS ARE TO CENTERLINE OF PIPE OR CENTER OF MANHOLE UNLESS NOTED OTHERWISE.
14. SEE PLUMBING PLANS FOR EXACT UTILITY CONNECTION LOCATIONS AT BUILDING.
15. ELECTRIC, TELEPHONE, AND OTHER DRY UTILITIES SHALL BE PLACED WITHIN CONDUIT, MEETING PRIVATE UTILITY STANDARDS, WHEN ROUTE CROSSES PAVED DRIVES AND PARKING AREAS.
16. ALL UNDERGROUND WATER MAINS AND HYDRANTS SHALL BE INSTALLED, COMPLETED AND IN SERVICE PRIOR TO ANY COMBUSTIBLES BEING BROUGHT ONSITE.
17. CONTRACTOR TO ENSURE ADEQUATE COVER REMAINS OVER ALL EXISTING UTILITIES.
18. CONTRACTOR TO VERIFY EXISTING COVER OVER ALL UTILITIES BEFORE START OF CONSTRUCTION AND TO COORDINATE WITH THE ENGINEER OF RECORD PRIOR TO START OF CONSTRUCTION IF DESIGN DOES NOT PROVIDE 36" COVER.
19. ALL ELECTRIC, CABLE, AND TELECOMMUNICATION UTILITIES FOR BUILDING SERVICE TO BE INSTALLED UNDERGROUND.

PALM BAY NOTES:

1. ALL UTILITY DESIGN, CONSTRUCTION, MATERIALS , AND TESTING SHALL BE IN ACCORDANCE WITH THE LATEST REVISION OF THE PALM BAY UTILITIES DEPARTMENTS POLICIES, PROCEDURES AND STANDARDS HANDBOOK AND THE STANDARD DETAIL DRAWINGS. CONTACT THE UTILITIES ENGINEERING DEPARTMENT AT 321.952.3410 TO ACCESS THESE DOCUMENTS.
2. THE CITY OF PALM BAY UTILITIES INSPECTOR MUST BE NOTIFIED 48 HOURS PRIOR TO ANY UTILITIES WORK OR ANY WORK OCCURRING WITHIN THE VICINITY OF THE EXISTING WATER AND SEWER UTILITIES.
3. CONTRACTOR SHALL NOT OPERATE ANY PUBLIC WATER OR SEWER VALVES UNLESS SPECIFICALLY AUTHORIZED BY THE UTILITIES INSPECTOR.
4. CONTRACTOR SHALL UTILIZE DITCHES, PIPES, AND/OR PUMPS AS NECESSARY TO MAINTAIN THE EXISTING DRAINAGE DURING ALL PHASES OF CONSTRUCTION. EXISTING DRAINAGE SHALL NOT BLOCK OR ADVERSELY AFFECTED DURING CONSTRUCTION.

LEGEND

▬ ▬ ▬	PROPERTY BOUNDARY
— W —	PROPOSED WATER LINE
— S —	PROPOSED SANITARY SEWER LINE
— — FM —	PROPOSED FORCE MAIN
Ⓢ	PROPOSED SANITARY MANHOLE
▬	PROPOSED STORM PIPE
Ⓓ	PROPOSED STORM MANHOLE
— — W —	EXISTING WATER LINE
HYD	EXISTING FIRE HYDRANT
— — FM —	EXISTING FORCE MAIN

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LICENSED PROFESSIONAL
DEREK E. RAMSBURG, P.E.
FLORIDA LICENSE NUMBER 88905
DATE: 8/21/2025

KHA PROJECT	249188006
DATE	8/21/2025
SCALE	AS SHOWN
DESIGNED BY	BMG
DRAWN BY	BMG
CHECKED BY	DER

UTILITY PLAN

7-11 PALM BAY

CITY OF PALM BAY FLORIDA

SHEET NUMBER
C6.0

Plotted By: Guidry, Blake Sheet Set: 7-11 PALM BAY Layout: C6.0 August 26, 2025 07:57:36am K:\ORL_Civil\249188006-7-11 Palm Bay\CADD\CONST\PlanSheets\C6.0 UTILITY PLAN.dwg

LIFT STATION WILL BE PRIVATELY OWNED AND MAINTAINED.

The H-20 Load Rated Fiberglass Wetwell Must Be Manufactured By L.F. Manufacturing, Giddings, Texas, Which Includes a 20 Yr. Warranty. Certification of the wetwell H-20 load rating must be supplied with submittals. H-20 certification must be signed and sealed by an engineer registered in the State of Florida.

After the H-20 load rated wetwell has been installed, the ASTM Certification Number and Serial Tracking Number must be visible inside wetwell.

PUMPS:

Submersible grinder pumps shall be installed in the H-20 GP FRP wetwell utilizing a slide rail system.

The grinder unit shall be capable of macerating materials normally found in domestic and commercial sewage into a fine slurry which will pass through the pump and the discharge piping.

Stator winding shall be open type with Class H insulation and shall be heat-shrink fitted into the stator housing. The use of pins, bolts, or other fastening devices is not acceptable.

A heat sensor thermostat shall be attached to the top end of the motor winding and shall be connected in series with the magnetic contactor coil in the control panel to stop motor if winding temperature exceeds 140 C., but shall automatically reset when the winding temperature returns to normal. Two heat sensor thermostats shall be used on three phase motors.

The pump motor grinder shaft shall be AISI 430F SS threaded to take the pump impeller and the grinder impeller.

Upper & lower mechanical seals shall be Silicon Carbide vs Silicon Carbide.

To insure complete unit and warranty responsibility the electrical control panel must be manufactured and built by the pump supplier. The pump supplier must be a TUV (UL508A CERTIFIED) manufacturing facility, with a minuimum of 10 years history in the manufacturing of electrical control panels.

The Enclosure shall be NEMA 4X, minimum 30" high x 30" wide x 10" deep fiberglass with 4 point latching system.

The enclosure shall have external mounting feet to allow for wall mounting.

The following components shall be mounted through the enclosure:
1- ea. Red Alarm Beacon (Light) 4" x 4" Minimum Diameter
1- ea. Alarm Horn (minimum 95 DCB)
1- ea. Generator Receptacle w/ weatherproof cover(SCM460 -UL 1686)
1- ea. Alarm Silence Pushbutton

The back panel shall be fabricated from .125, 5052-H32 marine alloy aluminum. All components shall be mounted by machined stainless steel screws.

The following components shall be mounted to back panel:
2- ea. Motor Contactors
1- ea. Phase Monitor (3 Ph) w/2 N/O & 1 N/C Contacts
1- ea. Control Transformer (480 Volt Only) (Min. 500VA)
1- ea. Lightning Arrestor
1- ea. Silence Relay Module
1- ea. Duplex Alternator w/ Pump Selector Switch
1- ea. Battery Back-Up w/ Smart Charger For The High Level Alarm System
20- ea. Terminals For Field Connections
6- ea. Terminals For Motor Connections (Single Phase Only)
7- ea. Grounding Lugs
1- ea. Seal Failure Relay

The inner door shall be fabricated from .080, 5052-H32 marine alloy aluminum. The inner door shall have a continuous aluminum piano hinge.

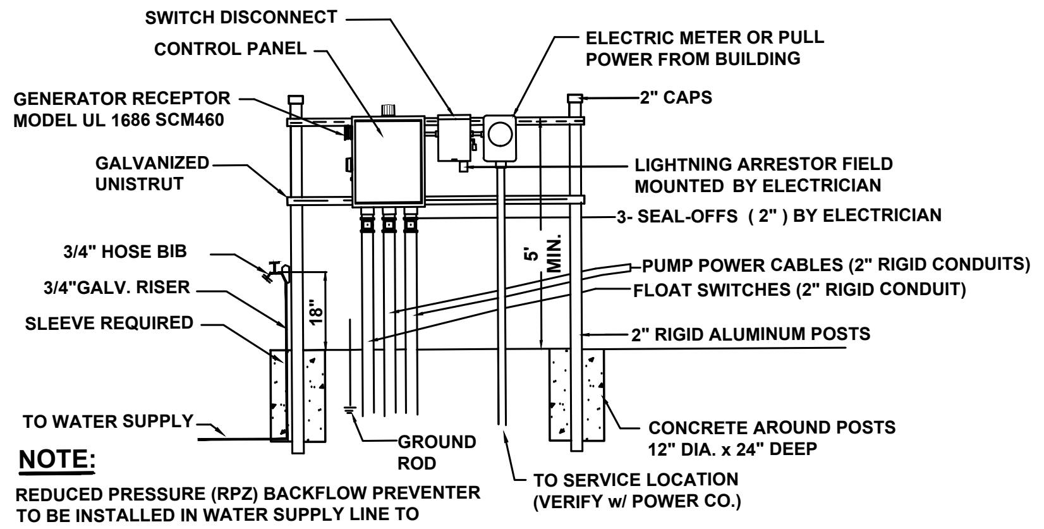
The following components shall be mounted through the inner door:
1- ea. Main Circuit Breaker
1- ea. Emergency Circuit Breaker
1- ea. Mechanical Interlock For Emergency And Main Breakers (UL Listed)
2- ea. Short Circuit Protectors w/ Auxiliary Contacts
1- ea. Control Circuit Breaker
2- ea. Seal Failure Indicator Lights
1- ea. Hand-Off-Auto Selector Switches
2- ea. Pump Run Pilot Lights
1- ea. Power On Pilot Light
2- ea. Elapse Time Meters (Non-Resetable)
1- ea. GFI Duplex Convenience Outlet

PUMP DATA	
PRIMARY PUMP CAPACITY	101.0 GPM
PRIMARY TDH	58.3 'TDH
PUMP MANUFACTURER	Flygt
PUMP MODEL #	MP 3127 HT 3~
R.P.M.	3505
HORSEPOWER	11
IMPELLER DIAMETER	159 mm
ELECTRICAL/ VOLTS / PHASE	60/208/3
FULL LOAD AMPS/ PER PUMP	*
PUMP DISCHARGE SIZE	2"

ELEVATIONS	
TOP OF WETWELL	24.22'
INLET INVERT	18.65'
HIGH LEVEL ALARM (HLA)	18.15'
2nd PUMP ON (LAG)	17.65'
1st PUMP ON (LEAD)	16.65'
PUMPS OFF (OFF)	13.65'
BOTTOM OF WETWELL	11.65'
WETWELL DIAMETER	48"

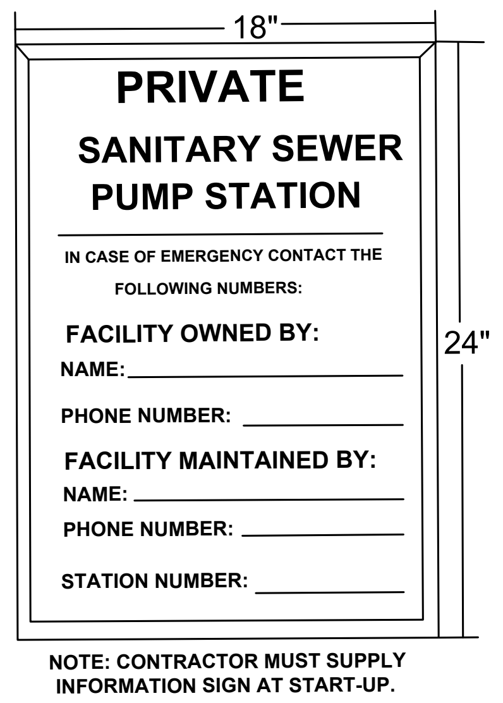
* ELECTRICIAN NOTES:

1. DRAWING NOT TO SCALE
* 2. ALL ELECTRICAL WORK SHALL BE IN ACCORDANCE WITH LOCAL CODES
* 3. ELECTRICIAN SHALL SEAL OFF CONDUIT RUNS
* 4. ELECTRICIAN TO MOUNT LIGHTNING ARRESTOR AT SWITCH DISCONNECT
* 5. CONTRACTOR SHALL VERIFY POWER SOURCE PRIOR TO ORDERING EQUIPMENT
* 6. NEUTRAL TO BE SUPPLIED FOR 23OV-3 PHASE OR 230V-SINGLE PHASE POWER.

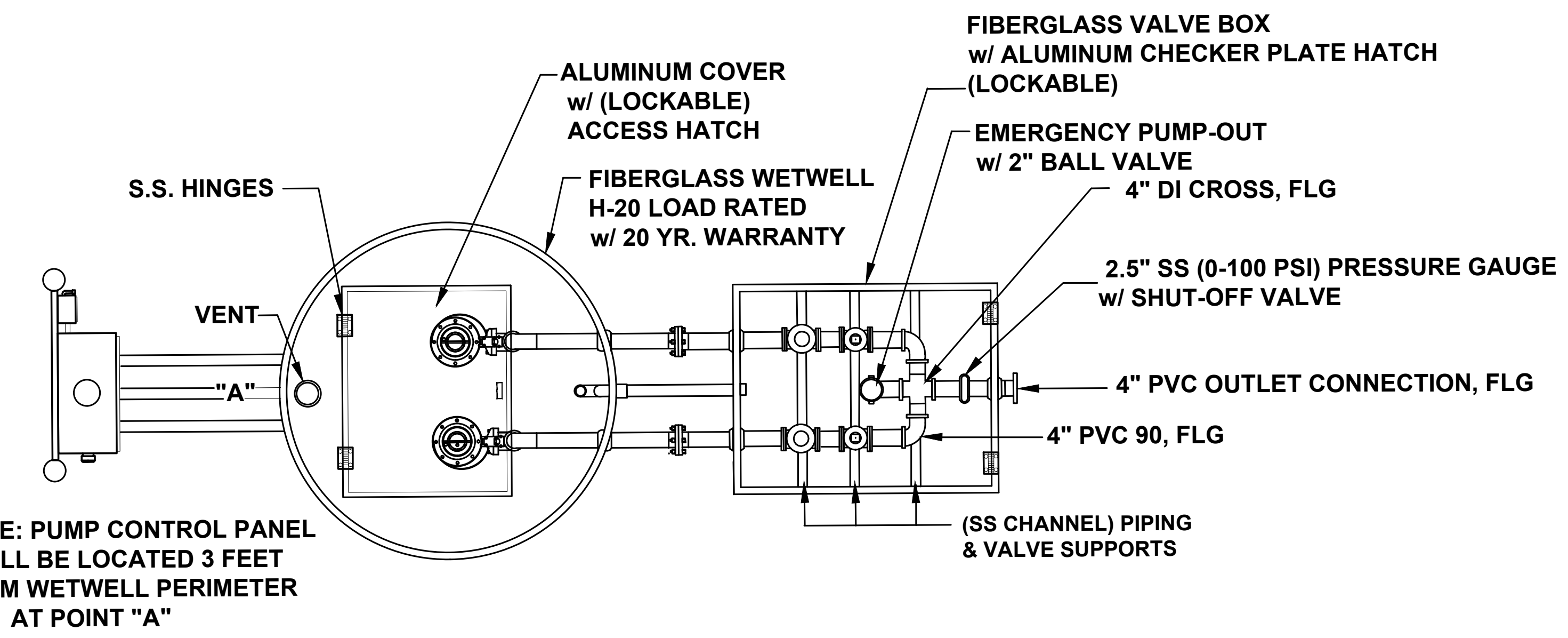

SWITCH DISCONNECT
CONTROL PANEL
GENERATOR RECEPTOR MODEL UL 1686 SCM460
GALVANIZED UNISTRUT
3/4" HOSE BIB
3/4"GALV. RISER
SLEEVE REQUIRED
TO WATER SUPPLY
ELECTRIC METER OR PULL POWER FROM BUILDING
2" CAPS
LIGHTNING ARRESTOR FIELD MOUNTED BY ELECTRICIAN
3- SEAL-OFFS (2") BY ELECTRICIAN
PUMP POWER CABLES (2" RIGID CONDUITS)
FLOAT SWITCHES (2" RIGID CONDUIT)
2" RIGID ALUMINUM POSTS
18"
5' MIN.
GROUND ROD
TO SERVICE LOCATION (VERIFY w/ POWER CO.)
CONCRETE AROUND POSTS 12" DIA. x 24" DEEP

NOTE:
REDUCED PRESSURE (RPZ) BACKFLOW PREVENTER TO BE INSTALLED IN WATER SUPPLY LINE TO LIFT STATION "FEBCO WATTS" (OAE)

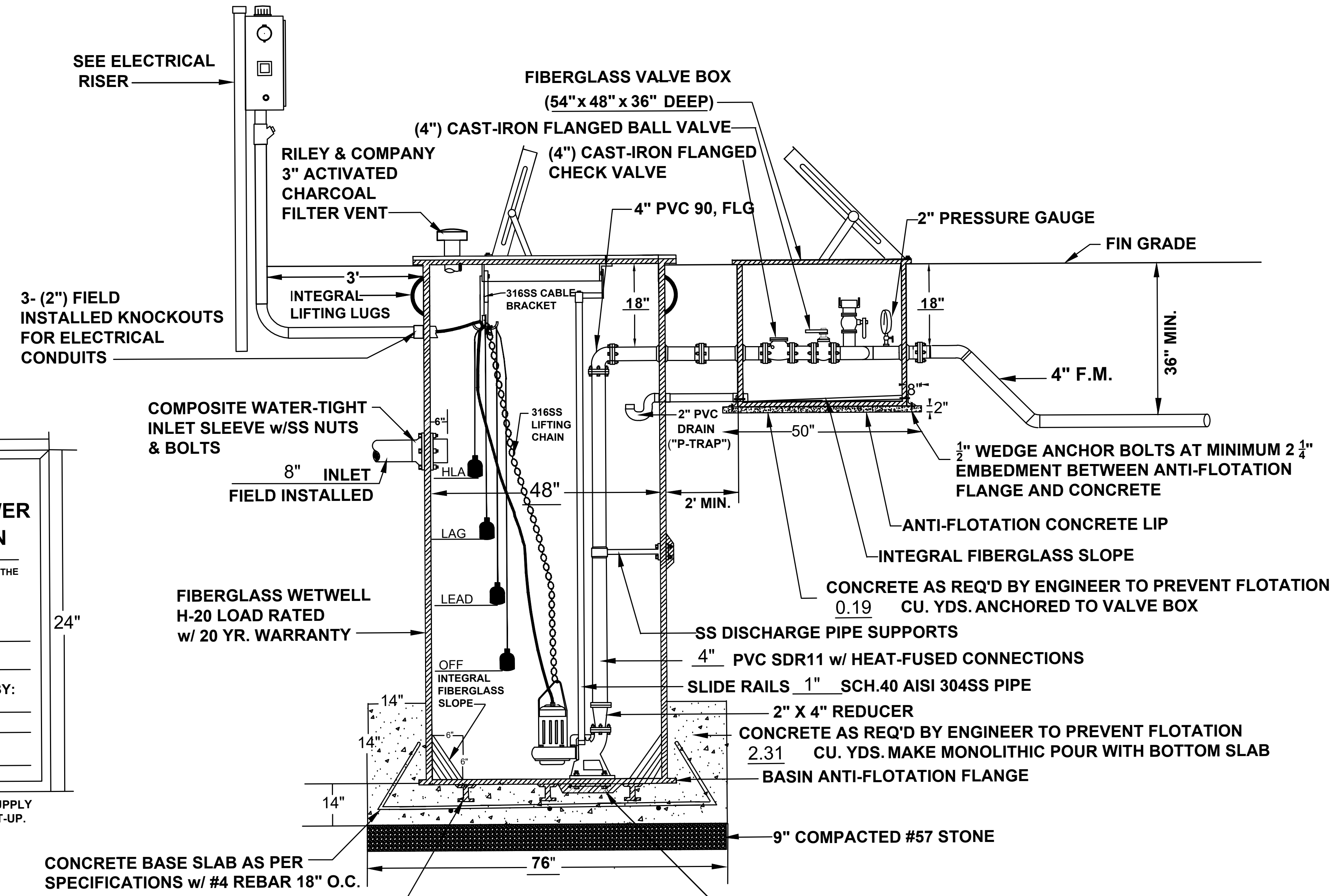
ELECTRICAL RISER FOR ILLUSTRATION PURPOSES ONLY


18"
24"
PRIVATE
SANITARY SEWER PUMP STATION
IN CASE OF EMERGENCY CONTACT THE FOLLOWING NUMBERS:
FACILITY OWNED BY:
NAME:
PHONE NUMBER:
FACILITY MAINTAINED BY:
NAME:
PHONE NUMBER:
STATION NUMBER:

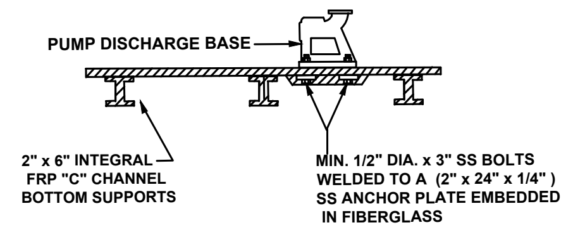
NOTE: CONTRACTOR MUST SUPPLY INFORMATION SIGN AT START-UP.


ALUMINUM COVER w/ (LOCKABLE) ACCESS HATCH
S.S. HINGES
FIBERGLASS WETWELL H-20 LOAD RATED w/ 20 YR. WARRANTY
VENT
"A"
FIBERGLASS VALVE BOX w/ ALUMINUM CHECKER PLATE HATCH (LOCKABLE)
EMERGENCY PUMP-OUT w/ 2" BALL VALVE
4" DI CROSS, FLG
2.5" SS (0-100 PSI) PRESSURE GAUGE w/ SHUT-OFF VALVE
4" PVC OUTLET CONNECTION, FLG
4" PVC 90, FLG
(SS CHANNEL) PIPING & VALVE SUPPORTS

NOTE: PUMP CONTROL PANEL SHALL BE LOCATED 3 FEET FROM WETWELL PERIMETER AT POINT "A"


SEE ELECTRICAL RISER
FIBERGLASS VALVE BOX (54" x 48" x 36" DEEP)
(4") CAST-IRON FLANGED BALL VALVE
RILEY & COMPANY 3" ACTIVATED CHARCOAL FILTER VENT
(4") CAST-IRON FLANGED CHECK VALVE
4" PVC 90, FLG
2" PRESSURE GAUGE
FIN GRADE
3'
INTEGRAL LIFTING LUGS
316SS CABLE BRACKET
18"
18"
36" MIN.
3- (2") FIELD INSTALLED KNOCKOUTS FOR ELECTRICAL CONDUITS
4" F.M.
COMPOSITE WATER-TIGHT INLET SLEEVE w/SS NUTS & BOLTS
6"
316SS LIFTING CHAIN
2" PVC DRAIN ("P-TRAP")
8"
2"
50"
8" INLET FIELD INSTALLED
HLA
48"
2' MIN.
½" WEDGE ANCHOR BOLTS AT MINIMUM 2 ¼" EMBEDMENT BETWEEN ANTI-FLOTATION FLANGE AND CONCRETE
LAG
ANTI-FLOTATION CONCRETE LIP
INTEGRAL FIBERGLASS SLOPE
LEAD
CONCRETE AS REQ'D BY ENGINEER TO PREVENT FLOTATION 0.19 CU. YDS. ANCHORED TO VALVE BOX
FIBERGLASS WETWELL H-20 LOAD RATED w/ 20 YR. WARRANTY
SS DISCHARGE PIPE SUPPORTS
4" PVC SDR11 w/ HEAT-FUSED CONNECTIONS
OFF
INTEGRAL FIBERGLASS SLOPE
SLIDE RAILS 1" SCH.40 AISI 304SS PIPE
14"
14"
6"
6"
2" X 4" REDUCER
CONCRETE AS REQ'D BY ENGINEER TO PREVENT FLOTATION 2.31 CU. YDS. MAKE MONOLITHIC POUR WITH BOTTOM SLAB
BASIN ANTI-FLOTATION FLANGE
14"
9" COMPACTED #57 STONE
CONCRETE BASE SLAB AS PER SPECIFICATIONS w/ #4 REBAR 18" O.C.
76"
2" x 6" INTEGRAL FRP BOTTOM SUPPORTS

WETWELL BOTTOM BOLT & SUPPORT DETAIL


PUMP DISCHARGE BASE
2" x 6" INTEGRAL FRP "C" CHANNEL BOTTOM SUPPORTS
MIN. 1/2" DIA. x 3" SS BOLTS WELDED TO A (2" x 24" x 1/4") SS ANCHOR PLATE EMBEDDED IN FIBERGLASS

NOTES:

1. *Water service with hose bibb and reduced pressure backflow preventer to be installed near lift station. (See Electrical Riser Illustration)*
2. *System shall be operated and maintained to provide uninterrupted service as required by DEP Chapter 62-604.500.*
3. *Approved Operation & Maintenance Manual(O&M) shall be kept available for operation and maintenance personnel*
4. *A weather resistant emergency contact sign shall be installed at the lift station and made visible to the public (Lettering shall be min. 2" in height.*
5. *INSPECTION & TESTING: A factory representative shall be provide for a one (1) time start-up and shall have complete knowledge of the proper operation and maintenance for the complete system.*

02-16-2023

ELECTRICAL INFORMATION IS SHOWN FOR REFERENCE ONLY AND IS NOT INCLUDED AS PART OF THE ENGINEERING DESIGN OR CERTIFICATION BY THE PROFESSIONAL ENGINEER. ANY ELECTRICAL DESIGN NEEDED FOR THE LIFT STATION SHALL BE CONFIRMED AND CERTIFIED BY A PROFESSIONAL ELECTRICAL ENGINEER.

No.	REVISIONS	DATE	BY

Kimley»Horn

200 S. ORANGE AVENUE, SUITE 600, ORLANDO, FL
PHONE: (407) 898-1511
WWW.KIMLEY-HORN.COM REGISTRY No. 35106

LICENSED PROFESSIONAL
DEREK E. RAMSBURG, P.E.
FLORIDA LICENSE NUMBER 88905
DATE: 8/21/2025

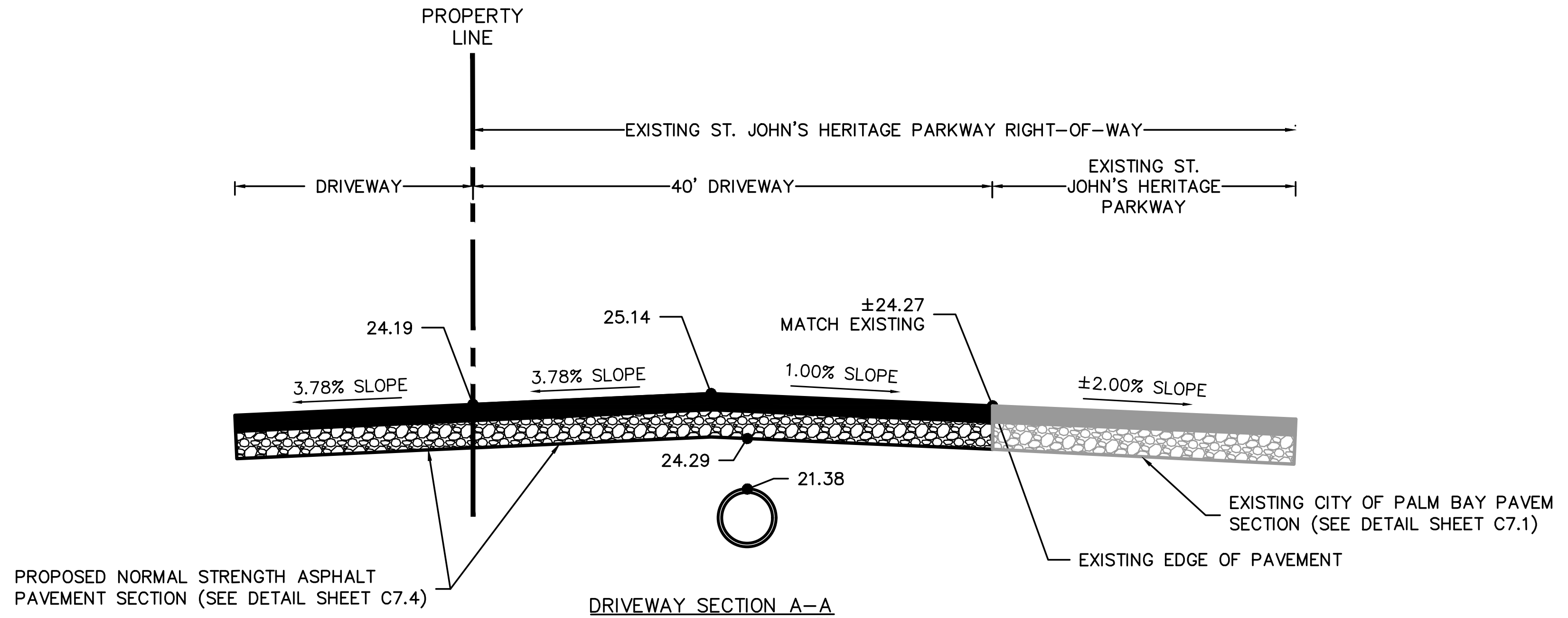
KHA PROJECT	249188006
DATE	8/21/2025
SCALE	AS SHOWN
DESIGNED BY	BMG
DRAWN BY	BMG
CHECKED BY	DER

UTILITY PLAN

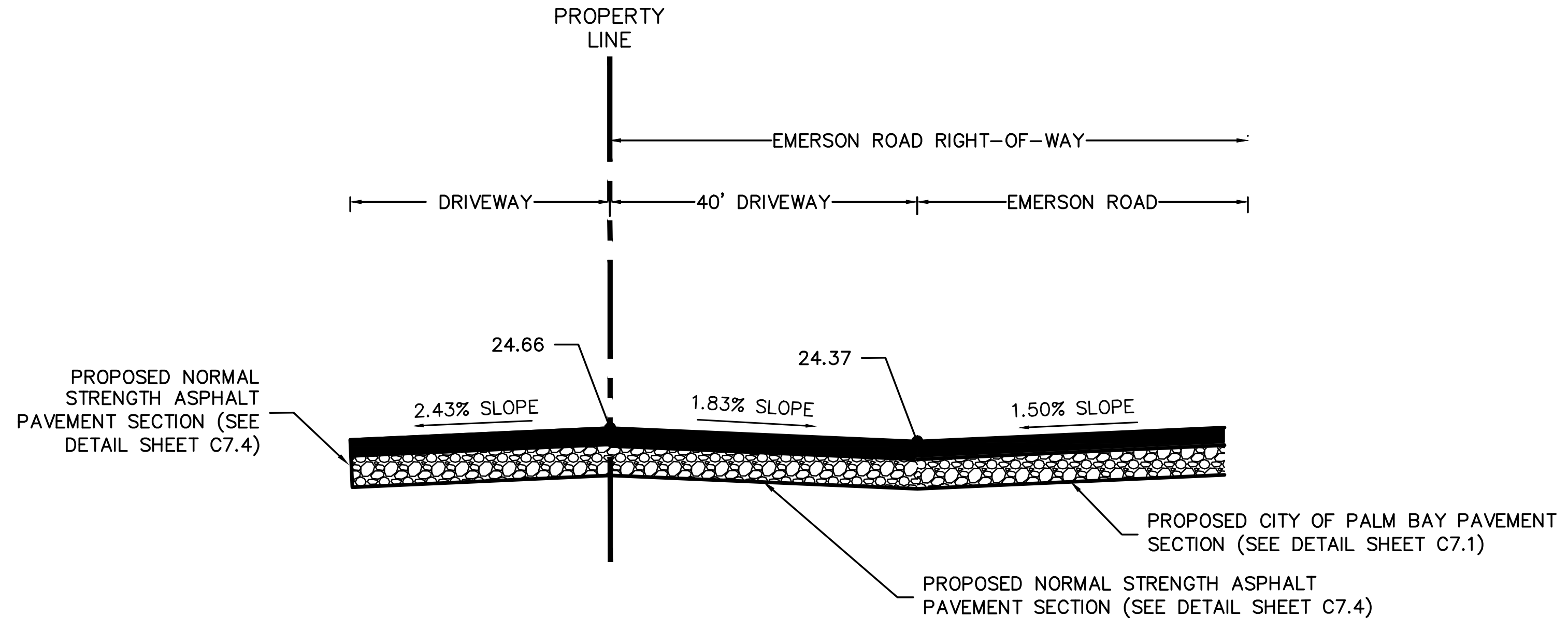
7-11 PALM BAY

CITY OF PALM BAY FLORIDA

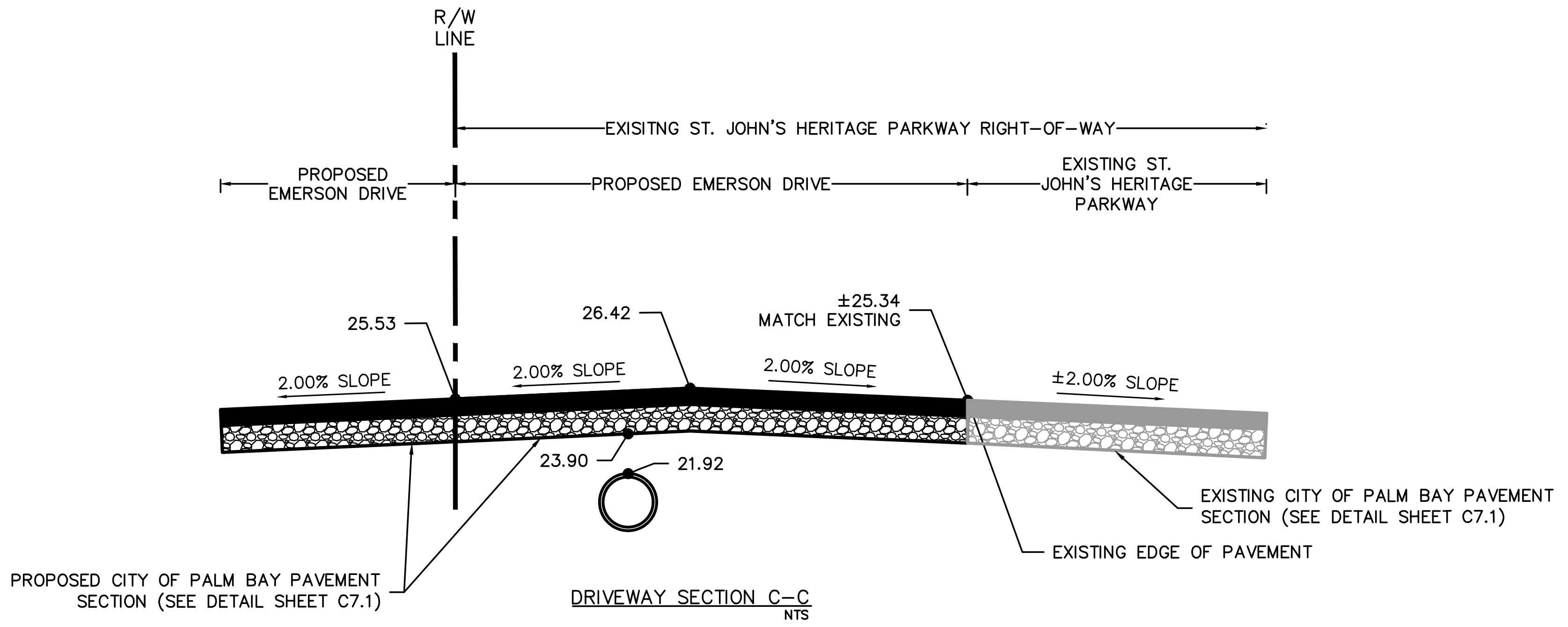
SHEET NUMBER
C6.1


PROPERTY LINE
EXISTING ST. JOHN'S HERITAGE PARKWAY RIGHT-OF-WAY
DRIVEWAY
40' DRIVEWAY
EXISTING ST. JOHN'S HERITAGE PARKWAY
24.19
25.14
±24.27
MATCH EXISTING
3.78% SLOPE
3.78% SLOPE
1.00% SLOPE
±2.00% SLOPE
24.29
21.38
EXISTING CITY OF PALM BAY PAVEM SECTION (SEE DETAIL SHEET C7.1)
EXISTING EDGE OF PAVEMENT
PROPOSED NORMAL STRENGTH ASPHALT PAVEMENT SECTION (SEE DETAIL SHEET C7.4)

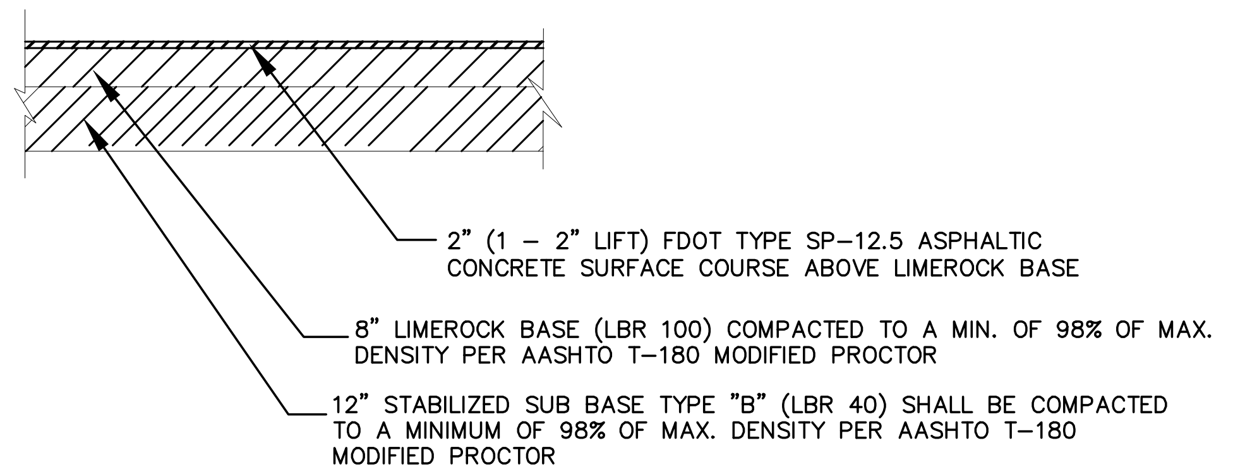
DRIVEWAY SECTION A–A
NTS


PROPERTY LINE
EMERSON ROAD RIGHT-OF-WAY
DRIVEWAY
40' DRIVEWAY
EMERSON ROAD
24.66
24.37
PROPOSED NORMAL STRENGTH ASPHALT PAVEMENT SECTION (SEE DETAIL SHEET C7.4)
2.43% SLOPE
1.83% SLOPE
1.50% SLOPE
PROPOSED CITY OF PALM BAY PAVEMENT SECTION (SEE DETAIL SHEET C7.1)
PROPOSED NORMAL STRENGTH ASPHALT PAVEMENT SECTION (SEE DETAIL SHEET C7.4)

DRIVEWAY SECTION B–B
NTS

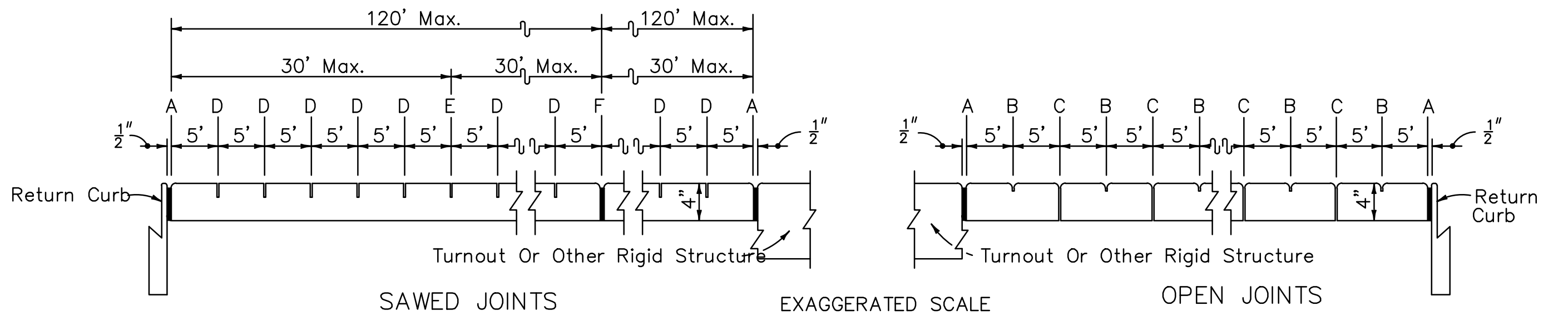

R/W LINE
EXISITNG ST. JOHN'S HERITAGE PARKWAY RIGHT-OF-WAY
PROPOSED EMERSON DRIVE
PROPOSED EMERSON DRIVE
EXISTING ST. JOHN'S HERITAGE PARKWAY
25.53
26.42
±25.34
MATCH EXISTING
2.00% SLOPE
2.00% SLOPE
2.00% SLOPE
±2.00% SLOPE
23.90
21.92
EXISTING CITY OF PALM BAY PAVEMENT SECTION (SEE DETAIL SHEET C7.1)
EXISTING EDGE OF PAVEMENT
PROPOSED CITY OF PALM BAY PAVEMENT SECTION (SEE DETAIL SHEET C7.1)

DRIVEWAY SECTION C–C
NTS


2" (1 – 2" LIFT) FDOT TYPE SP–12.5 ASPHALTIC CONCRETE SURFACE COURSE ABOVE LIMEROCK BASE
8" LIMEROCK BASE (LBR 100) COMPACTED TO A MIN. OF 98% OF MAX. DENSITY PER AASHTO T–180 MODIFIED PROCTOR
12" STABILIZED SUB BASE TYPE "B" (LBR 40) SHALL BE COMPACTED TO A MINIMUM OF 98% OF MAX. DENSITY PER AASHTO T–180 MODIFIED PROCTOR

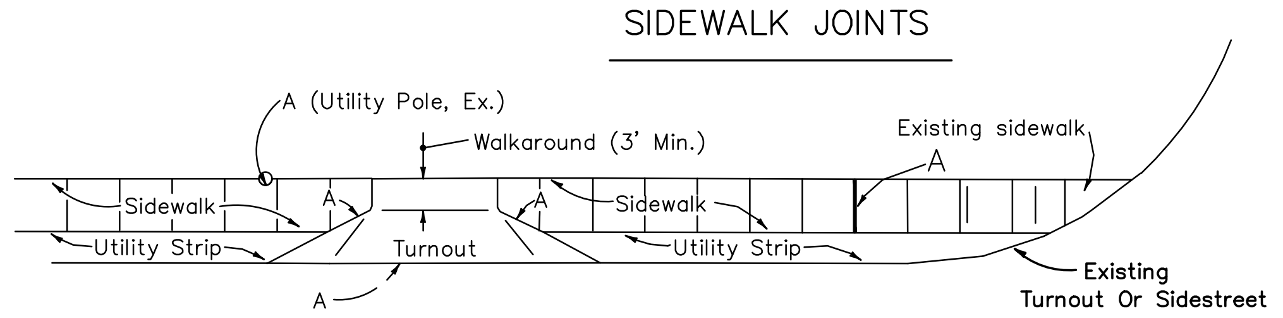
STANDARD DUTY ASPHALT PAVEMENT SECTION

NTS


120' Max.
120' Max.
30' Max.
30' Max.
30' Max.
A D D D D D E D D F D D A
A B C B C B C B C B A
5'
1/2"
4"
Return Curb
Return Curb
Turnout Or Other Rigid Structure
Turnout Or Other Rigid Structure
SAWED JOINTS
OPEN JOINTS

EXAGGERATED SCALE
LONGITUDINAL SECTION

SIDEWALK JOINTS


A (Utility Pole, Ex.)
Walkaround (3' Min.)
Existing sidewalk
A
Sidewalk
Sidewalk
Utility Strip
Utility Strip
Turnout
A
Existing Turnout Or Sidestreet (Partial Return Shown)

SIDEWALK WITH UTILITY STRIP

NTS

JOINT LEGEND

A– $\frac{1}{2}$" EXPANSION JOINTS (PREFORMED JOINT FILLER)
B– $\frac{1}{8}$" DUMMY JOINTS, TOOLED
C– $\frac{1}{8}$" FORMED OPEN JOINTS
D– $\frac{3}{16}$" SAW CUT JOINTS, $1\frac{1}{2}$" DEEP (96 HOUR) MAX. 5' CENTERS
E– $\frac{3}{16}$" SAW CUT JOINTS, $1\frac{1}{2}$" DEEP (12 HOUR) MAX. 30' CENTERS
F– $\frac{1}{2}$" EXPANSION JOINT WHEN RUN OF SIDEWALK EXCEEDS 120'
G– COLD JOINT WITH BOND BREAKER, TOOLED

FOOTNOTES:

ALL 1/2" JOINTS SHALL BE CONSTRUCTED WITH PREFORMED JOINT FILLER.

* 1/8" OPEN JOINTS PLACED AT EQUAL (20' MAX.) INTERVALS FOR DRIVEWAYS OVER 20' WIDE. JOINTS IN CURB AND GUTTER TO MATCH JOINTS IN DRIVEWAYS.

ϕ DRIVEWAYS (6" CONCRETE) SHALL BE OF A UNIFORM WIDTH (W) AS SHOWN ON SHT. P–1.

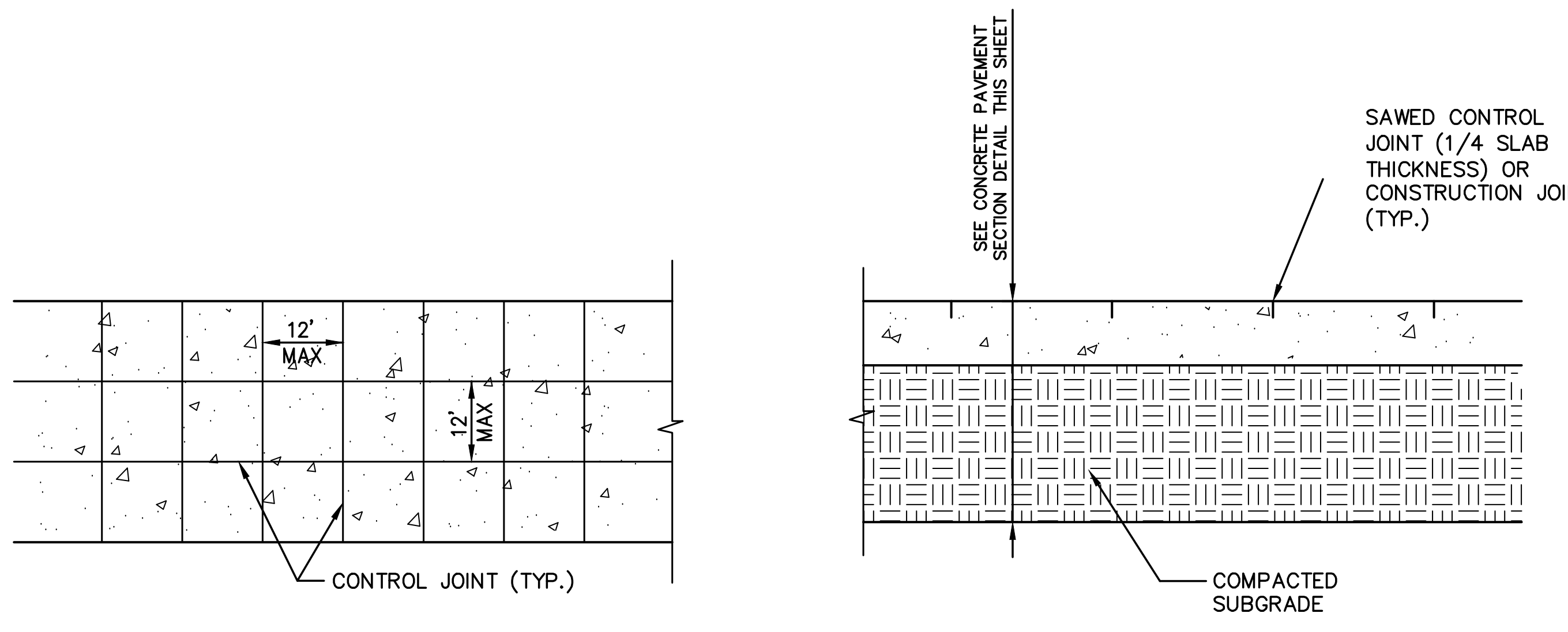
GENERAL NOTES

SIDEWALKS SHALL BE CONSTRUCTED IN ACCORDANCE WITH FDOT STANDARD SPECIFICATION NO. 522 EXCEPT FOR CURB CUT RAMP RUNS WHICH SHALL BE FINISHED IN ACCORDANCE WITH FDOT INDEX 522–002.

BOND BREAKER MATERIAL CAN BE ANY IMPERMEABLE COATED OR SHEET MEMBRANE OR PREFORMED MATERIAL HAVING A THICKNESS OF NOT LESS THAN 6 MILS NOR MORE THAN 1/2".

CONCRETE SIDEWALK DETAIL

NTS


12' MAX
12' MAX
CONTROL JOINT (TYP.)
SEE CONCRETE PAVEMENT SECTION DETAIL THIS SHEET
SAWED CONTROL JOINT (1/4 SLAB THICKNESS) OR CONSTRUCTION JOINT (TYP.)
COMPACTED SUBGRADE

PLAN

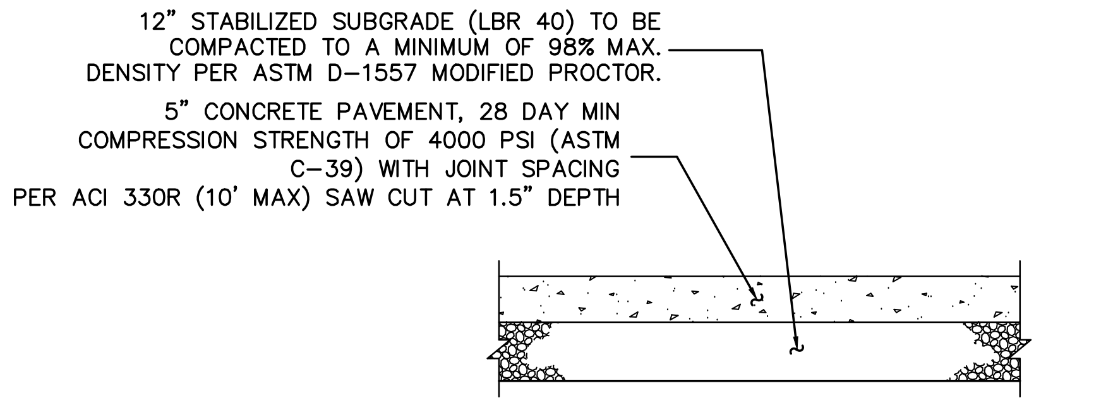
SECTION

NOTES:

1. LONGITUDINAL AND TRANSVERSE JOINTS SHALL BE SAWED AS INDICATED.
2. THE JOINT SEAL MANUFACTURER'S SPECIFICATIONS SHALL BE COMPATIBLE WITH THE JOINT CONFIGURATION. PROVIDE TYPICAL DETAILS FOR CONSTRUCTION AND EXPANSION JOINTS.
3. FOR ALL JOINTS THE BACKER ROD MATERIAL SHALL BE COMPATIBLE WITH THE COLD POURED SEALANT AND SLIGHTLY OVERSIZED TO PREVENT MOVEMENT DURING THE JOINT SEALANT OPERATION.
4. THE WIDTH OF ALL JOINTS SHALL BE CORRECTED FOR 68 DEGREE (F).
5. EXPANSION JOINTS SHALL BE USED AT ALL LOCATIONS WHERE PAVEMENT ABUTS A PERMANENT STRUCTURE.
6. DOWELS AND TIE BARS FOR CONSTRUCTION JOINTS SHALL BE CAST IN PLACE.

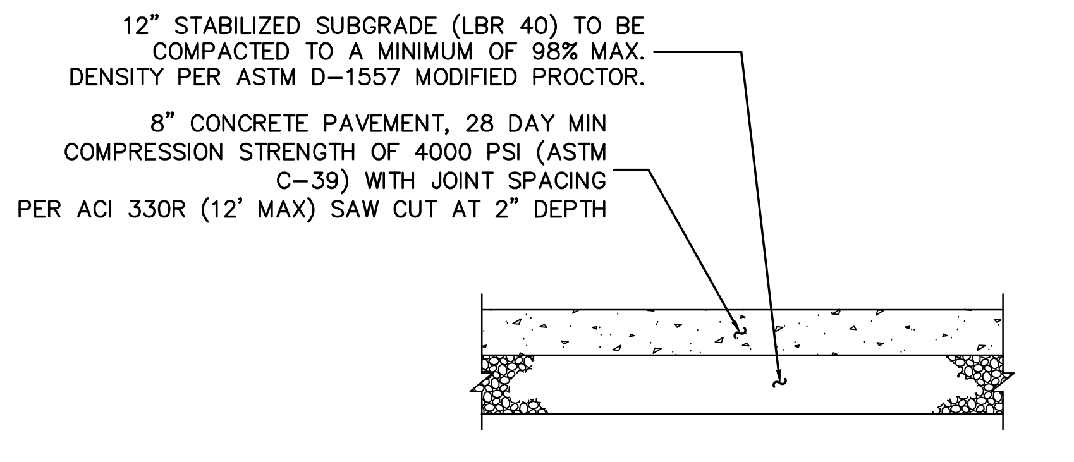
CONCRETE JOINTING AND REINFORCING DETAIL

NOT TO SCALE


12" STABILIZED SUBGRADE (LBR 40) TO BE COMPACTED TO A MINIMUM OF 98% MAX. DENSITY PER ASTM D–1557 MODIFIED PROCTOR.
5" CONCRETE PAVEMENT, 28 DAY MIN COMPRESSION STRENGTH OF 4000 PSI (ASTM C–39) WITH JOINT SPACING PER ACI 330R (10' MAX) SAW CUT AT 1.5" DEPTH

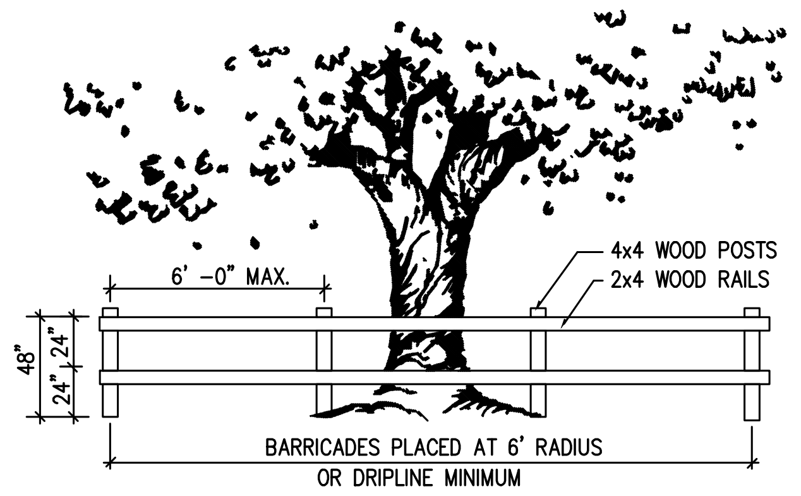
STANDARD DUTY CONCRETE PAVEMENT DETAIL

NTS

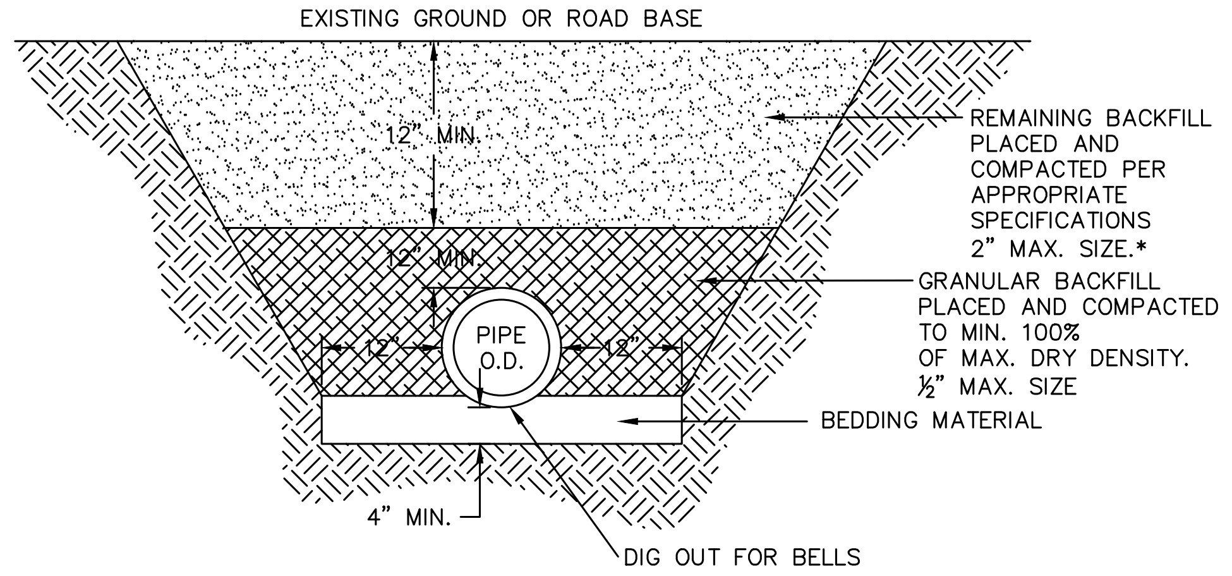

12" STABILIZED SUBGRADE (LBR 40) TO BE COMPACTED TO A MINIMUM OF 98% MAX. DENSITY PER ASTM D–1557 MODIFIED PROCTOR.
8" CONCRETE PAVEMENT, 28 DAY MIN COMPRESSION STRENGTH OF 4000 PSI (ASTM C–39) WITH JOINT SPACING PER ACI 330R (12' MAX) SAW CUT AT 2" DEPTH

HEAVY DUTY CONCRETE PAVEMENT DETAIL

NTS


6' –0" MAX.
4x4 WOOD POSTS
2x4 WOOD RAILS
48"
24"
24"
BARRICADES PLACED AT 6' RADIUS OR DRIPLINE MINIMUM

TREE PROTECTION DETAIL
NTS


EXISTING GROUND OR ROAD BASE
12" MIN.
12" MIN.
12"
12"
PIPE O.D.
REMAINING BACKFILL PLACED AND COMPACTED PER APPROPRIATE SPECIFICATIONS 2" MAX. SIZE.*
GRANULAR BACKFILL PLACED AND COMPACTED TO MIN. 100% OF MAX. DRY DENSITY. ½" MAX. SIZE
BEDDING MATERIAL
4" MIN.
DIG OUT FOR BELLS

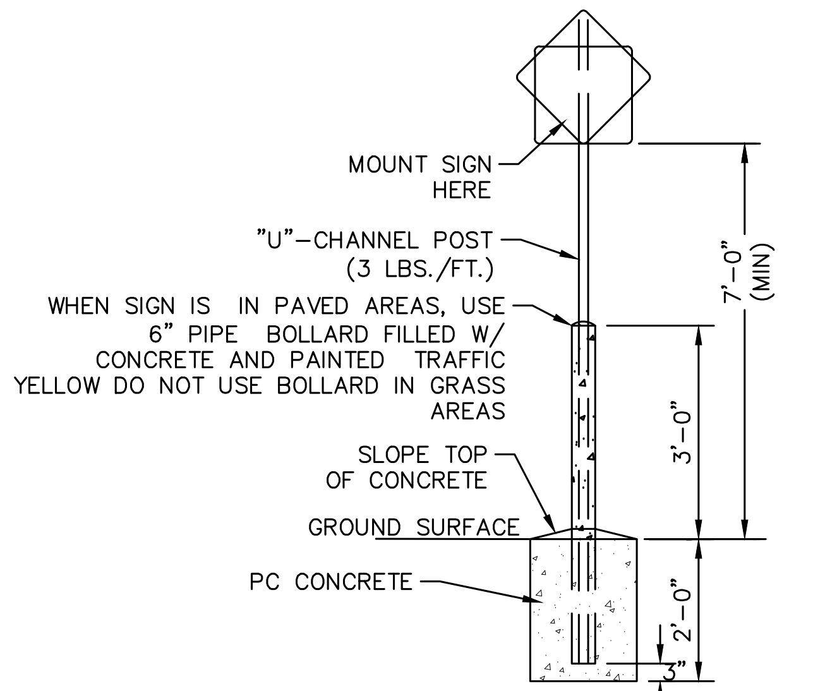
NOTES:

1. BEDDING SHALL CONSIST OF IN–SITU GRANULAR MATERIAL (2" MAX SIZE). UNSUITABLE IN–SITU MATERIALS SUCH AS MUCK, DEBRIS AND LARGER ROCK SHALL BE REMOVED.
2. THE PIPE SHALL BE FULLY SUPPORTED FOR ITS ENTIRE LENGTH WITH APPROPRIATE COMPACTION UNDER THE PIPE HAUNCHES.
3. THE PIPE SHALL BE PLACED IN A DRY TRENCH.
4. BACKFILL SHALL BE FREE OF UNSUITABLE MATERIAL SUCH AS LARGER ROCK, MUCK AND DEBRIS.
5. ALL WORK SHALL CONFORM TO STATE OF FLORIDA TRENCH SAFETY ACT.

* COMPACT TO 98%OF AASHTO T–180 MAXIMUM DRY DENSITY UNDER EXISTING AND PROPOSED PAVEMENT AREAS. COMPACT TO 95% ON ALL OTHER AREAS UNLESS OTHERWISE NOTED..

TRENCH WITHOUT EXFILTRATION

NOT TO SCALE


MOUNT SIGN HERE
"U"–CHANNEL POST (3 LBS./FT.)
WHEN SIGN IS IN PAVED AREAS, USE 6" PIPE BOLLARD FILLED W/ CONCRETE AND PAINTED TRAFFIC YELLOW DO NOT USE BOLLARD IN GRASS AREAS
SLOPE TOP OF CONCRETE
GROUND SURFACE
PC CONCRETE
7'–0" (MIN)
3'–0"
2'–0"
3"
1'–6"

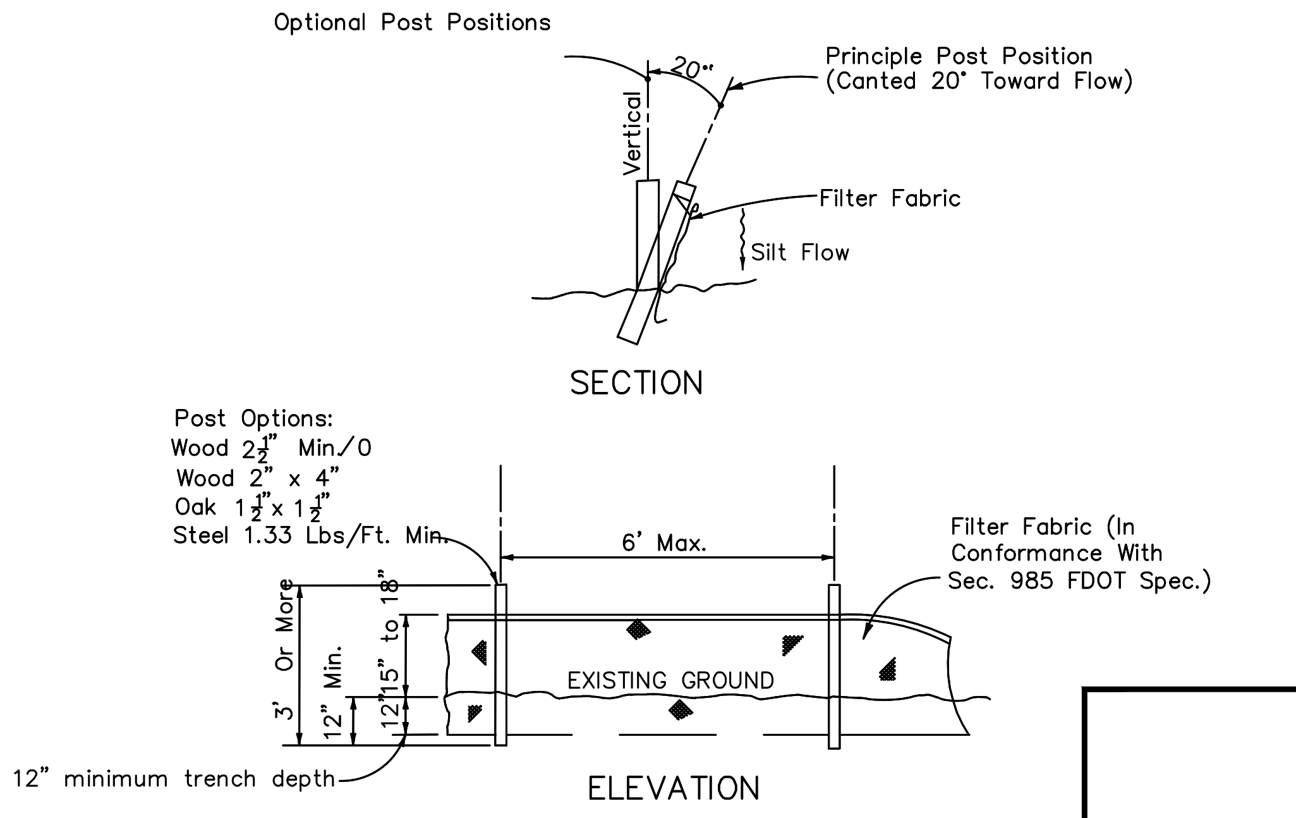
NOTES:

POLE AND SIGN TO BE PROVIDED AND INSTALLED BY GENERAL CONTRACTOR.

ALL SIGNS SHALL COMPLY WITH U.S. DEPARTMENT OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION'S "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES", LOCAL CODES AND AS SPECIFIED. MOUNT SIGNS TO POST IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

STANDARD SIGN BASE

N.T.S.


Optional Post Positions
20°
Vertical
Principle Post Position (Canted 20° Toward Flow)
Filter Fabric
Silt Flow
SECTION
Post Options:
Wood 2½" Min./0
Wood 2" x 4"
Oak 1½" x 1½"
Steel 1.33 Lbs/Ft. Min.
6' Max.
Filter Fabric (In Conformance With Sec. 985 FDOT Spec.)
3' Or More
12" Min.
15" to 18"
12"
EXISTING GROUND
12" minimum trench depth
ELEVATION

TYPE III SILT FENCE
NTS

No.	REVISIONS	DATE	BY

Kimley»Horn
© 2025 KIMLEY-HORN AND ASSOCIATES, INC.
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WWW.KIMLEY-HORN.COM REGISTRY No. 35106

LICENSED PROFESSIONAL
DEREK E. RAMSBURG, P.E.
FLORIDA LICENSE NUMBER
88965
DATE: 8/21/2025

KHA PROJECT 249188006
DATE 8/21/2025
SCALE AS SHOWN
DESIGNED BY BMG
DRAWN BY BMG
CHECKED BY DER

GENERAL CONSTRUCTION DETAILS

7-11 PALM BAY

CITY OF PALM BAY FLORIDA

SHEET NUMBER
C7.0

Plotted By:Guidry, Blake Sheet Set:7-11 PALM BAY Layout:C7.0 September 22, 2025 12:55:21pm K:\ORL_Civil\249188006-7-11 Palm Bay\CADD\CONST\PlanSheets\C7.0 GENERAL CONSTRUCTION DETAILS.dwg
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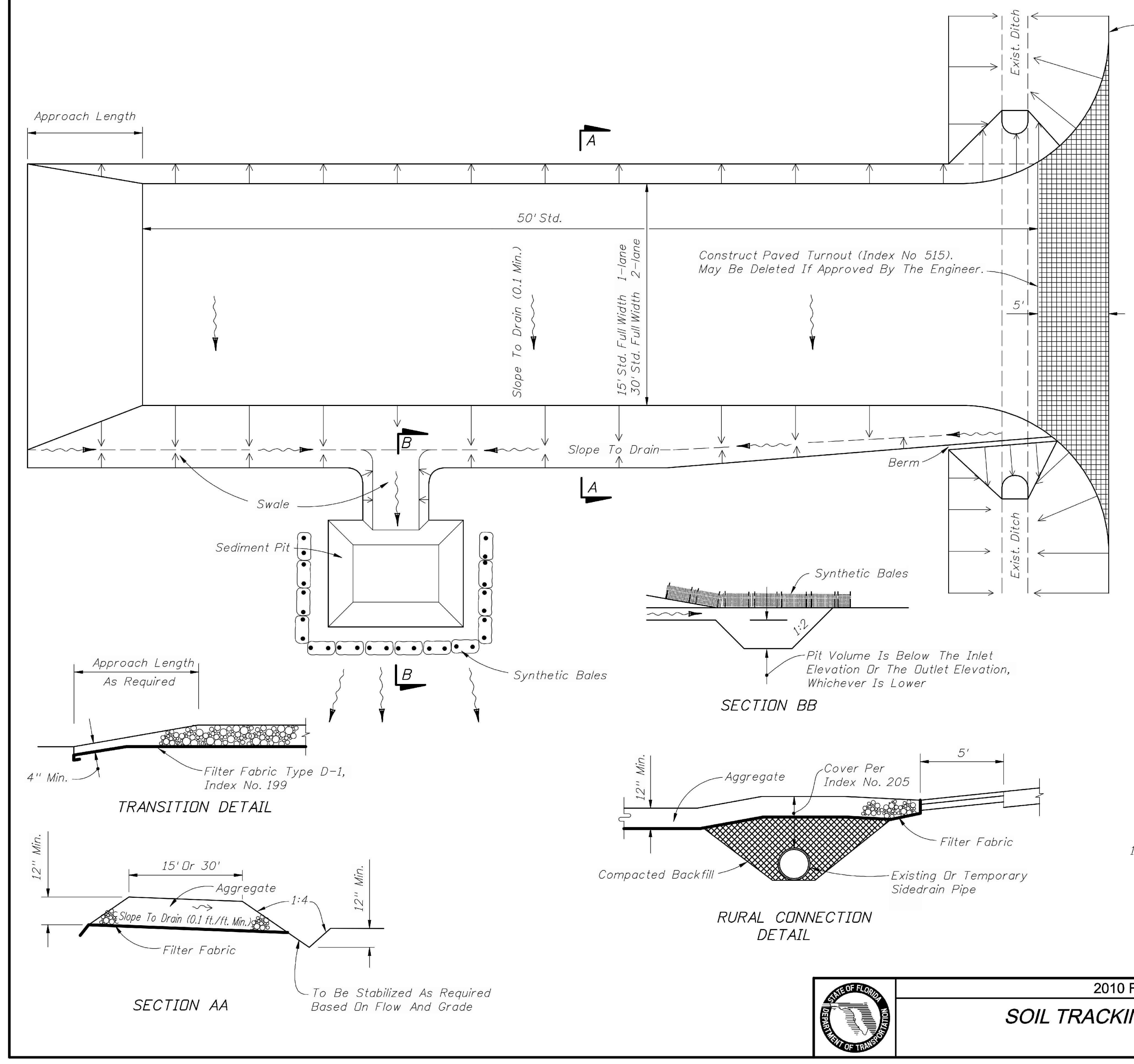
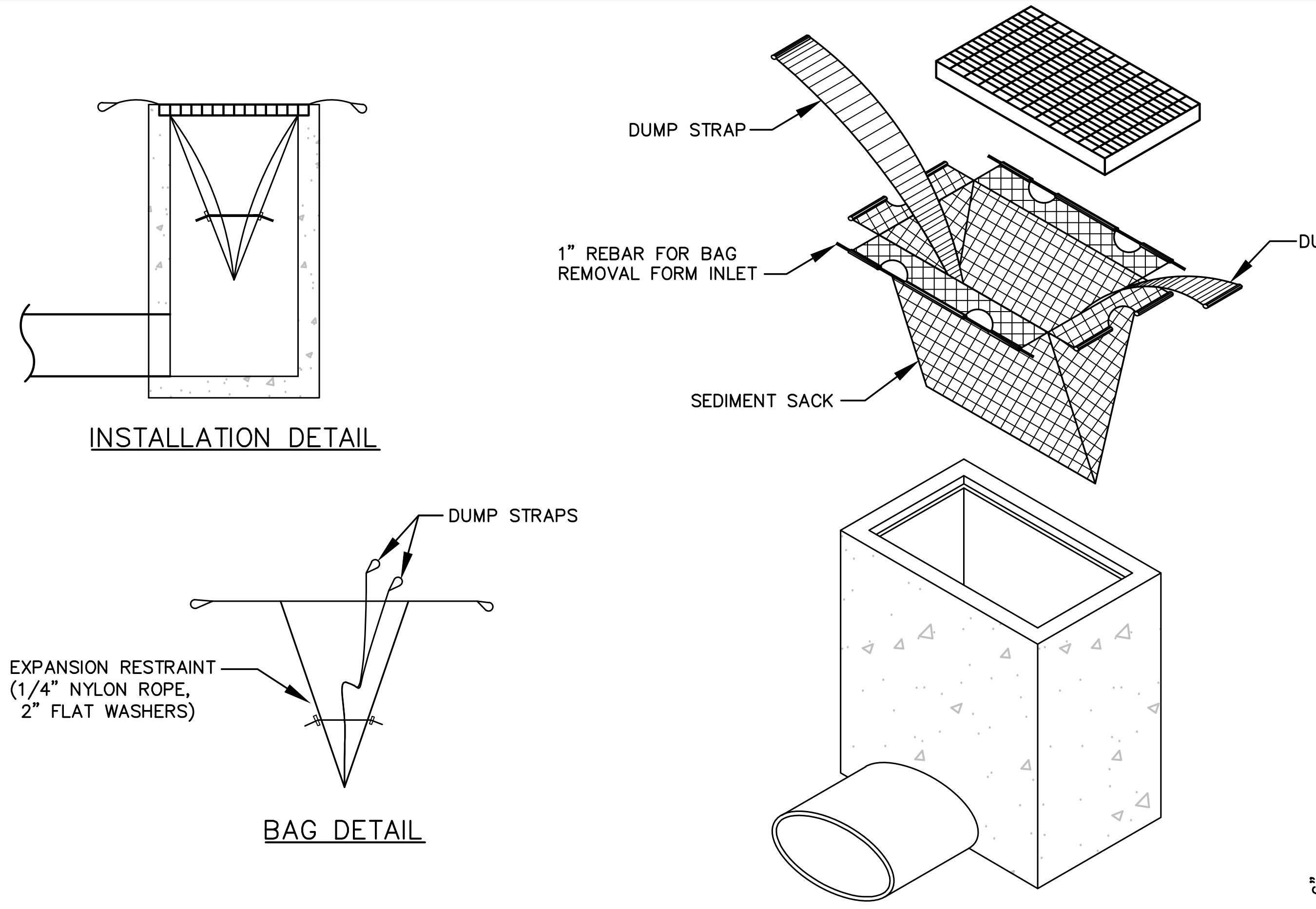

Existing Roadway Edge Of Pavement
Approach Length
A
50' Std.
Slope To Drain (0.1 Min.)
15' Std. Full Width 1-lane
30' Std. Full Width 2-lane
Construct Paved Turnout (Index No 515). May Be Deleted If Approved By The Engineer.
5'
Exist. Ditch
B
Slope To Drain
Berm
Swale
Sediment Pit
Synthetic Bales
Approach Length As Required
4" Min.
Filter Fabric Type D-1, Index No. 199
TRANSITION DETAIL
Pit Volume Is Below The Inlet Elevation Or The Outlet Elevation, Whichever Is Lower
1:2
SECTION BB
12" Min.
15' Or 30'
Aggregate
1:4
Slope To Drain (0.1 ft./ft. Min.)
Filter Fabric
SECTION AA
To Be Stabilized As Required Based On Flow And Grade
Aggregate
Cover Per Index No. 205
5'
Filter Fabric
Compacted Backfill
Existing Or Temporary Sidedrain Pipe
RURAL CONNECTION DETAIL

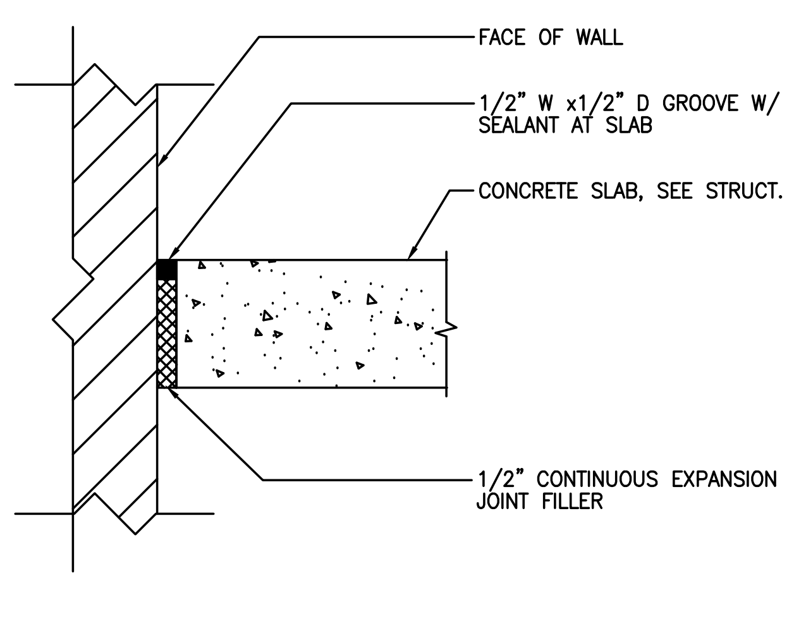
GENERAL NOTES

1. A Soil Tracking Prevention Device (STPD) shall be constructed at locations designated by the engineer for points of egress from unstabilized areas of the project to public roads where off-site tracking of mud could occur. Traffic from unstabilized areas of the construction project shall be directed thru a STPD. Barriers, flagging, or other positive means shall be used as required to limit and direct vehicular egress across the STPD.
2. The Contractor may propose an alternative technique to minimize off-site tracking of sediment. The alternative must be reviewed and approved by the Engineer prior to its use.
3. All materials spilled, dropped, or tracked onto public roads (including the STPD aggregate and construction mud) shall be removed daily, or more frequently if so directed by the Engineer.
4. Aggregates shall be as described in Section 901 excluding 901-2.3. Aggregates shall be FDOT size #1. If this size is not available, the next available smaller size aggregate may be substituted with the approval of the Engineer. Sizes containing excessive small aggregate will track off the project and are unsuitable.
5. The sediment pit should provide a retention volume of 3600 cubic feet/acre of surface area draining to the pit.
   When the STPD is isolated from other drainage areas, the following pit volumes will satisfy this requirement:
   $15' \times 50' = 100\ \text{ft.}^3 \quad 30' \times 50' = 200\ \text{ft.}^3$
   As an option to the sediment pit, the width of the swale bottom can be increased to obtain the volume. When the sediment pit or swale volume has been reduced to one half, it shall be cleaned. When a swale is used, synthetic bales or silt fence shall be placed along the entire length.
6. The swale ditch draining the STPD shall have a 0.02% minimum and a 1.0% maximum grade along the STPD and to the sediment pit.
7. Mitered end sections are not required when the sidedrain pipe satisfies the clear zone requirements.
8. The STPD shall be maintained in a condition that will allow it to perform its function. To prevent off-site tracking, the STPD shall be rinsed (daily when in use) to move accumulated mud downward thru the stone. Additional stabilization of the vehicular route leading to the STPD may be required to limit the mud tracked.
9. A STPD shall be paid for under the contract unit price for Soil Tracking Prevention Device, EA. The unit price shall constitute full compensation for construction, maintenance, replacement of materials, removal, and restoration of the area utilized for the STPD; including but not limited to excavation, grading, temporary pipe (including MES when required), filter fabric, aggregate, paved turnout (including asphalt and base construction), ditch stabilization, approach route stabilization, sediment removal and disposal, water, rinsing and cleaning of the STPD and cleaning of public roads, grassing and sod. Synthetic Bale or Bale Type Barrier shall be paid for under the contract unit price for Synthetic Bales, LF. Silt fence shall be paid for under the contract unit price for Staked Silt Fence, LF.
10. The nominal size of a standard STPD is 15' x 50' unless otherwise shown in the plans. If the volume of entering and existing vehicles warrant, a 30' width STPD may be used if approved by the Engineer. When a double width (30') STPD is used, the pay quantity shall be 2 for each location.

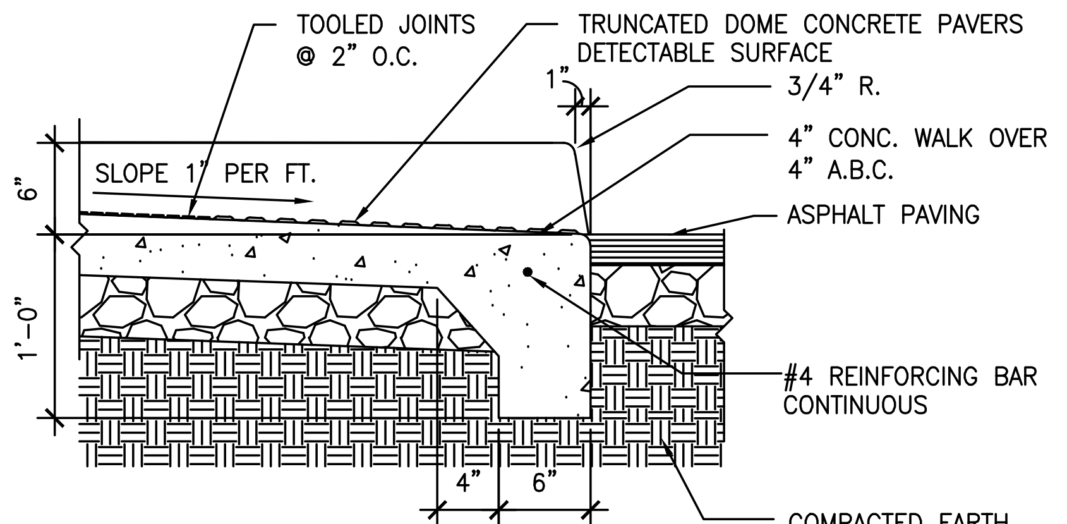
2010 FDOT Design Standards	Last Revision	Sheet No.
SOIL TRACKING PREVENTION DEVICE TYPE A	07/01/07	1 of 1
	Index No.	106


INSTALLATION DETAIL
DUMP STRAPS
EXPANSION RESTRAINT (1/4" NYLON ROPE, 2" FLAT WASHERS)
BAG DETAIL
DUMP STRAP
1" REBAR FOR BAG REMOVAL FORM INLET
SEDIMENT SACK
DUMP STRAP

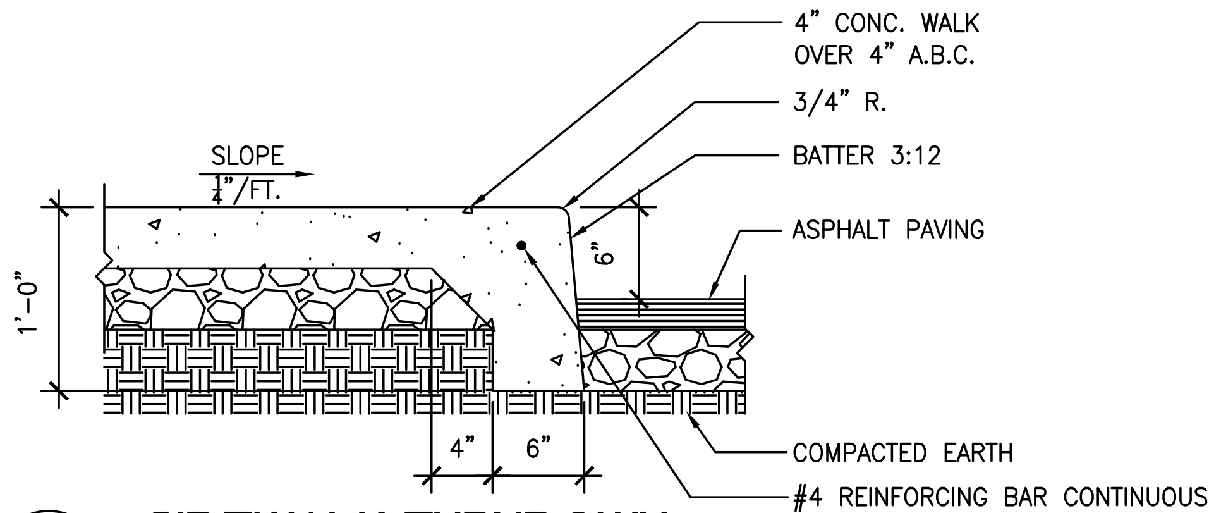
STANDARD INLET SEDIMENT CONTROL DEVICE
NTS


FACE OF WALL
1/2" W x1/2" D GROOVE W/ SEALANT AT SLAB
CONCRETE SLAB, SEE STRUCT.
1/2" CONTINUOUS EXPANSION JOINT FILLER

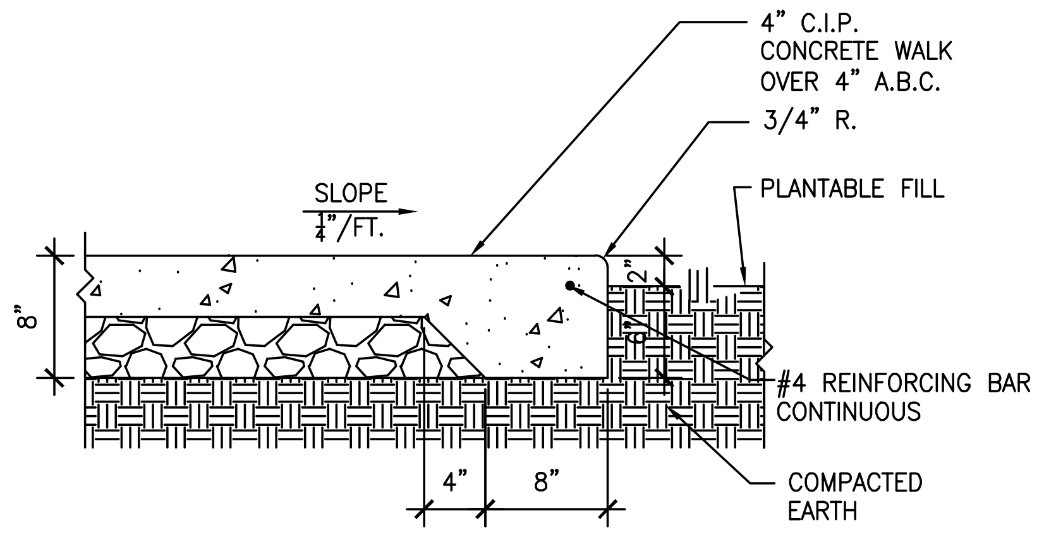
TYPICAL SLAB AT GRADE
NOT TO SCALE


TOOLED JOINTS @ 2" O.C.
TRUNCATED DOME CONCRETE PAVERS DETECTABLE SURFACE
1"
3/4" R.
4" CONC. WALK OVER 4" A.B.C.
ASPHALT PAVING
SLOPE 1" PER FT.
6"
1'-0"
#4 REINFORCING BAR CONTINUOUS
4"
6"
COMPACTED EARTH

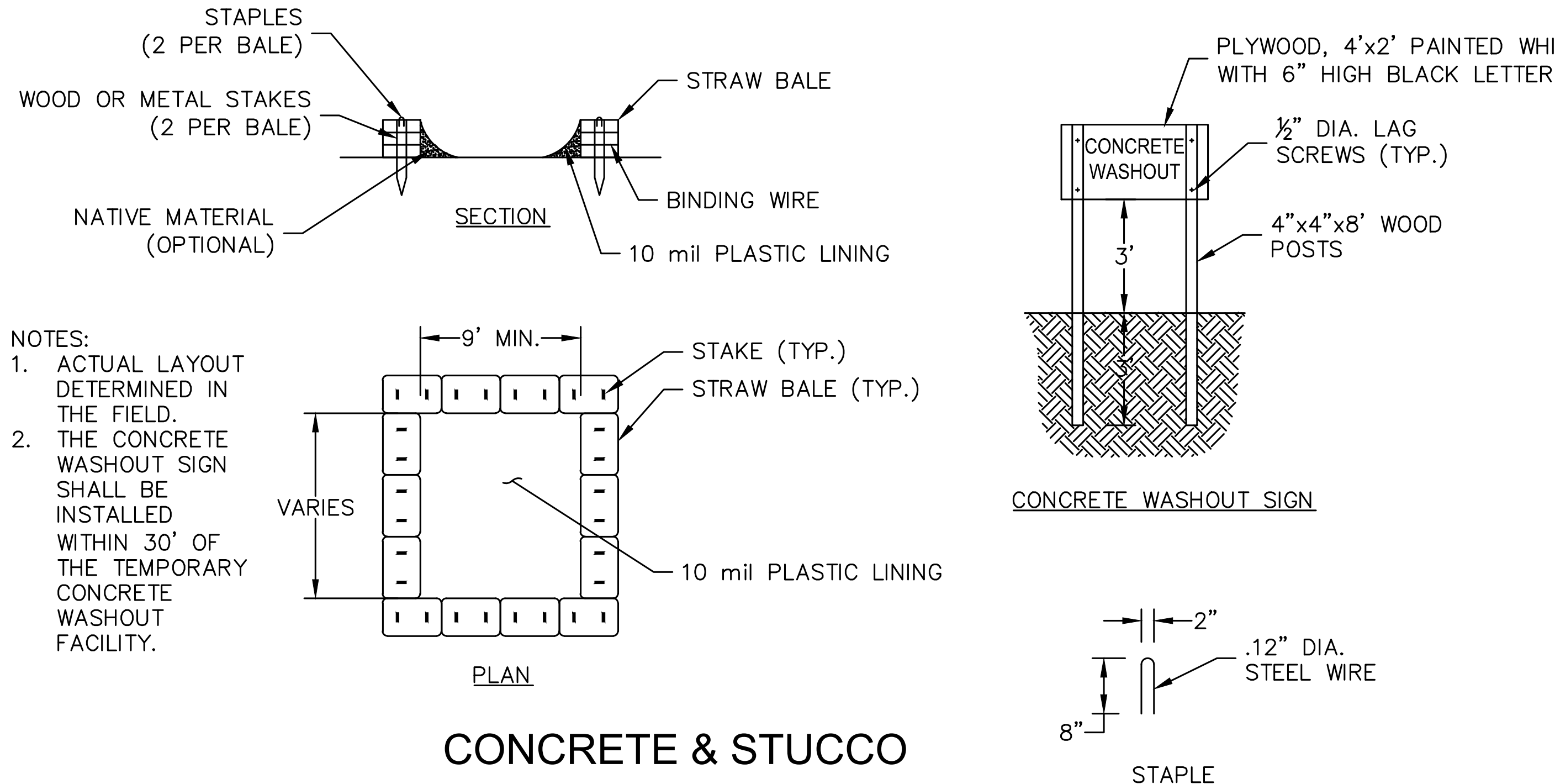
10 **WALK AT RAMP**
NTS


4" CONC. WALK OVER 4" A.B.C.
3/4" R.
BATTER 3:12
ASPHALT PAVING
SLOPE 1/4"/FT.
1'-0"
6"
4"
6"
COMPACTED EARTH
#4 REINFORCING BAR CONTINUOUS

9 **SIDEWALK TURNDOWN**
NTS

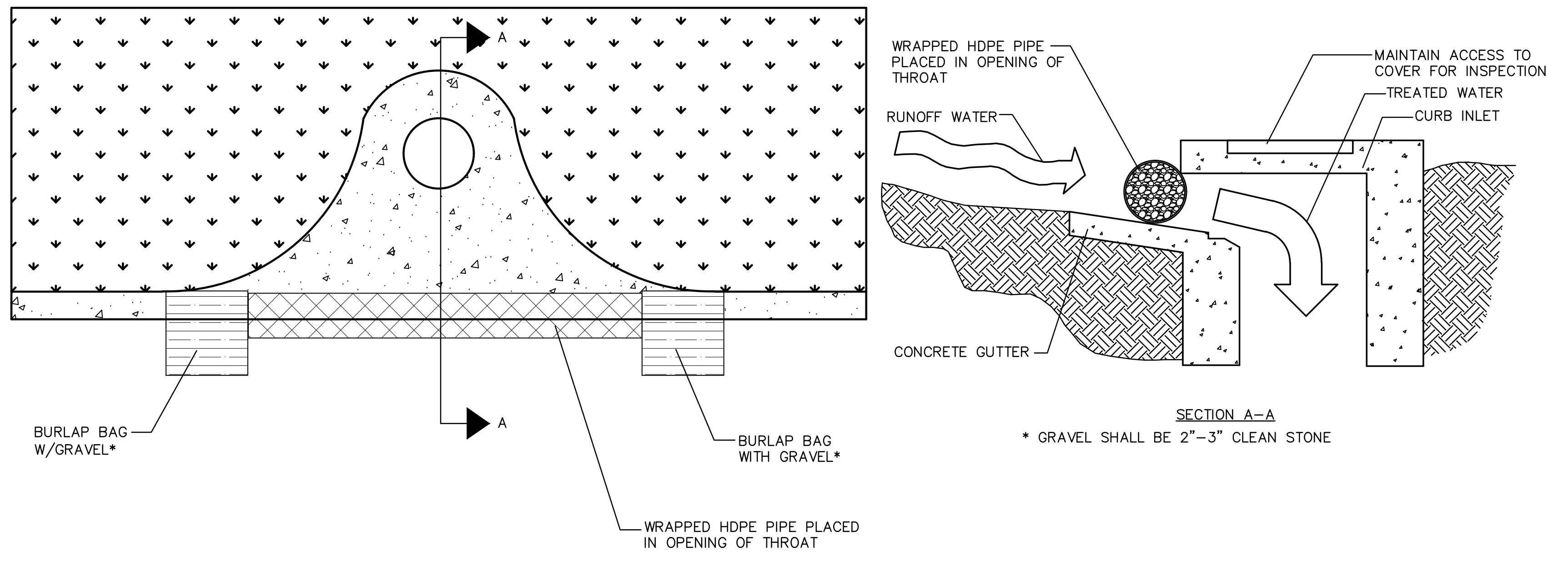

4" C.I.P. CONCRETE WALK OVER 4" A.B.C.
3/4" R.
PLANTABLE FILL
SLOPE 1/4"/FT.
8"
2"
6"
#4 REINFORCING BAR CONTINUOUS
4"
8"
COMPACTED EARTH

8 **EDGE OF WALK AT PLANTER**
NTS


STAPLES (2 PER BALE)
WOOD OR METAL STAKES (2 PER BALE)
STRAW BALE
NATIVE MATERIAL (OPTIONAL)
BINDING WIRE
10 mil PLASTIC LINING
SECTION
9' MIN.
STAKE (TYP.)
STRAW BALE (TYP.)
VARIES
10 mil PLASTIC LINING
PLAN
PLYWOOD, 4'x2' PAINTED WHITE WITH 6" HIGH BLACK LETTERS
CONCRETE WASHOUT
½" DIA. LAG SCREWS (TYP.)
4"x4"x8' WOOD POSTS
3'
3'
CONCRETE WASHOUT SIGN
2"
.12" DIA. STEEL WIRE
8"
STAPLE

NOTES:
1. ACTUAL LAYOUT DETERMINED IN THE FIELD.
2. THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30' OF THE TEMPORARY CONCRETE WASHOUT FACILITY.

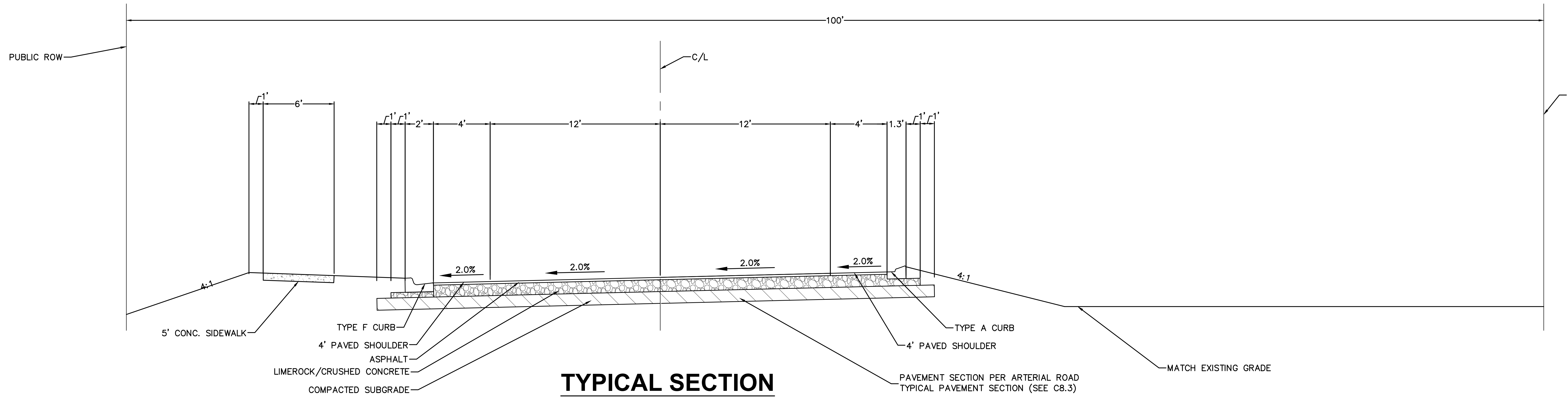
CONCRETE & STUCCO WASTE MANAGEMENT
N.T.S


A
BURLAP BAG W/GRAVEL*
BURLAP BAG WITH GRAVEL*
WRAPPED HDPE PIPE PLACED IN OPENING OF THROAT
WRAPPED HDPE PIPE PLACED IN OPENING OF THROAT
RUNOFF WATER
MAINTAIN ACCESS TO COVER FOR INSPECTION
TREATED WATER
CURB INLET
CONCRETE GUTTER
SECTION A-A

* GRAVEL SHALL BE 2"-3" CLEAN STONE

SOCK DRAIN INLET SEDIMENT FILTER
NTS

NOTE: THE PERFORATED PIPE MUST EXTEND AT LEAST 1' BEYOND THE CURB OPENING ON EACH SIDE AND BE ANCHORED WITH GRAVEL BAGS, OR SIMILAR, ON EACH END. A SPACER MUST BE PROVIDED FOR BETWEEN THE INLET OPENING AND THE PIPE TO ALLOW FOR OVERFLOW, PREVENT FLOODING AND TO PREVENT THE PIPE FROM FALLING INTO THE INLET.


100'
PUBLIC ROW
C/L
PUBLIC ROW
1'
6'
1'
1'
2'
4'
12'
12'
4'
1.3'
1'
1'
2.0%
2.0%
2.0%
2.0%
4:1
4:1
5' CONC. SIDEWALK
TYPE F CURB
4' PAVED SHOULDER
ASPHALT
LIMEROCK/CRUSHED CONCRETE
COMPACTED SUBGRADE
PAVEMENT SECTION PER ARTERIAL ROAD TYPICAL PAVEMENT SECTION (SEE C8.3)
4' PAVED SHOULDER
TYPE A CURB
MATCH EXISTING GRADE

TYPICAL SECTION
EMERSON DRIVE
N.T.S.

No.	REVISIONS	DATE	BY

Kimley»Horn

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LICENSED PROFESSIONAL
DEREK E. RAMSBURG, P.E.
FLORIDA LICENSE NUMBER
88905
DATE: 8/21/2025

KHA PROJECT
249188006
DATE
8/21/2025
SCALE AS SHOWN
DESIGNED BY BMG
DRAWN BY BMG
CHECKED BY DER

GENERAL CONSTRUCTION DETAILS

7-11 PALM BAY

CITY OF PALM BAY FLORIDA

SHEET NUMBER
C7.1

Plotted By: Guidry, Blake Sheet Set: 7-11 PALM BAY Layout: C7.1 August 21, 2025 12:52:09pm K:\ORL_Civil\249188006-7-11 Palm Bay\CADD\CONST\PlanSheets\C7.0 GENERAL CONSTRUCTION DETAILS.dwg
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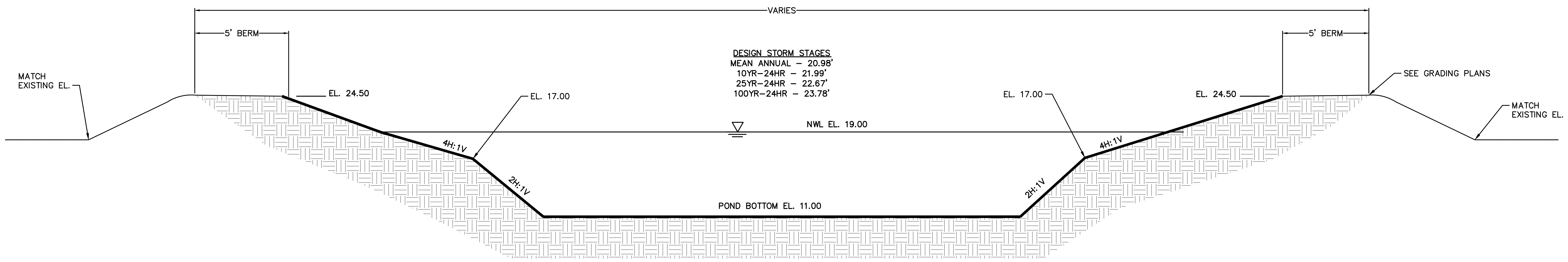
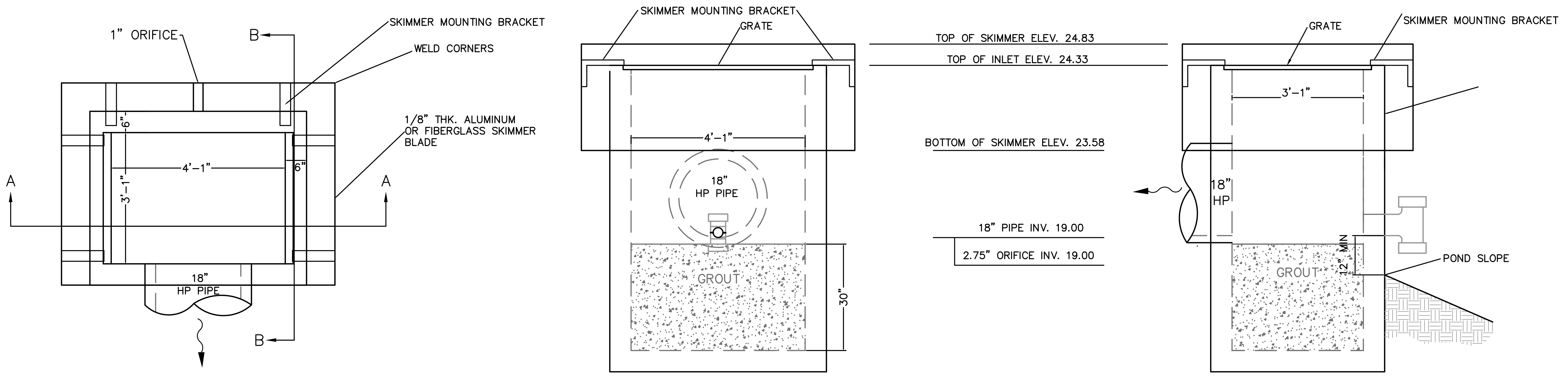

VARIES
5' BERM
5' BERM
DESIGN STORM STAGES
MEAN ANNUAL – 20.98'
10YR–24HR – 21.99'
25YR–24HR – 22.67'
100YR–24HR – 23.78'
MATCH EXISTING EL.
EL. 24.50
EL. 17.00
4H:1V
2H:1V
NWL EL. 19.00
POND BOTTOM EL. 11.00
EL. 17.00
EL. 24.50
4H:1V
2H:1V
SEE GRADING PLANS
MATCH EXISTING EL.

TYPICAL POND SECTION

N.T.S.


1" ORIFICE
B
SKIMMER MOUNTING BRACKET
WELD CORNERS
1/8" THK. ALUMINUM OR FIBERGLASS SKIMMER BLADE
A
A
6"
4'-1"
6"
3'-1"
18" HP PIPE
B
SKIMMER MOUNTING BRACKET
GRATE
4'-1"
18" HP PIPE
GROUT
30"
TOP OF SKIMMER ELEV. 24.83
TOP OF INLET ELEV. 24.33
BOTTOM OF SKIMMER ELEV. 23.58
18" PIPE INV. 19.00
2.75" ORIFICE INV. 19.00
GRATE
SKIMMER MOUNTING BRACKET
3'-1"
18" HP
GROUT
12" MIN
POND SLOPE

PLAN

SECTION A–A

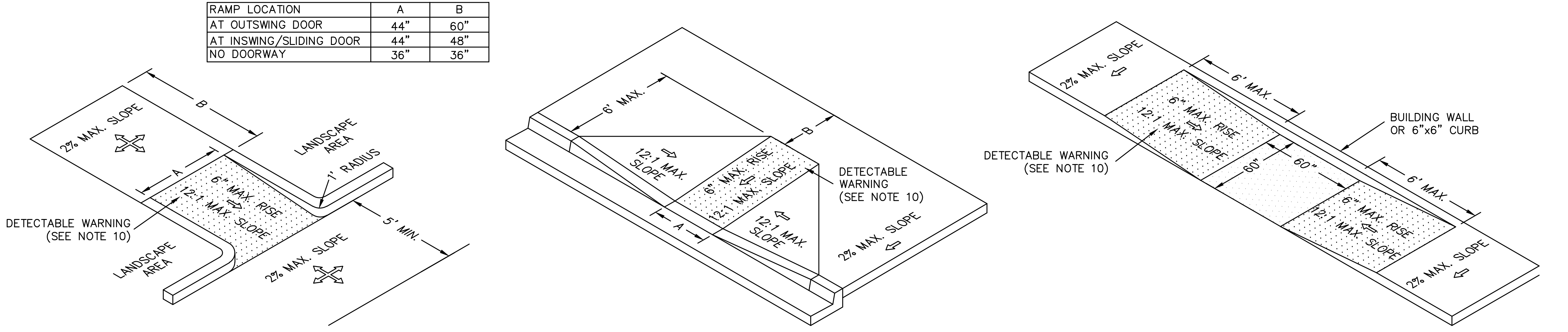
SECTION B–B

CONTROL STRUCTURE "CS–1" DETAIL

USE TYPE "D" DITCH BOTTOM INLET F.D.O.T. INDEX NO. 425–052

N.T.S.

	MINIMUM DIMENSION	
RAMP LOCATION	A	B
AT OUTSWING DOOR	44"	60"
AT INSWING/SLIDING DOOR	44"	48"
NO DOORWAY	36"	36"


B
2% MAX. SLOPE
A
6" MAX. RISE
12:1 MAX. SLOPE
LANDSCAPE AREA
1' RADIUS
DETECTABLE WARNING (SEE NOTE 10)
LANDSCAPE AREA
2% MAX. SLOPE
5' MIN.
6' MAX.
B
12:1 MAX. SLOPE
6" MAX. RISE
12:1 MAX. SLOPE
DETECTABLE WARNING (SEE NOTE 10)
A
12:1 MAX. SLOPE
2% MAX. SLOPE
2% MAX. SLOPE
6' MAX.
6" MAX. RISE
12:1 MAX. SLOPE
DETECTABLE WARNING (SEE NOTE 10)
BUILDING WALL OR 6"x6" CURB
60"
60"
6' MAX.
6" MAX. RISE
12:1 MAX. SLOPE
2% MAX. SLOPE

NOTES:

1. ALL CURB CUT ACCESSIBLE RAMPS AND DETECTABLE WARNING SURFACES SHALL BE INSTALLED BY THE SITE CONTRACTOR.
2. THE STANDARD COLOR FOR THE DETECTABLE WARNING SURFACE SHALL BE YELLOW. ANY TYPE OF ADHESIVE OR GLUE DOWN MATS; STAMPED CONCRETE OR ANY VARIATION OTHER THAN WHAT IS SPECIFIED ABOVE WILL NOT BE ACCEPTED BY CLAY COUNTY. CLAY COUNTY WILL CONSIDER ALTERNATIVES THAT ARE EQUAL TO THE PRODUCTS SPECIFIED ABOVE. COUNTY ENGINEER AND THE CHIEF ENGINEER FOR DEVELOPMENT SERVICES WILL HAVE THE SOLE RESPONSIBILITY FOR DETERMING THE PRODUCT ACCEPTABILITY.
3. ALL DETECTABLE WARNING SURFACES FOR SIDEWALKS AT CURB CUT HANDICAP RAMP SHALL BE A COUNTY APPROVED YELLOW COLORED COMPOSITE MATERIAL ANCHORED IN THE CONCRETE SIDEWALK RAMP. ANCHORED COMPOSITE WARNING AREA INSERTS ARE TO BE COLORED "SAFETY YELLOW", ARE TO BE SET INTO THE CONCRETE AND ARE TO BE FLUSH WITH CONCRETE SURFACE ALONG ALL FOUR SIDES. DESIGN DIMENSIONS OF DETECTABLE WARNING AREA SHALL CONFORM TO FDOT STANDARD INDEX 522–002, CODE OF FEDERAL REGULATIONS PART 36, AND SJC REQUIREMENTS.

ACCESSIBLE RAMPS

N.T.S

No.	REVISIONS	DATE	BY

Kimley»Horn

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LICENSED PROFESSIONAL
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SCALE	AS SHOWN
DESIGNED BY	BMG
DRAWN BY	BMG
CHECKED BY	DER

GENERAL CONSTRUCTION DETAILS

7-11 PALM BAY

CITY OF PALM BAY FLORIDA

SHEET NUMBER
C7.2

Plotted By: Guidry, Blake Sheet Set: 7-11 PALM BAY Layout: C7.2 August 21, 2025 12:52:19pm K:\ORL_Civil\249188006-7-11 Palm Bay\CADD\CONST\PlanSheets\C7.0 GENERAL CONSTRUCTION DETAILS.dwg
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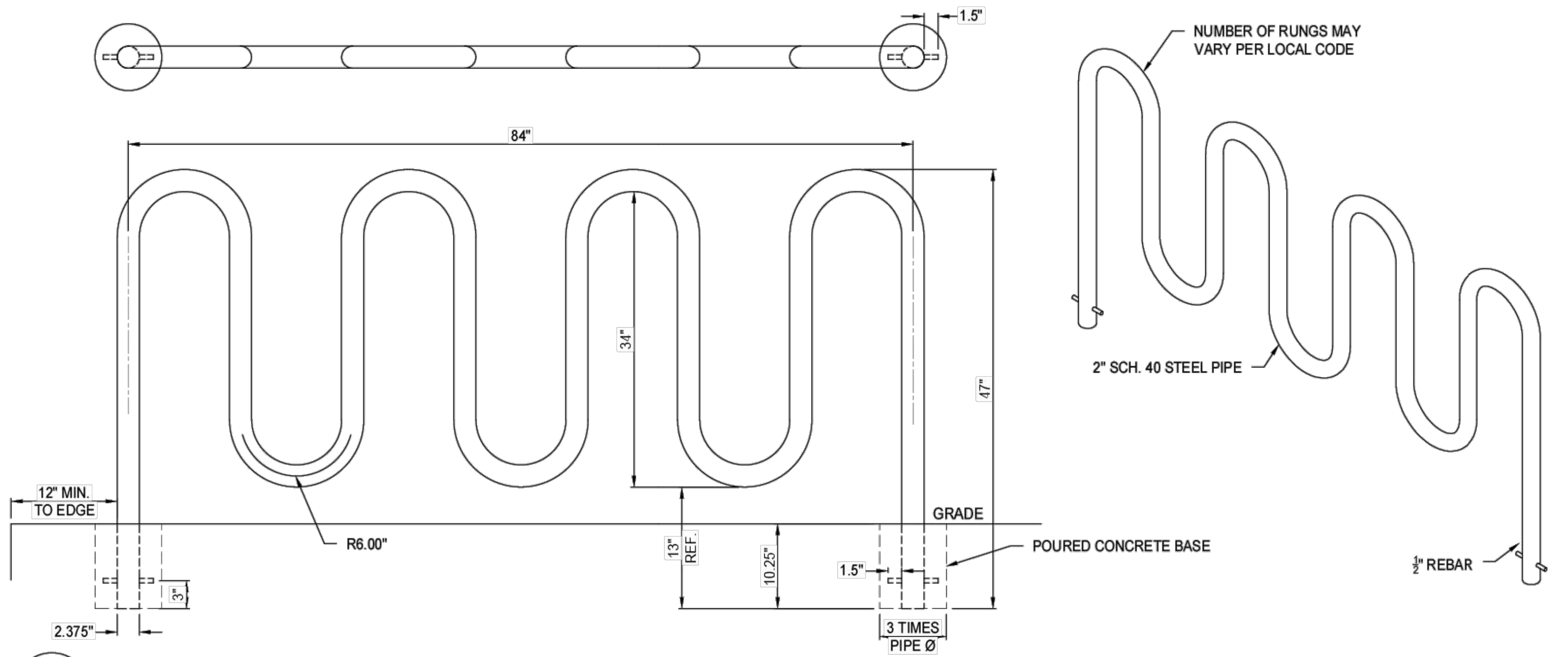
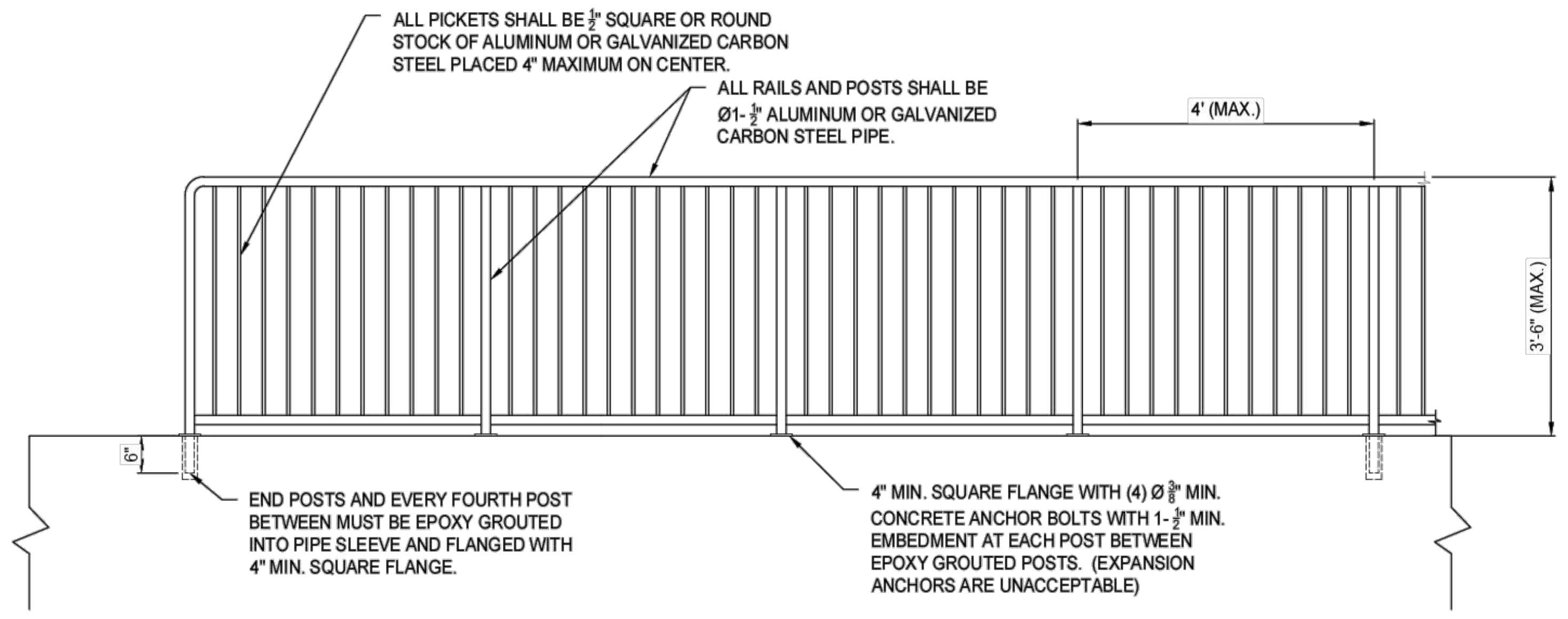
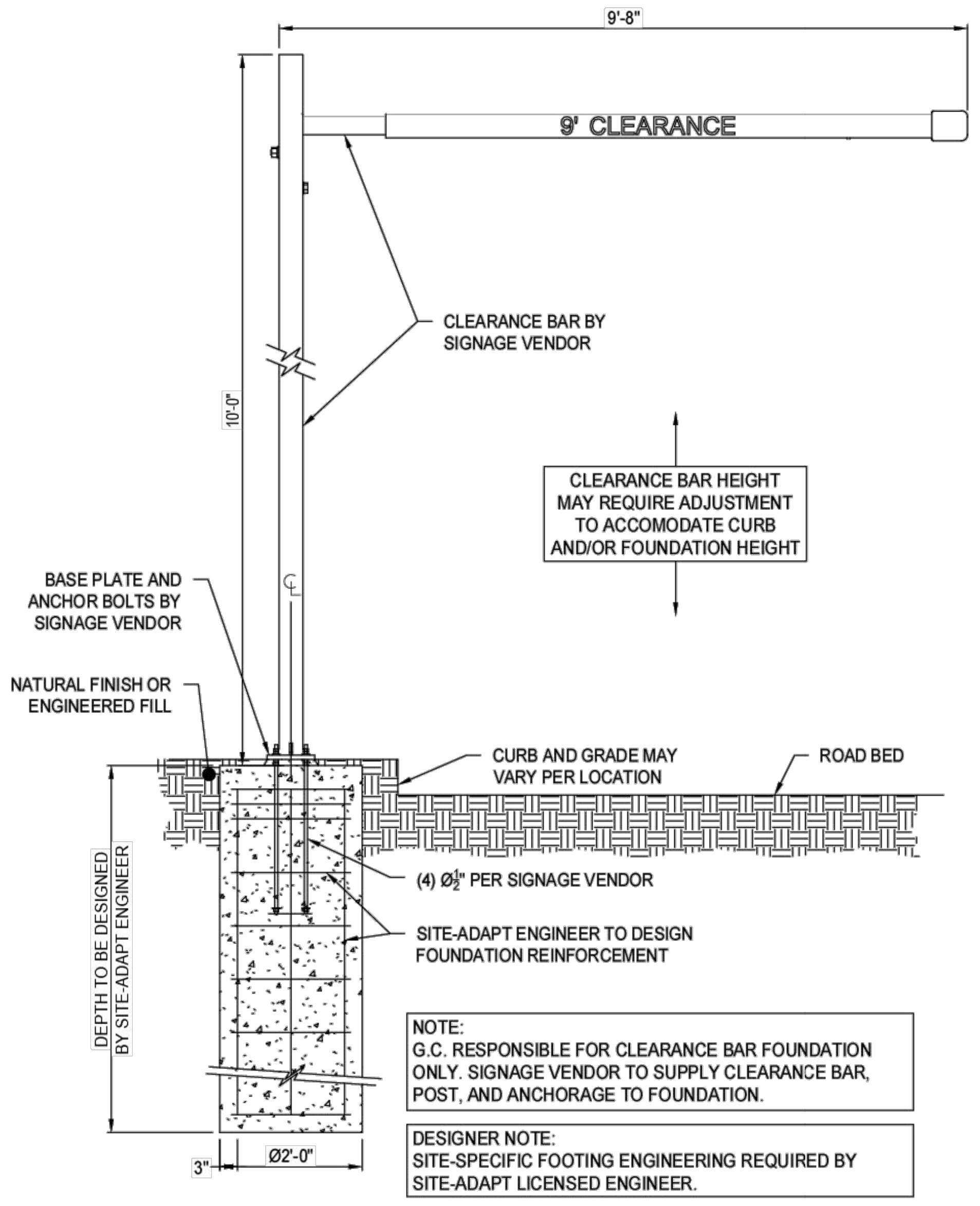

1.5"
NUMBER OF RUNGS MAY VARY PER LOCAL CODE
84"
34"
47"
2" SCH. 40 STEEL PIPE
12" MIN. TO EDGE
R6.00"
GRADE
13" REF.
10.25"
1.5"
3"
2.375"
3 TIMES PIPE Ø
POURED CONCRETE BASE
½" REBAR

6 BIKE RACK
NOT TO SCALE


ALL PICKETS SHALL BE ½" SQUARE OR ROUND STOCK OF ALUMINUM OR GALVANIZED CARBON STEEL PLACED 4" MAXIMUM ON CENTER.
ALL RAILS AND POSTS SHALL BE Ø1-½" ALUMINUM OR GALVANIZED CARBON STEEL PIPE.
4' (MAX.)
3'-6" (MAX.)
6"
END POSTS AND EVERY FOURTH POST BETWEEN MUST BE EPOXY GROUTED INTO PIPE SLEEVE AND FLANGED WITH 4" MIN. SQUARE FLANGE.
4" MIN. SQUARE FLANGE WITH (4) Ø ⅜" MIN. CONCRETE ANCHOR BOLTS WITH 1-½" MIN. EMBEDMENT AT EACH POST BETWEEN EPOXY GROUTED POSTS. (EXPANSION ANCHORS ARE UNACCEPTABLE)

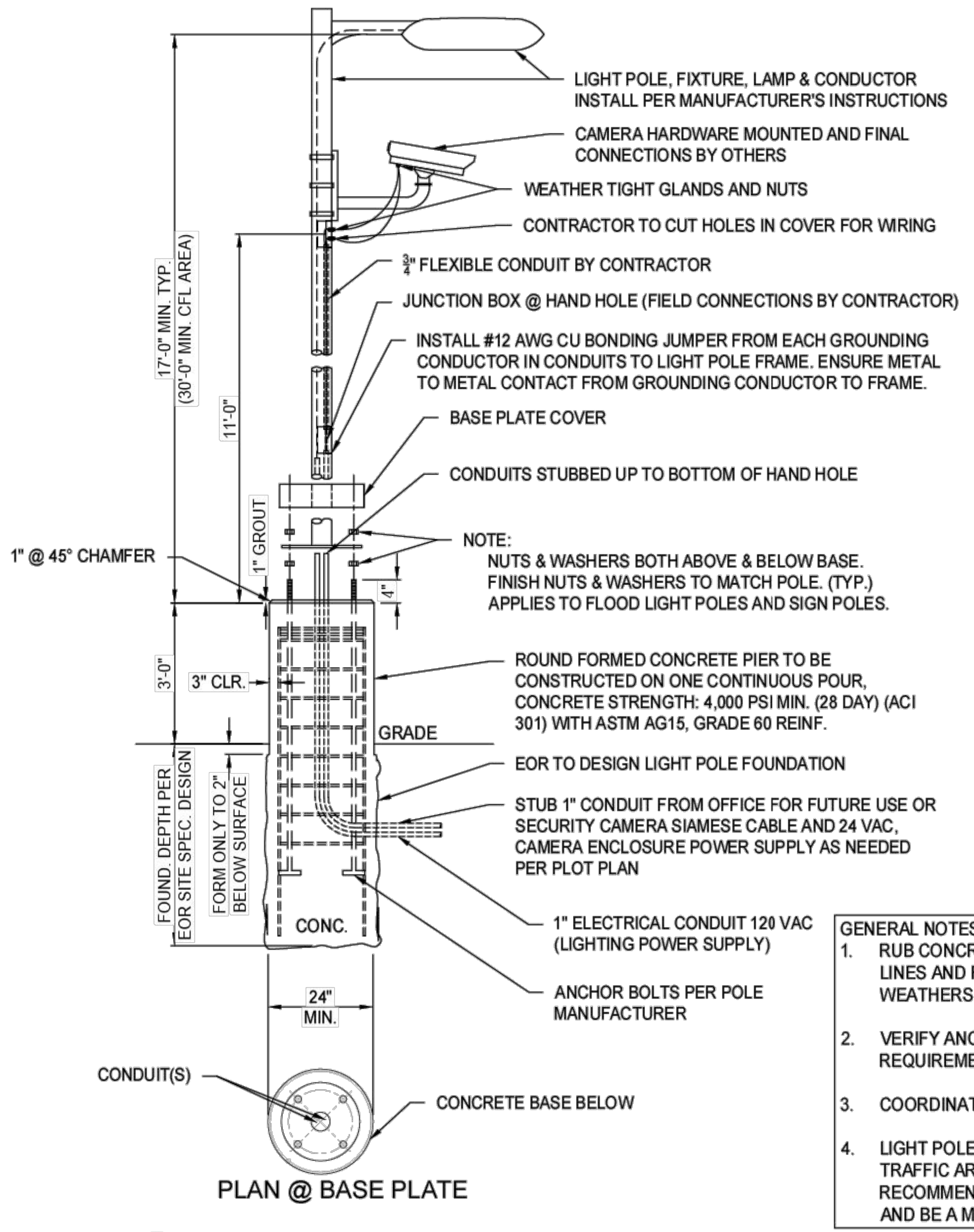
7 SAFETY RAIL
NOT TO SCALE


9'-8"
9' CLEARANCE
CLEARANCE BAR BY SIGNAGE VENDOR
10'-0"
CLEARANCE BAR HEIGHT MAY REQUIRE ADJUSTMENT TO ACCOMODATE CURB AND/OR FOUNDATION HEIGHT
BASE PLATE AND ANCHOR BOLTS BY SIGNAGE VENDOR
NATURAL FINISH OR ENGINEERED FILL
CURB AND GRADE MAY VARY PER LOCATION
ROAD BED
(4) Ø½" PER SIGNAGE VENDOR
SITE-ADAPT ENGINEER TO DESIGN FOUNDATION REINFORCEMENT
DEPTH TO BE DESIGNED BY SITE-ADAPT ENGINEER
3"
Ø2'-0"

NOTE:
G.C. RESPONSIBLE FOR CLEARANCE BAR FOUNDATION ONLY. SIGNAGE VENDOR TO SUPPLY CLEARANCE BAR, POST, AND ANCHORAGE TO FOUNDATION.

DESIGNER NOTE:
SITE-SPECIFIC FOOTING ENGINEERING REQUIRED BY SITE-ADAPT LICENSED ENGINEER.

9 CAR WASH CLEARANCE BAR
NOT TO SCALE


LIGHT POLE, FIXTURE, LAMP & CONDUCTOR INSTALL PER MANUFACTURER'S INSTRUCTIONS
CAMERA HARDWARE MOUNTED AND FINAL CONNECTIONS BY OTHERS
WEATHER TIGHT GLANDS AND NUTS
CONTRACTOR TO CUT HOLES IN COVER FOR WIRING
¾" FLEXIBLE CONDUIT BY CONTRACTOR
JUNCTION BOX @ HAND HOLE (FIELD CONNECTIONS BY CONTRACTOR)
INSTALL #12 AWG CU BONDING JUMPER FROM EACH GROUNDING CONDUCTOR IN CONDUITS TO LIGHT POLE FRAME. ENSURE METAL TO METAL CONTACT FROM GROUNDING CONDUCTOR TO FRAME.
BASE PLATE COVER
CONDUITS STUBBED UP TO BOTTOM OF HAND HOLE
17'-0" MIN. TYP. (30'-0" MIN. CFL AREA)
11'-0"
1" GROUT
1" @ 45° CHAMFER
4"
3'-0"
3" CLR.
GRADE
FOUND. DEPTH PER EOR SITE SPEC. DESIGN
FORM ONLY TO 2" BELOW SURFACE
CONC.
ROUND FORMED CONCRETE PIER TO BE CONSTRUCTED ON ONE CONTINUOUS POUR, CONCRETE STRENGTH: 4,000 PSI MIN. (28 DAY) (ACI 301) WITH ASTM AG15, GRADE 60 REINF.
EOR TO DESIGN LIGHT POLE FOUNDATION
STUB 1" CONDUIT FROM OFFICE FOR FUTURE USE OR SECURITY CAMERA SIAMESE CABLE AND 24 VAC, CAMERA ENCLOSURE POWER SUPPLY AS NEEDED PER PLOT PLAN
1" ELECTRICAL CONDUIT 120 VAC (LIGHTING POWER SUPPLY)
ANCHOR BOLTS PER POLE MANUFACTURER
24" MIN.
CONDUIT(S)
CONCRETE BASE BELOW
PLAN @ BASE PLATE

NOTE:
NUTS & WASHERS BOTH ABOVE & BELOW BASE.
FINISH NUTS & WASHERS TO MATCH POLE. (TYP.)
APPLIES TO FLOOD LIGHT POLES AND SIGN POLES.

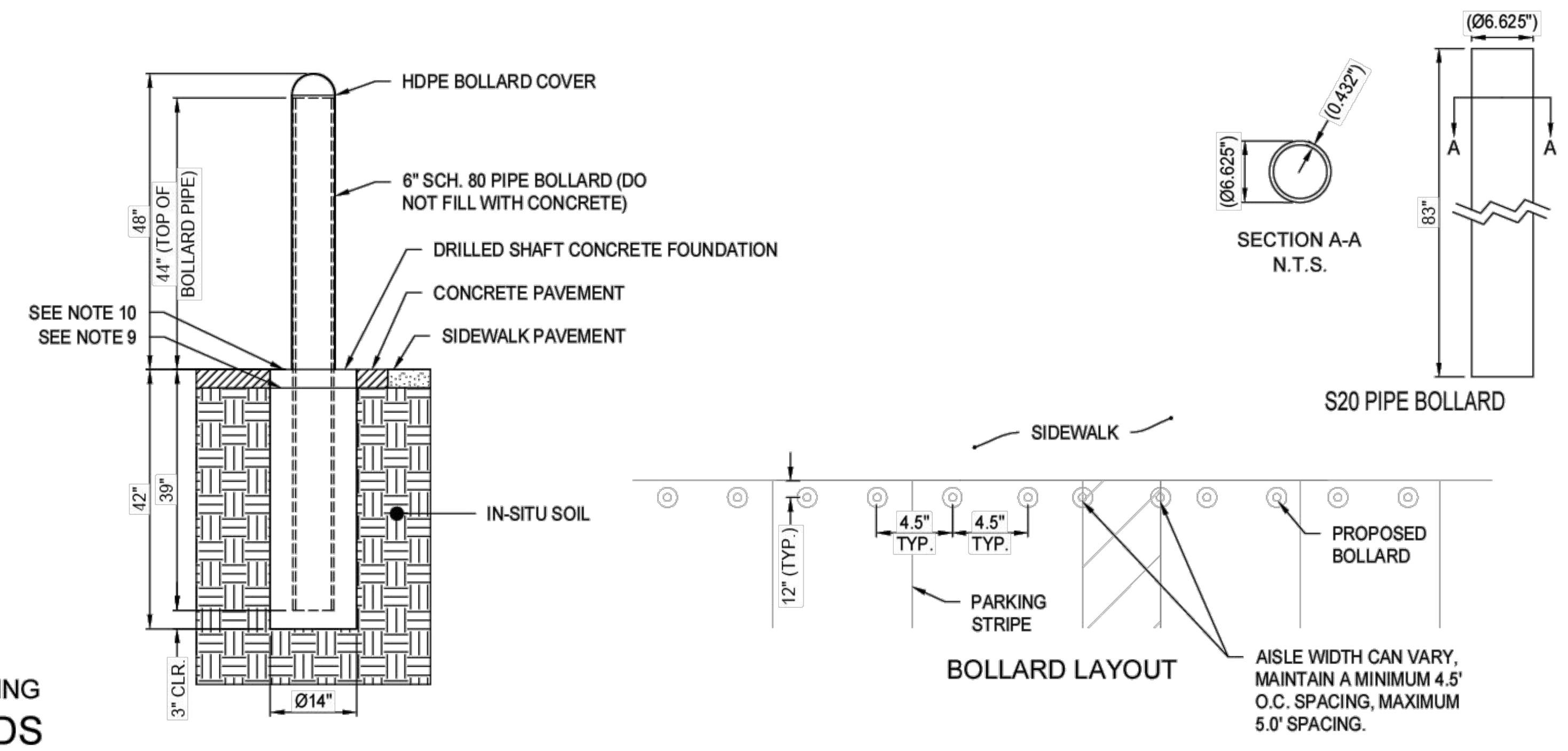
GENERAL NOTES:
1. RUB CONCRETE TO REMOVE SONOTUBE FORM LINES AND FILL ALL HOLES FOR SMOOTH FINISH. WEATHERSEAL ALL EXPOSED CONCRETE.
2. VERIFY ANCHOR ROD LAYOUT AND EMBEDMENT REQUIREMENTS WITH POLE SUPPLIER.
3. COORDINATE LOCATIONS WITH CIVIL.
4. LIGHT POLE FOUNDATIONS LOCATED IN CFL TRAFFIC AREAS OR PARKING AREAS ARE RECOMMENDED TO EXTEND 5'-0" ABOVE GRADE AND BE A MIN. Ø3'-0".

8 AREA LIGHT POLE FOUNDATION
NOT TO SCALE

GENERAL NOTES:

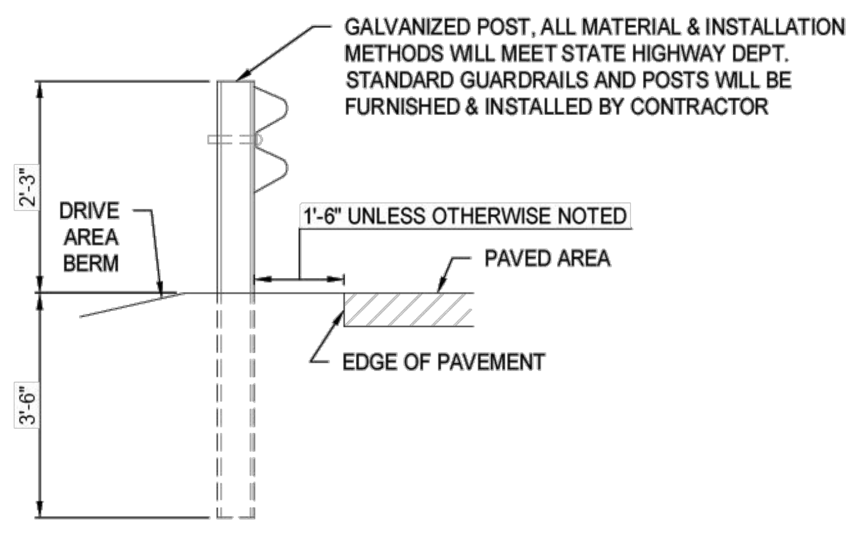
1. MAXIMUM BOLLARD SPACING IS 5' ON CENTER
2. CONCRETE TO BE 4,000 PSI MIN. UNCONFINED COMPRESSIVE STRENGTH.
3. REINFORCING STEEL CONFORMS TO ASTM A615 GRADE 60.
4. BOLLARD PIPE IS ASTM A53, TYPE E, GRADE B OR A500 GRADE B/C.
5. PROVIDE HIGH-DENSITY POLYETHYLENE (HDPE) BOLLARD COVER. COVER TO BE IDEALSHIELD (OR APPROVED EQUAL) 1/8" THICK, BLACK, 6" PIPE FIT, DOME TOP, 48" TALL.
6. DO NOT FILL BOLLARD PIPE WITH CONCRETE. TEMPORARILY SEAL BOTTOM AS NECESSARY TO PREVENT CONCRETE INTRUSION WHILE POURING.
7. USE SONOTUBE IN SANDY OR OTHER SOILS THAT MIGHT CAVE IN.
8. DIMENSIONS IN PARENTHESIS ARE NOMINAL.
9. COLD JOINT ACCEPTABLE THIS LINE FOR NEW INSTALLATIONS IN MONOLITHIC POUR CONCRETE PAVEMENT.
10. SLOPE TOP OF CONCRETE AWAY FROM BOLLARD 1/4" FROM PIPE TO EDGE OF DRILLED SHAFT OR CAP.
11. INCREASE DEPTH OF CAISSON AND BOLLARD PIPE TO MEET LOCAL JURISDICTION MIN. FROST DEPTH REQUIREMENT.
12. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY NO UTILITY CONFLICTS EXIST WHERE BOLLARDS ARE TO BE INSTALLED, PRIOR TO INSTALLATION.

DESIGN SPECIFICATIONS: ASTM F3016-19 CONDITION DESIGNATION S20

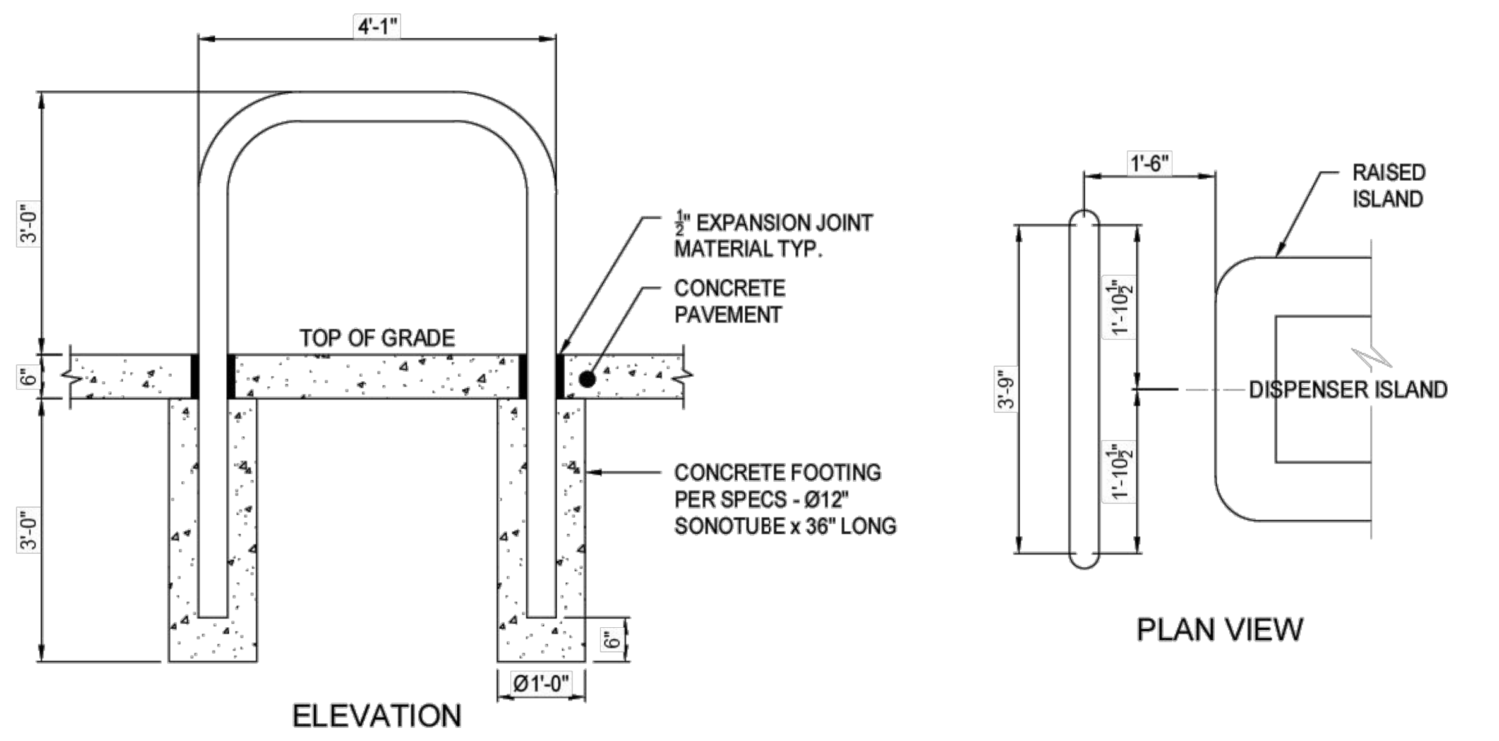

HDPE BOLLARD COVER
6" SCH. 80 PIPE BOLLARD (DO NOT FILL WITH CONCRETE)
DRILLED SHAFT CONCRETE FOUNDATION
CONCRETE PAVEMENT
SIDEWALK PAVEMENT
SEE NOTE 10
SEE NOTE 9
48"
44" (TOP OF BOLLARD PIPE)
42"
39"
3" CLR.
Ø14"
IN-SITU SOIL
(Ø6.625")
(0.432")
SECTION A-A
N.T.S.
83"
A
S20 PIPE BOLLARD
SIDEWALK
12" (TYP.)
4.5" TYP.
4.5" TYP.
PARKING STRIPE
PROPOSED BOLLARD
BOLLARD LAYOUT
AISLE WIDTH CAN VARY, MAINTAIN A MINIMUM 4.5' O.C. SPACING, MAXIMUM 5.0' SPACING.

DEEP MOUNT S20 BOLLARD IN CONCRETE PAVING

1 STORE FRONT GUARD BOLLARDS
NOT TO SCALE


GALVANIZED POST, ALL MATERIAL & INSTALLATION METHODS WILL MEET STATE HIGHWAY DEPT. STANDARD GUARDRAILS AND POSTS WILL BE FURNISHED & INSTALLED BY CONTRACTOR
2'-3"
DRIVE AREA BERM
1'-6" UNLESS OTHERWISE NOTED
PAVED AREA
EDGE OF PAVEMENT
3'-6"

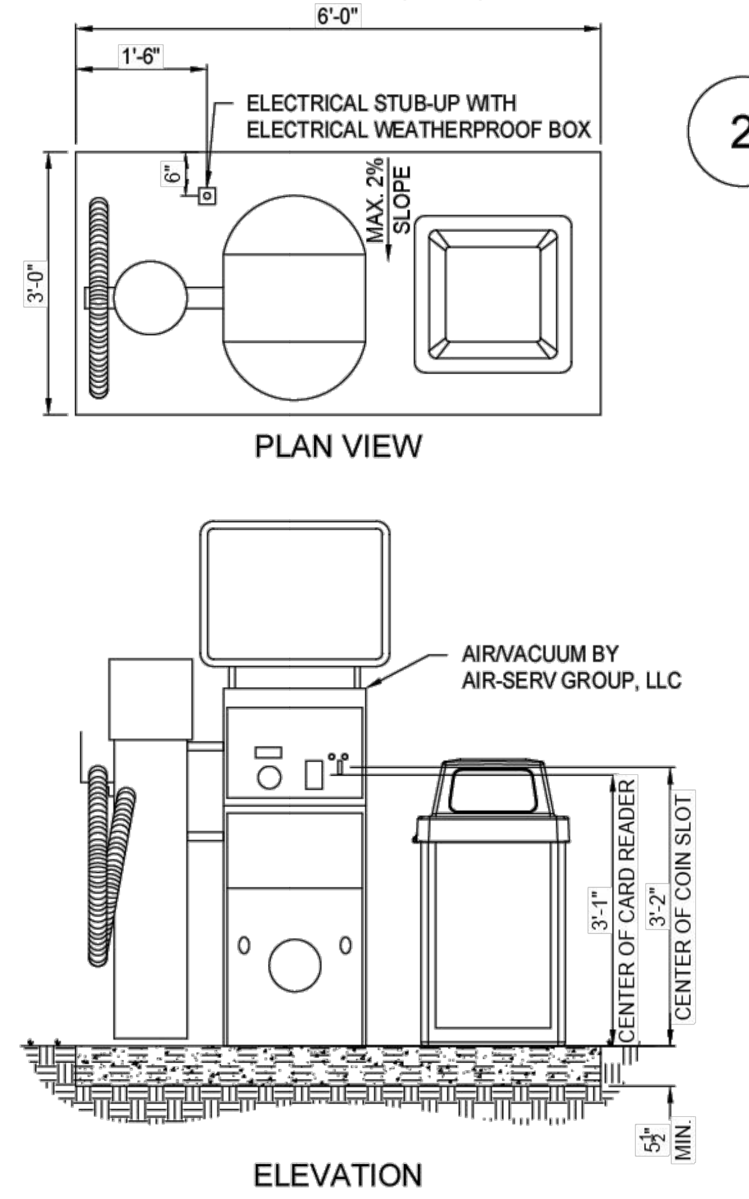
4 GUARDRAIL SECTION
NOT TO SCALE


4'-1"
3'-0"
6"
3'-0"
TOP OF GRADE
½" EXPANSION JOINT MATERIAL TYP.
CONCRETE PAVEMENT
CONCRETE FOOTING PER SPECS - Ø12" SONOTUBE x 36" LONG
6"
Ø1'-0"
ELEVATION
1'-6"
RAISED ISLAND
3'-9"
1'-10½"
1'-10½"
DISPENSER ISLAND
PLAN VIEW

U-SHAPED BOLLARD LOCATED AT ALL AUTO CANOPY LAYOUTS. SEE FUEL PROTOTYPE FOR LOCATIONS.

2 ISLAND GUARD POST
NOT TO SCALE

1. ELECTRICAL NEEDS ARE #10 WIRE (30 AMP) WITH GROUND

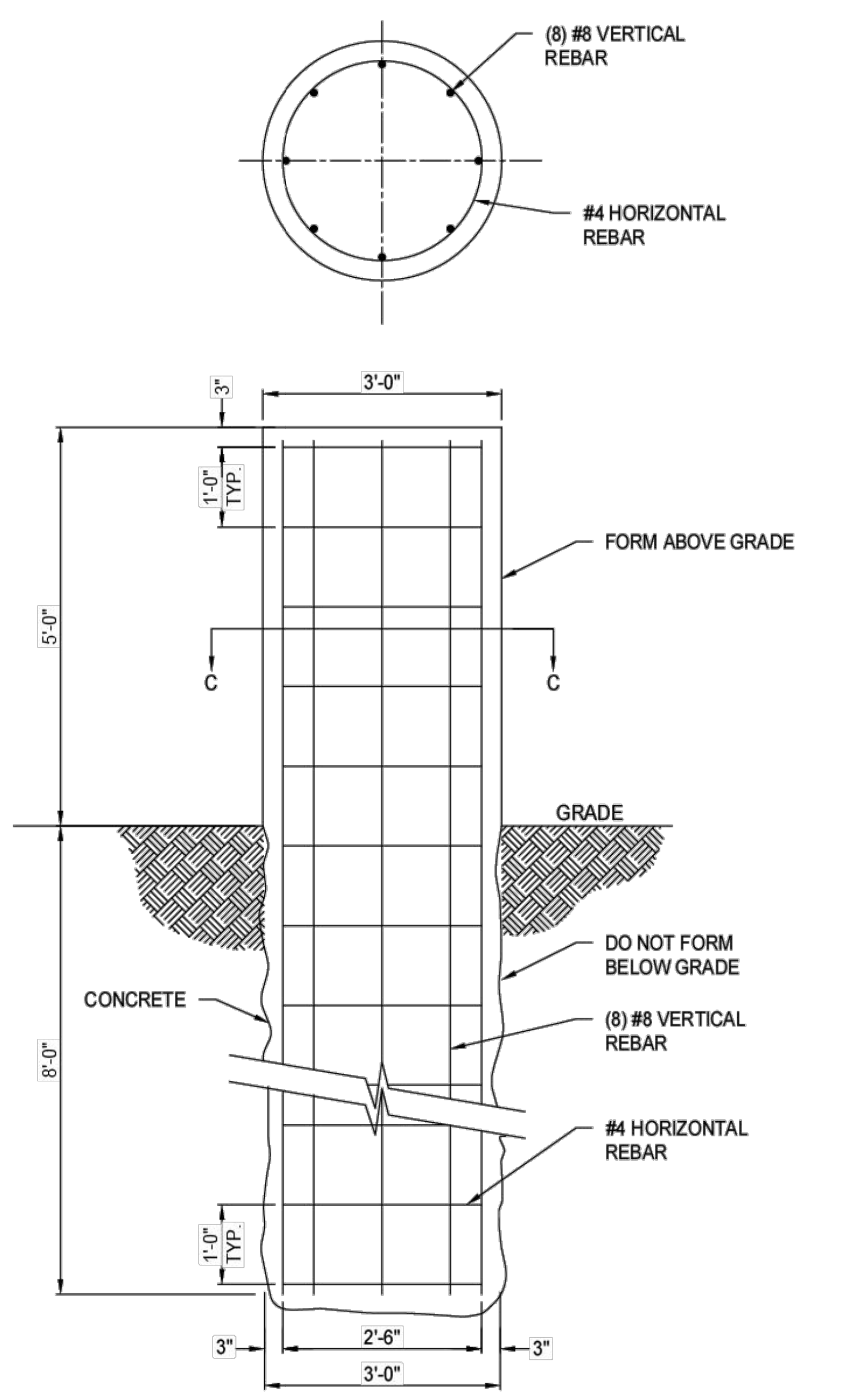

6'-0"
1'-6"
ELECTRICAL STUB-UP WITH ELECTRICAL WEATHERPROOF BOX
6"
MAX. 2% SLOPE
3'-0"
PLAN VIEW
AIR/VACUUM BY AIR-SERV GROUP, LLC
3'-1" CENTER OF CARD READER
3'-2" CENTER OF COIN SLOT
5½" MIN.
ELEVATION

DESIGNER NOTES:
1. CALIFORNIA SITES REQUIRE AIR/WATER AND THAT THERE BE A FREE OPTION THROUGH THE REMOTE SYSTEM.
2. DESIGNER TO SEPARATE THE VACUUM SERVICE AT CAR WASH LOCATIONS IF TWO PLACEMENTS ARE AVAILABLE. OPTION TO PROVIDE AIR/WATER/VACUUM THOUGH THE SAME MACHINE IF NECESSARY.

NOTE:
MAXIMUM 2 PERCENT GRADE SLOPE EACH WAY REQUIRED FOR AMERICANS WITH DISABILITIES ACT.

G.C. TO PROVIDE CONCRETE SLAB AND UTILITIES. AIR-SERV TO PROVIDE EQUIPMENT AND MAKE FINAL CONNECTIONS.

5 AIR-VAC MACHINE
NOT TO SCALE


(8) #8 VERTICAL REBAR
#4 HORIZONTAL REBAR
3"
3'-0"
1'-0" TYP.
FORM ABOVE GRADE
5'-0"
C
GRADE
DO NOT FORM BELOW GRADE
CONCRETE
(8) #8 VERTICAL REBAR
#4 HORIZONTAL REBAR
8'-0"
1'-0" TYP.
3"
2'-6"
3"
3'-0"

3 HEAVY-DUTY GUARD POST
NOT TO SCALE

Rev. #	Date	Description

CIVIL STANDARD PROTO

7-ELEVEN, INC.
3200 HACKBERRY ROAD, IRVING, TEXAS 75063
7-ELEVEN #XXXXX
STREET ADDRESS
ANYTOWN, USA 00000
YARD EQUIPMENT INSTALLATION DETAILS

ELEVEN

Job#:	SEI-XXXXX
Scale:	AS NOTED
Date:	XX/XX/XXXX
Drawn By:	x.x.x.
Checked By:	x.x.x.

SHEET:
CYE-A

No.	REVISIONS	DATE	BY

Kimley»Horn
© 2025 KIMLEY-HORN AND ASSOCIATES, INC.
200 S. ORANGE AVENUE, SUITE 600, ORLANDO, FL
PHONE: (407) 898-1511
WWW.KIMLEY-HORN.COM REGISTRY No. 35106

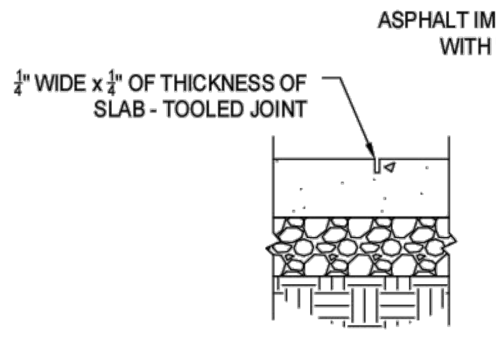
DEREK E. RAMSBURG, P.E.
FLORIDA LICENSE NUMBER 88965
DATE: 8/21/2025

KHA PROJECT	249188006
DATE	8/21/2025
SCALE	AS SHOWN
DESIGNED BY	BMG
DRAWN BY	BMG
CHECKED BY	DER

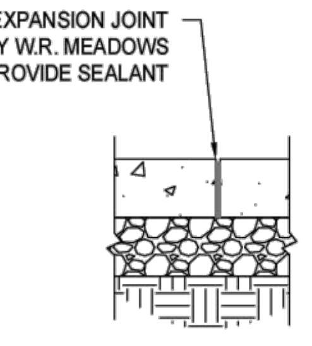
7-11 STANDARD DETAILS

7-11 PALM BAY
CITY OF PALM BAY FLORIDA

SHEET NUMBER
C7.3


$\frac{1}{4}$" WIDE x $\frac{1}{4}$" OF THICKNESS OF SLAB - TOOLED JOINT

SLAB CONTROL JOINT (C.J.)


ASPHALT IMPREGNATED EXPANSION JOINT WITH "SNAP-CAP" BY W.R. MEADOWS PROVIDE SEALANT

EXTERIOR SLAB EXPANSION JOINT (E.J.)

FOR 5' OR 8' WALKS, INSTALL A CONTROL JOINT EVERY 5' AND ONE IN THE CENTER (5' FROM THE BACK OF THE BUILDING FOR EXAMPLE)

DETAILS ONLY APPLY TO BUILDING SIDEWALK. THEY DO NOT APPLY TO INTERIOR SLAB OR SITE CONCRETE.

10 CONCRETE WALK JOINTING SECTIONS

NOT TO SCALE

ASPHALT SEALING

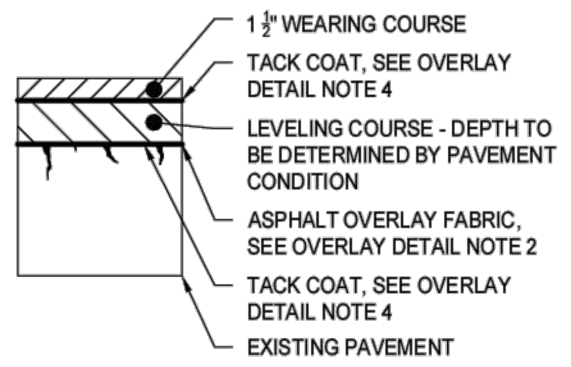
1. SURFACE CLEANING
   THE SURFACE TO BE SEALED SHALL BE FREE FROM DIRT AND OTHER FOREIGN MATTER. ANY ACCUMULATIONS OF OIL PR GREASE SHALL BE CLEANED OFF THE PAVEMENT WITH DETERGENT SOLUTION. THE RESIDUE OF WHICH SHALL BE THOROUGHLY WASHED AWAY WITH CLEAN WATER BEFORE SEALANT IS APPLIED.
2. SEALING:
   THE SEAL COATING MATERIAL SHALL BE COMPRISED OF A RUBBERIZED COAL-TAR PITCH EMULSION AND SHALL MEET OR EXCEED FEDERAL SPECIFICATION R-P-355e. SUPPLIED IN CONCENTRATED FORM, IT SHALL BE DILUTED A MINIMUM OF 15% AND A MAXIMUM OF 25% WITH FRESH, CLEAN WATER. THE SEALANT MATERIAL SHALL CONTAIN 5-6 LBS. PER GALLON OF FINE , CLEAN, DRY SILICAS AND MEETING THE FOLLOWING GRADATION:

SIEVE SIZE	% PASSING
#16	100
#30	80-100
#50	10-60
#100	0-5

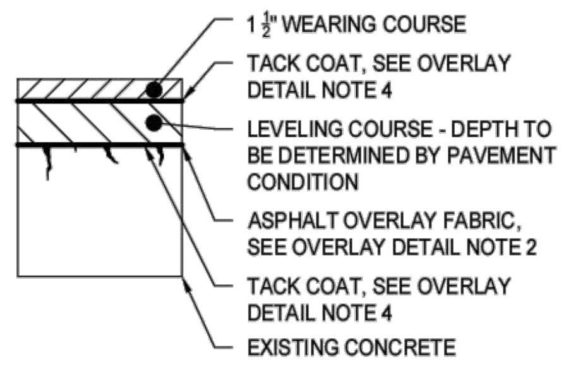
THE SEALANT SHALL BE APPLIED TO THE PAVEMENT IN TWO COATS AT THE RATE OF 0.08 TO 0.12 GALLONS PER SQUARE YARD. A LATEX ADDITIVE MAY ALSO BE ADDED TO THE SEALANT TO ALLOW FOR QUICKER DRYING TIME IN THOSE AREAS SPECIFIED BY OWNER'S REPRESENTATIVE.

7 ASPHALT SEALING NOTES

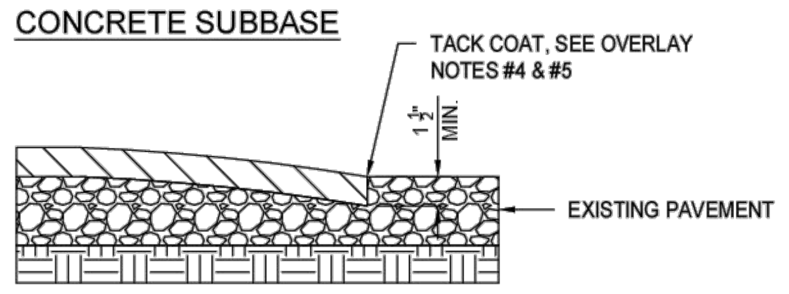
NO SCALE


1 $\frac{1}{2}$" WEARING COURSE
TACK COAT, SEE OVERLAY DETAIL NOTE 4
LEVELING COURSE - DEPTH TO BE DETERMINED BY PAVEMENT CONDITION
ASPHALT OVERLAY FABRIC, SEE OVERLAY DETAIL NOTE 2
TACK COAT, SEE OVERLAY DETAIL NOTE 4
EXISTING PAVEMENT

ASPHALT SUBBASE


1 $\frac{1}{2}$" WEARING COURSE
TACK COAT, SEE OVERLAY DETAIL NOTE 4
LEVELING COURSE - DEPTH TO BE DETERMINED BY PAVEMENT CONDITION
ASPHALT OVERLAY FABRIC, SEE OVERLAY DETAIL NOTE 2
TACK COAT, SEE OVERLAY DETAIL NOTE 4
EXISTING CONCRETE

CONCRETE SUBBASE


TACK COAT, SEE OVERLAY NOTES #4 & #5
1 $\frac{1}{2}$" MIN.
EXISTING PAVEMENT

WHERE OVERLAY IS NOT SPECIFIED FOR ENTIRE EXISTING SURFACE, THE INTERFACE BETWEEN THE NEW OVERLAY AND THE OLD PAVEMENT SURFACE SHALL BE PER THE ABOVE DETAIL. FEATHERING OF THE ASPHALT TO MEET THE EXISTING PAVEMENT WILL NOT BE ACCEPTABLE.

EDGE DETAIL

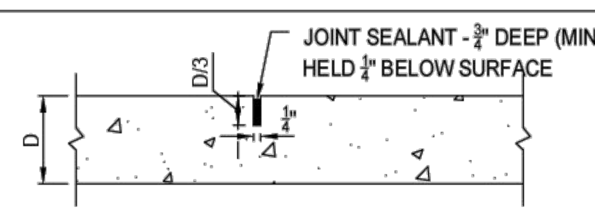
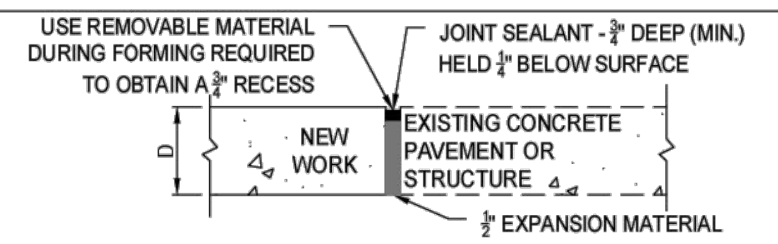
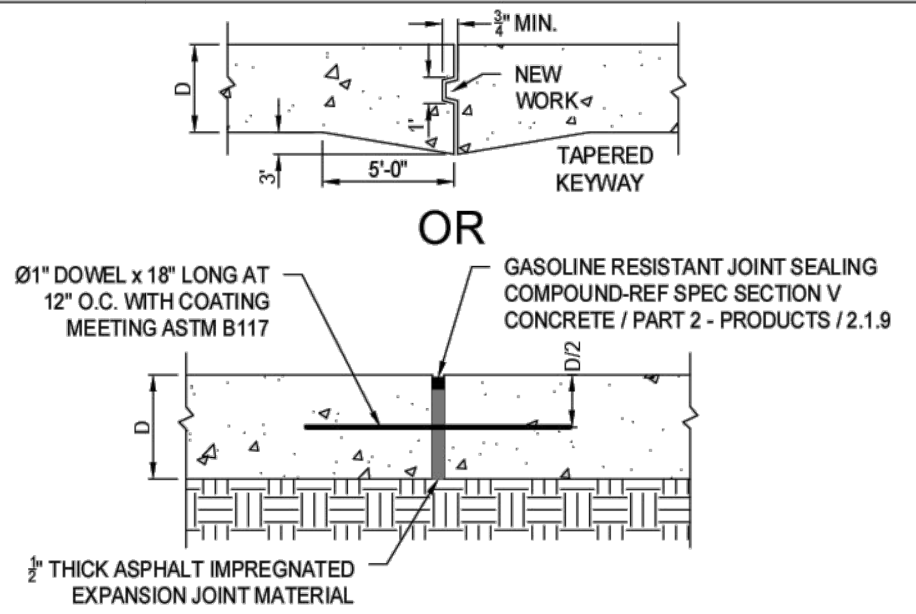
OVERLAY DETAIL NOTES:

1. THE OVERLAY SHALL BE PLACED IN ACCORDANCE WITH OWNER'S SPECIFICATIONS.
2. ALL FAILED AREAS SHALL BE REPAIRED WITH PROPER PATCHES BEFORE OVERLAY IS PLACED.
3. IF THE SURFACE IS DISTURBED, THE CONTRACTOR SHALL CONSTRUCT LEVELING COURSES TO RESTORE PROPER LINE AND CROSS SECTION.
4. THE PAVEMENT SHALL BE THOROUGHLY CLEANED AND A TACK COAT OF ASPHALT SHALL BE APPLIED BEFORE THE OVERLAY IS PLACED.
5. ALL VERTICAL SURFACES COMING IN CONTACT WITH THE OVERLAY SHALL BE SPRAYED OR PAINTED WITH A UNIFORM COATING OF EMULSIFIED ASPHALT IMMEDIATELY PRIOR TO PAVEMENT CONSTRUCTION.
6. CONTRACTOR IS RESPONSIBLE FOR ENSURING PROPER SURFACE DRAINAGE. PONDING OR PUDDLING OF WATER ON THE FINAL SURFACE WILL BE UNACCEPTABLE.
7. REPLACE IN KIND ANY EXISTING TRAFFIC LOOPS AND/OR RELATED SENSOR EQUIPMENT THAT IS REMOVED OR DAMAGED DUE TO PAVEMENT MILLING ACTIVITY.

8 ASPHALT OVERLAY PAVEMENT SECTIONS

NOT TO SCALE

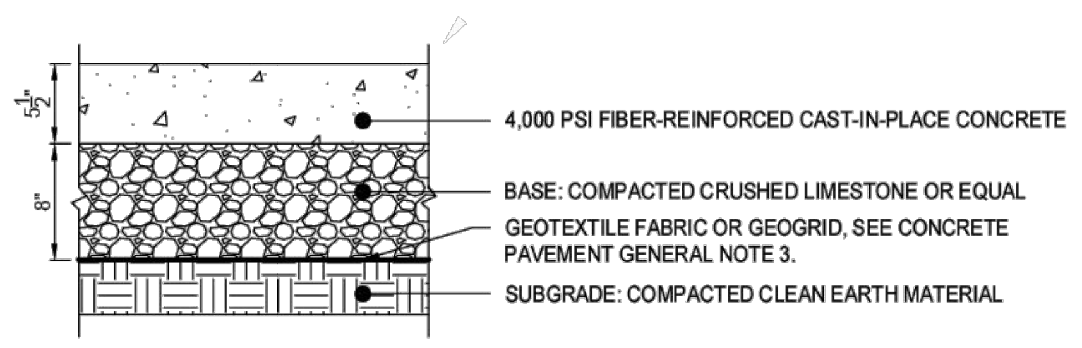
CONCRETE PAVEMENT JOINT DETAILS

TYPE OF JOINT	USE DESCRIPTION	DETAIL
A. CONTROL JOINT ("SJ" ON FUEL PROTOTYPES) 1. SAWN 2. PREMOLD STRIP 3. HAND FORMED AND SAWN AT CRITICAL JOINTS	USE SPECIFICATION ACI 360R-06 TO PLACE CONTROL JOINTS SO AS TO UNIFORMLY DIVIDE SLABS INTO NOMINAL 12' x 12' (STANDARD-DUTY) OR 16' x 16' (HEAVY-DUTY) SECTIONS. (SEAL CONTROL JOINTS ONLY IF SPECIFIED ON DRAWINGS OR BY OWNER'S REPRESENTATIVE.	 JOINT SEALANT - $\frac{3}{4}$" DEEP (MIN.) HELD $\frac{1}{4}$" BELOW SURFACE D/3 $\frac{1}{4}$" D
B. EXPANSION JOINT (ISOLATION JOINT)	PLACE AGAINST CONCRETE TANK SLAB, ABUTTING ROADWAY PAVEMENTS AND STRUCTURES (BUILDINGS, CANOPY COLUMNS, CATCH BASINS, ETC.)	 USE REMOVABLE MATERIAL DURING FORMING REQUIRED TO OBTAIN A $\frac{3}{4}$" RECESS JOINT SEALANT - $\frac{3}{4}$" DEEP (MIN.) HELD $\frac{1}{4}$" BELOW SURFACE D NEW WORK EXISTING CONCRETE PAVEMENT OR STRUCTURE $\frac{1}{2}$" EXPANSION MATERIAL
C. CONSTRUCTION JOINT ("CJ" ON FUEL PROTOTYPES)	CONSTRUCTION JOINTS MUST BE APPROVED BY OWNER'S REPRESENTATIVE. PLACE WHEN CONTINUOUS POUR OPERATIONS ARE SUSPENDED FOR MORE THAN 30 MINUTES.	 $\frac{3}{4}$" MIN. D NEW WORK 1' 3' 5'-0" TAPERED KEYWAY OR Ø1" DOWEL x 18" LONG AT 12" O.C. WITH COATING MEETING ASTM B117 GASOLINE RESISTANT JOINT SEALING COMPOUND-REF SPEC SECTION V CONCRETE / PART 2 - PRODUCTS / 2.1.9 D/2 D $\frac{1}{2}$" THICK ASPHALT IMPREGNATED EXPANSION JOINT MATERIAL

9 CONCRETE PAVEMENT JOINTING SECTIONS

NO SCALE

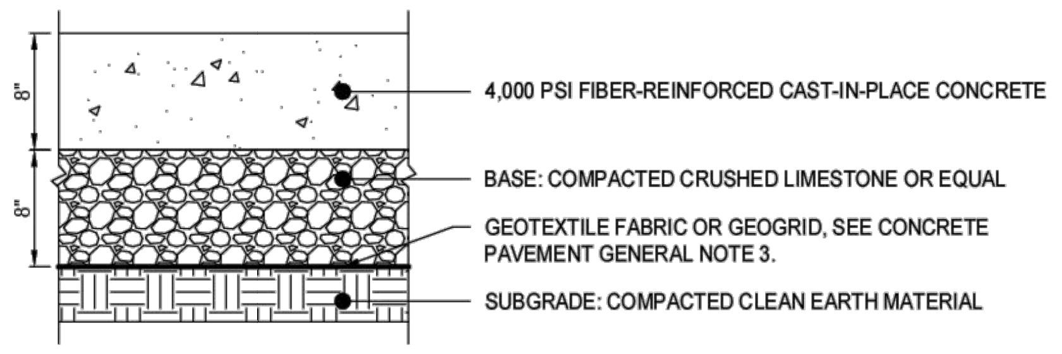
LAYERED SECTION DEPTHS
REVISED PER CR2025-3002


5$\frac{1}{2}$"
8"
4,000 PSI FIBER-REINFORCED CAST-IN-PLACE CONCRETE
BASE: COMPACTED CRUSHED LIMESTONE OR EQUAL
GEOTEXTILE FABRIC OR GEOGRID, SEE CONCRETE PAVEMENT GENERAL NOTE 3.
SUBGRADE: COMPACTED CLEAN EARTH MATERIAL

AUTO PARKING AREAS, AUTO CANOPY SLAB, AND OTHER LIMITED SERVICE TRAFFIC AREAS

1 STANDARD-DUTY CONCRETE PAVEMENT SECTION

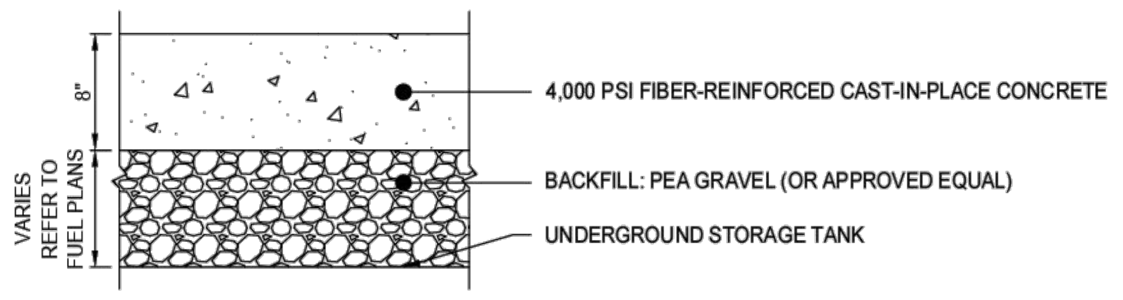
1 1/2" = 1'-0"


8"
8"
4,000 PSI FIBER-REINFORCED CAST-IN-PLACE CONCRETE
BASE: COMPACTED CRUSHED LIMESTONE OR EQUAL
GEOTEXTILE FABRIC OR GEOGRID, SEE CONCRETE PAVEMENT GENERAL NOTE 3.
SUBGRADE: COMPACTED CLEAN EARTH MATERIAL

HEAVY LOAD TRAFFIC AREAS

2 HEAVY-DUTY CONCRETE PAVEMENT SECTION

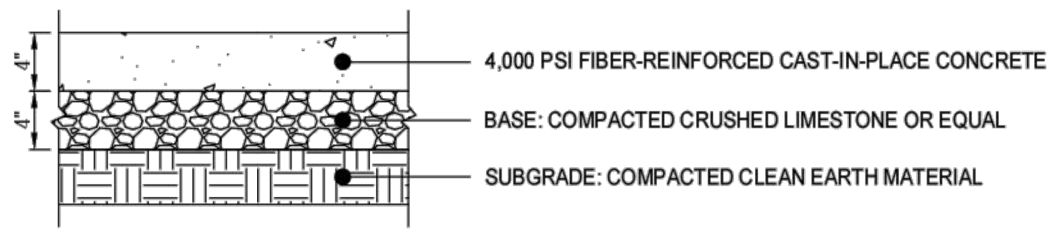
1 1/2" = 1'-0"


8"
VARIES REFER TO FUEL PLANS
4,000 PSI FIBER-REINFORCED CAST-IN-PLACE CONCRETE
BACKFILL: PEA GRAVEL (OR APPROVED EQUAL)
UNDERGROUND STORAGE TANK

AUTO TANKS, CFL TANKS, AND COMBINED TANK PITS

3 TANK SLAB CONCRETE PAVEMENT SECTION

1 1/2" = 1'-0"

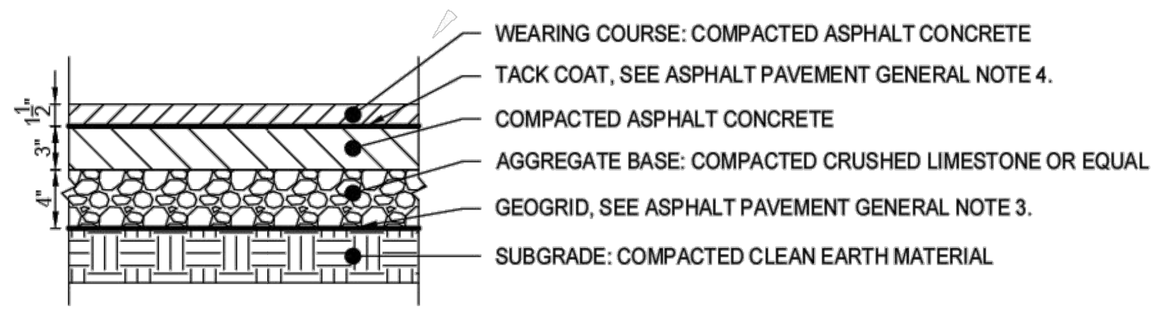

4"
4"
4,000 PSI FIBER-REINFORCED CAST-IN-PLACE CONCRETE
BASE: COMPACTED CRUSHED LIMESTONE OR EQUAL
SUBGRADE: COMPACTED CLEAN EARTH MATERIAL

PEDESTRIAN TRAFFIC AREAS

4 CONCRETE WALK PAVEMENT SECTION

1 1/2" = 1'-0"

ADDED WEARING COURSE &
TACK COAT PER CR2025-3002

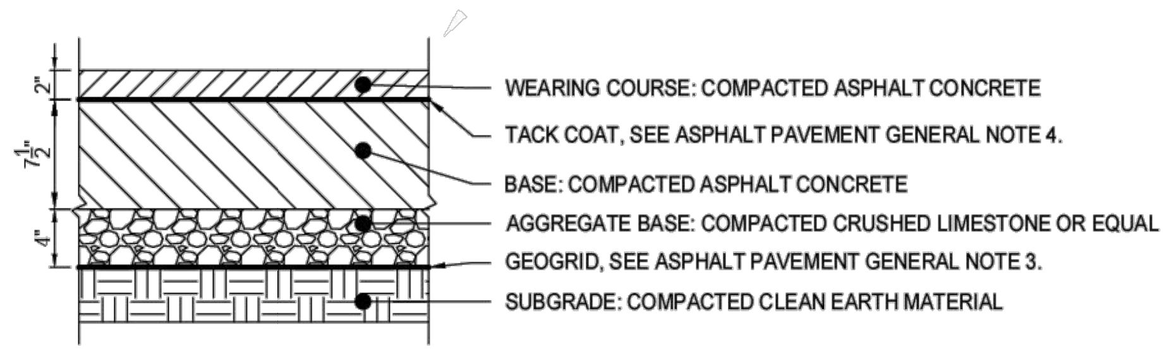

1$\frac{1}{2}$"
3"
4"
WEARING COURSE: COMPACTED ASPHALT CONCRETE
TACK COAT, SEE ASPHALT PAVEMENT GENERAL NOTE 4.
COMPACTED ASPHALT CONCRETE
AGGREGATE BASE: COMPACTED CRUSHED LIMESTONE OR EQUAL
GEOGRID, SEE ASPHALT PAVEMENT GENERAL NOTE 3.
SUBGRADE: COMPACTED CLEAN EARTH MATERIAL

AUTO PARKING AREAS AND OTHER LIMITED SERVICE TRAFFIC AREAS

5 STANDARD-DUTY ASPHALT PAVEMENT SECTION

1 1/2" = 1'-0"

LAYERED SECTION DEPTHS
REVISED PER CR2025-3002


2"
7$\frac{1}{2}$"
4"
WEARING COURSE: COMPACTED ASPHALT CONCRETE
TACK COAT, SEE ASPHALT PAVEMENT GENERAL NOTE 4.
BASE: COMPACTED ASPHALT CONCRETE
AGGREGATE BASE: COMPACTED CRUSHED LIMESTONE OR EQUAL
GEOGRID, SEE ASPHALT PAVEMENT GENERAL NOTE 3.
SUBGRADE: COMPACTED CLEAN EARTH MATERIAL

HEAVY LOAD TRAFFIC AREAS

6 HEAVY-DUTY ASPHALT PAVEMENT SECTION

1 1/2" = 1'-0"

PAVING EXECUTION NOTES:

1. LOCATE AND INSTALL CONSTRUCTION, ISOLATION, AND EXPANSION JOINTS AS INDICATED OR REQUIRED.
2. PLACE CONCRETE IN A CONTINUOUS OPERATION WITHIN PLANNED JOINTS OR SECTIONS. DO NOT ADD WATER TO ADJUST SUMP.
3. FLOAT SURFACES TO TRUE PLANES WITHIN A TOLERANCE OF $\frac{1}{4}$ INCH IN 10 FEET.
4. TOOL EDGES AND JOINTS TO A RADIUS OF $\frac{1}{4}$ INCH FOR SIDEWALKS.
5. ALLOW CONCRETE PAVING TO CURE FOR A MINIMUM OF 28 DAYS AND DRY BEFORE STARTING PAVEMENT MARKING.
6. APPLY TRAFFIC PAINT WITH MECHANICAL EQUIPMENT TO A MINIMUM WET FILM THICKNESS OF 15 MILS.
7. PROTECT CONCRETE PAVING FROM DAMAGE. EXCLUDE TRAFFIC FROM PAVING FOR AT LEAST 14 DAYS.

CONCRETE PAVEMENT GENERAL NOTES:

1. SEE FUEL PROTOTYPE FOR ADDITIONAL REQUIREMENTS FOR TANK SLABS.
2. SEE FUEL PROTOTYPE FOR ADDITIONAL REQUIREMENTS FOR DISPENSER ISLAND SLABS.
3. A GEOTEXTILE OR GEOGRID IS ONLY NEEDED WHEN THE GEOTECHNICAL REPORT AND/OR A GEOTECH EXPERT REQUIRES IT FOR THE SPECIFIC SITE'S SOIL CONDITIONS.
4. UNDISTURBED SOIL OR COMPACTED BACK FILL NOT LESS THAN 95% OF MODIFIED PROCTOR DENSITY (AASHTO-T-180).
5. REFER TO CIVIL DESIGN GUIDELINES (CDG) FOR PAVEMENT LOCATION GUIDANCE.
6. CONTRACTOR REFER TO THE GEOTECH REPORT FOR PAVEMENT AND FOUNDATION DESIGN AND CONSTRUCTION RECOMMENDATIONS IF MORE STRINGENT THAN PROTOTYPE DETAILS.
7. COMPACTION IS NOT REQUIRED OVER THE TANK PIT(S).

ASPHALT PAVEMENT GENERAL NOTES:

1. ALL WORK SHALL BE IN CONFORMANCE WITH OWNER'S SPECIFICATIONS FOR ASPHALTIC CONCRETE PAVING.
2. GEOGRID IS ONLY NEEDED WHEN THE GEOTECHNICAL REPORT AND/OR A GEOTECH EXPERT REQUIRES IT FOR THE SPECIFIC SITE'S SOIL CONDITION.
3. FOR SUBSURFACE DRAINAGE OR STABILITY ISSUES DURING CONSTRUCTION (UNDER DIRECTION BY GEOTECH EXPERT):
   A. SUBSURFACE DRAINAGE ISSUE - REFER TO GUIDELINES FOR DEWATERING ISSUES TO DERIVE ACCEPTABLE OPTIONS.
   B. SUBSURFACE STABILITY ISSUE - INSTALL GEOGRID PER GEOTECH EXPERT RECOMMENDATION.
4. THE PAVEMENT SHALL BE THOROUGHLY CLEANED AND A TACK COAT OF ASPHALT SHALL BE APPLIED BEFORE THE OVERLAY IS PLACED.
5. REFER TO CIVIL DESIGN GUIDELINES (CDG) FOR PAVEMENT LOCATION GUIDANCE.

CONTRACTOR MUST REFER TO THE GEOTECH REPORT FOR PAVEMENT AND FOUNDATION DESIGN AND CONSTRUCTION RECOMMENDATIONS

PLEASE SEE PAVEMENT SECTIONS PER GEOTECH
REPORT RECOMMENDATIONS ON SHEET C7.0

Rev. #	Date	Description

CIVIL STANDARD PROTO

7-ELEVEN, INC.
3200 HACKBERRY ROAD, IRVING, TEXAS 75063

7-ELEVEN #XXXXX
STREET ADDRESS
ANYTOWN, USA 00000

PAVEMENT AND JOINTING DETAILS

Job#: SEI-XXXXX
Scale: AS NOTED
Date: XX/XX/XXXX
Drawn By: x.x.x.
Checked By: x.x.x.

SHEET:
CPC-1

No.	REVISIONS	DATE	BY

Kimley»Horn

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PHONE: (407) 898-1511
WWW.KIMLEY-HORN.COM REGISTRY No. 35106

DEREK E. RAMSBURG, P.E.
FLORIDA LICENSE NUMBER 88905
DATE: 8/21/2025

KHA PROJECT 249188006
DATE 8/21/2025
SCALE AS SHOWN
DESIGNED BY BMG
DRAWN BY BMG
CHECKED BY DER

7-11 STANDARD DETAILS

7-11 PALM BAY
CITY OF PALM BAY FLORIDA

SHEET NUMBER
C7.4

Plotted By:Guidry, Blake Sheet Set:7-11 PALM BAY Layout:C7.4 August 22, 2025 01:22:27pm K:\ORL_Civil\249188006-7-11 Palm Bay\CADD\CONST\PlanSheets\C7.0 GENERAL CONSTRUCTION DETAILS.dwg

Plotted By:Guidry, Blake Sheet Set:7-11 PALM BAY Layout:C7.5 August 21, 2025 12:52:43pm K:\ORL_Civil\249188006-7-11 Palm Bay\CADD\CONST\PlanSheets\C7.0 GENERAL CONSTRUCTION DETAILS.dwg
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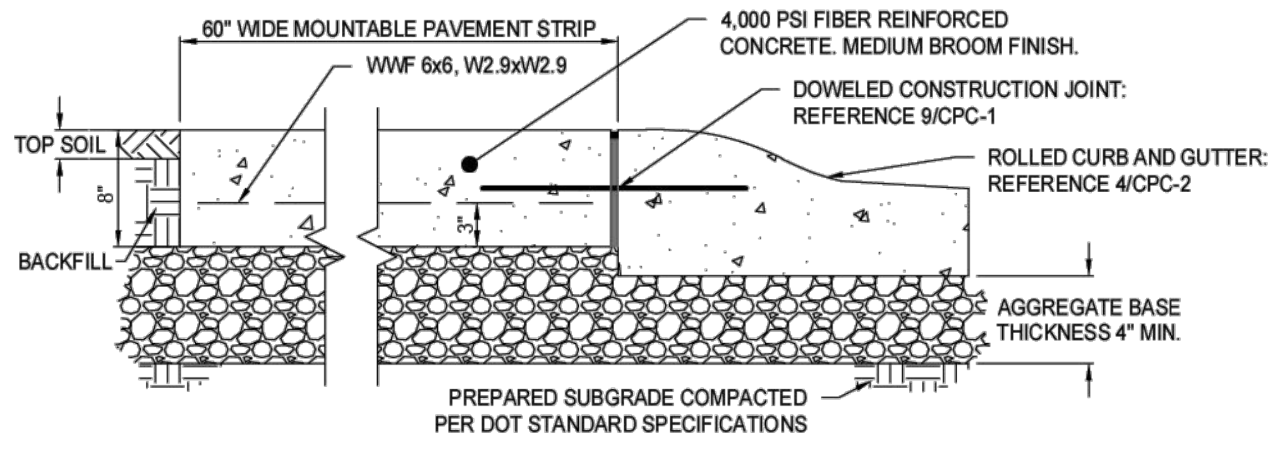
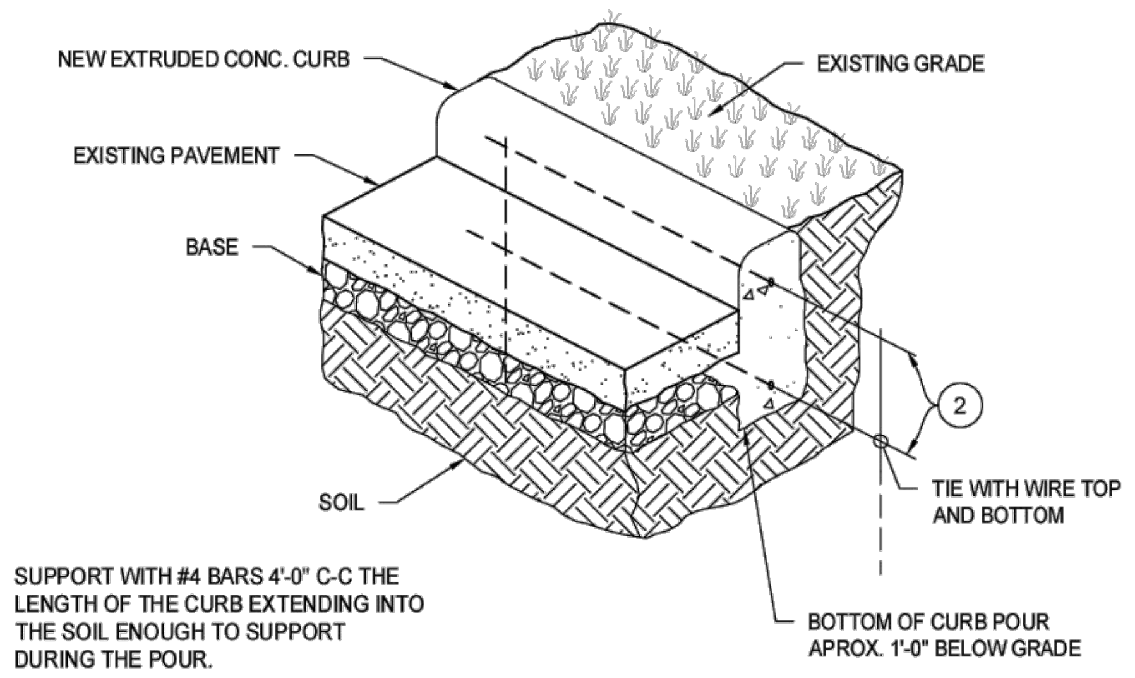

60" WIDE MOUNTABLE PAVEMENT STRIP
WWF 6x6, W2.9xW2.9
4,000 PSI FIBER REINFORCED CONCRETE. MEDIUM BROOM FINISH.
DOWELED CONSTRUCTION JOINT: REFERENCE 9/CPC-1
ROLLED CURB AND GUTTER: REFERENCE 4/CPC-2
TOP SOIL
8"
3"
BACKFILL
AGGREGATE BASE THICKNESS 4" MIN.
PREPARED SUBGRADE COMPACTED PER DOT STANDARD SPECIFICATIONS

CONCRETE MOUNTABLE CURB IS TO BE USED AT APPROACHES THAT DO NOT MEET STANDARD WIDTH

5 CONCRETE MOUNTABLE CURB SECTION

1" = 1'-0"

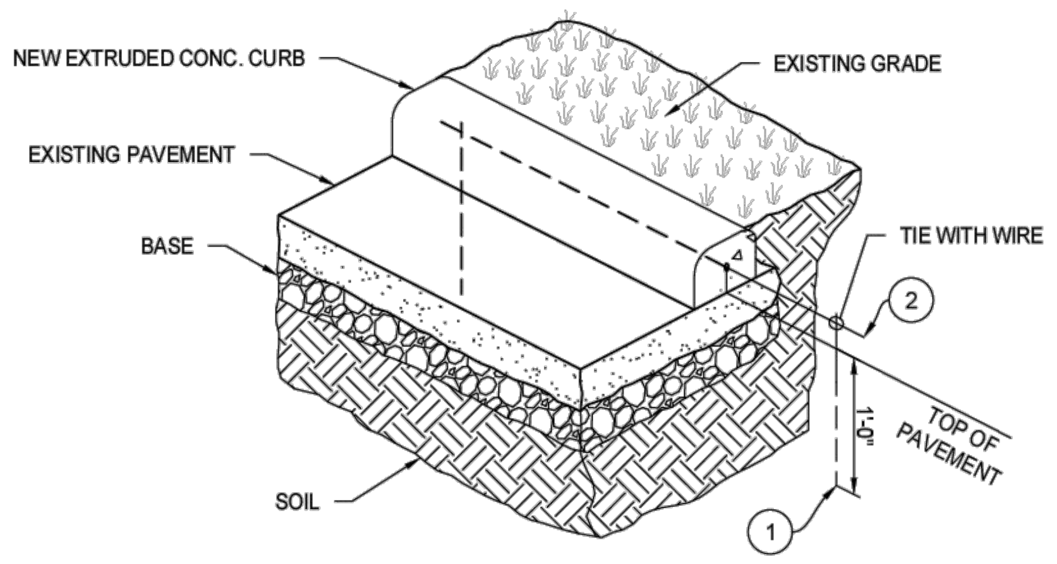
PREFERRED METHOD


NEW EXTRUDED CONC. CURB
EXISTING PAVEMENT
BASE
SOIL
EXISTING GRADE
2
TIE WITH WIRE TOP AND BOTTOM
BOTTOM OF CURB POUR APROX. 1'-0" BELOW GRADE

① SUPPORT WITH #4 BARS 4'-0" C-C THE LENGTH OF THE CURB EXTENDING INTO THE SOIL ENOUGH TO SUPPORT DURING THE POUR.

② USE (2) #4 BARS WITH 3" OF COVER ON SIDES, TOP AND BOTTOM AND 2" COVER ON ENDS OF CURB.

ALTERNATE METHOD


NEW EXTRUDED CONC. CURB
EXISTING PAVEMENT
BASE
SOIL
EXISTING GRADE
TIE WITH WIRE
2
1'-0"
TOP OF PAVEMENT
1

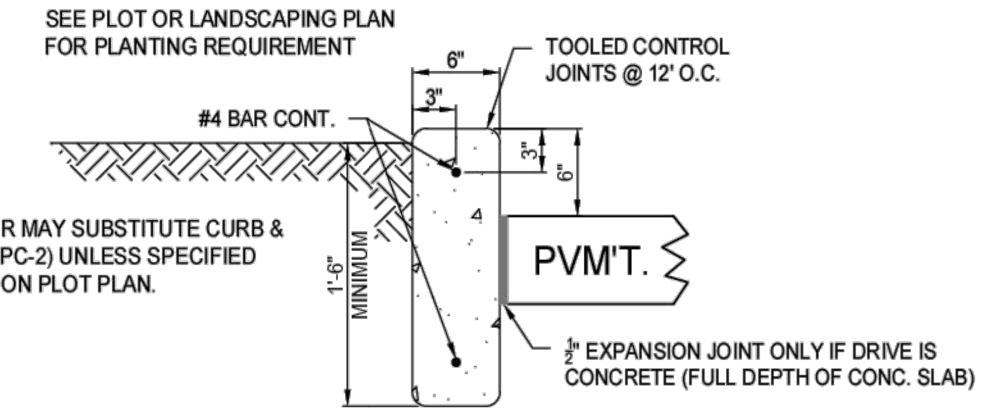
① SUPPORT WITH #4 BARS 4'-0" C-C THE LENGTH OF THE CURB EXTENDING 1'-0" INTO THE PAVEMENT AND BASE.

② USE (1) #4 BAR CENTERED LONGITUDINALLY IN THE CURB WITH 2" OF COVER ON ENDS OF CURB.

FOR USE WHEN COLD WEATHER CONDITIONS CAUSE ASPHALT PAVEMENT TO BE PLACED BEFORE THE CONCRETE CURB.

6 COLD WEATHER CURB INSTALLATION

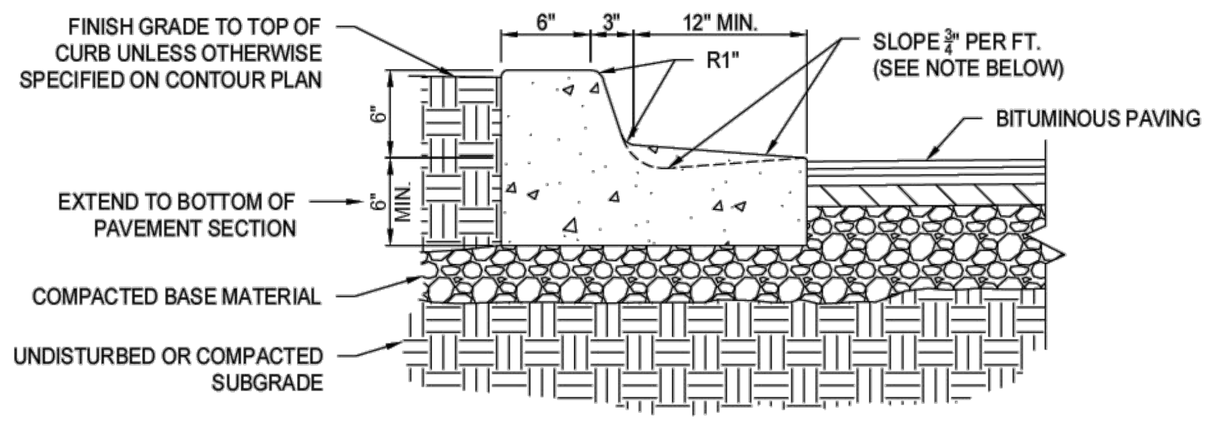
NOT TO SCALE


SEE PLOT OR LANDSCAPING PLAN FOR PLANTING REQUIREMENT
6"
3"
TOOLED CONTROL JOINTS @ 12' O.C.
#4 BAR CONT.
3"
6"
1'-6" MINIMUM
PVM'T.
½" EXPANSION JOINT ONLY IF DRIVE IS CONCRETE (FULL DEPTH OF CONC. SLAB)

NOTE:
CONTRACTOR MAY SUBSTITUTE CURB & GUTTER (2/CPC-2) UNLESS SPECIFIED OTHERWISE ON PLOT PLAN.

1 CONCRETE STANDING CURB SECTION

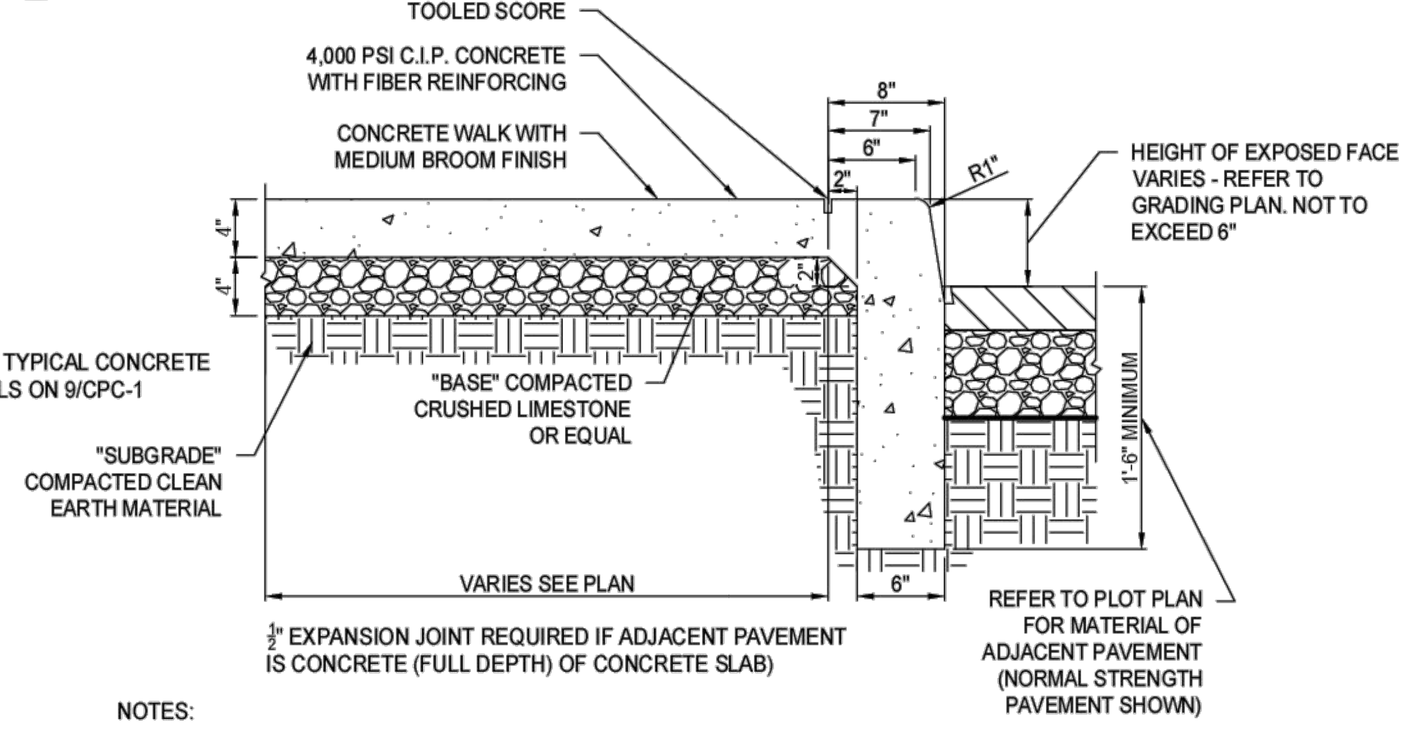
1" = 1'-0"


FINISH GRADE TO TOP OF CURB UNLESS OTHERWISE SPECIFIED ON CONTOUR PLAN
6"
3"
12" MIN.
R1"
SLOPE ¾" PER FT. (SEE NOTE BELOW)
BITUMINOUS PAVING
6"
6" MIN.
EXTEND TO BOTTOM OF PAVEMENT SECTION
COMPACTED BASE MATERIAL
UNDISTURBED OR COMPACTED SUBGRADE

NOTE:
GUTTER TO BE SLOPED DOWN GRADIENT TOWARDS CURB WHEN SITE GRADE IS TOWARDS CURB. GUTTER TO BE SLOPED DOWN GRADIENT AWAY FROM CURB WHEN SITE GRADE IS AWAY FROM CURB. MAY BE MACHINE FORMED.

2 CONCRETE STANDING CURB AND GUTTER SECTION

1" = 1'-0"

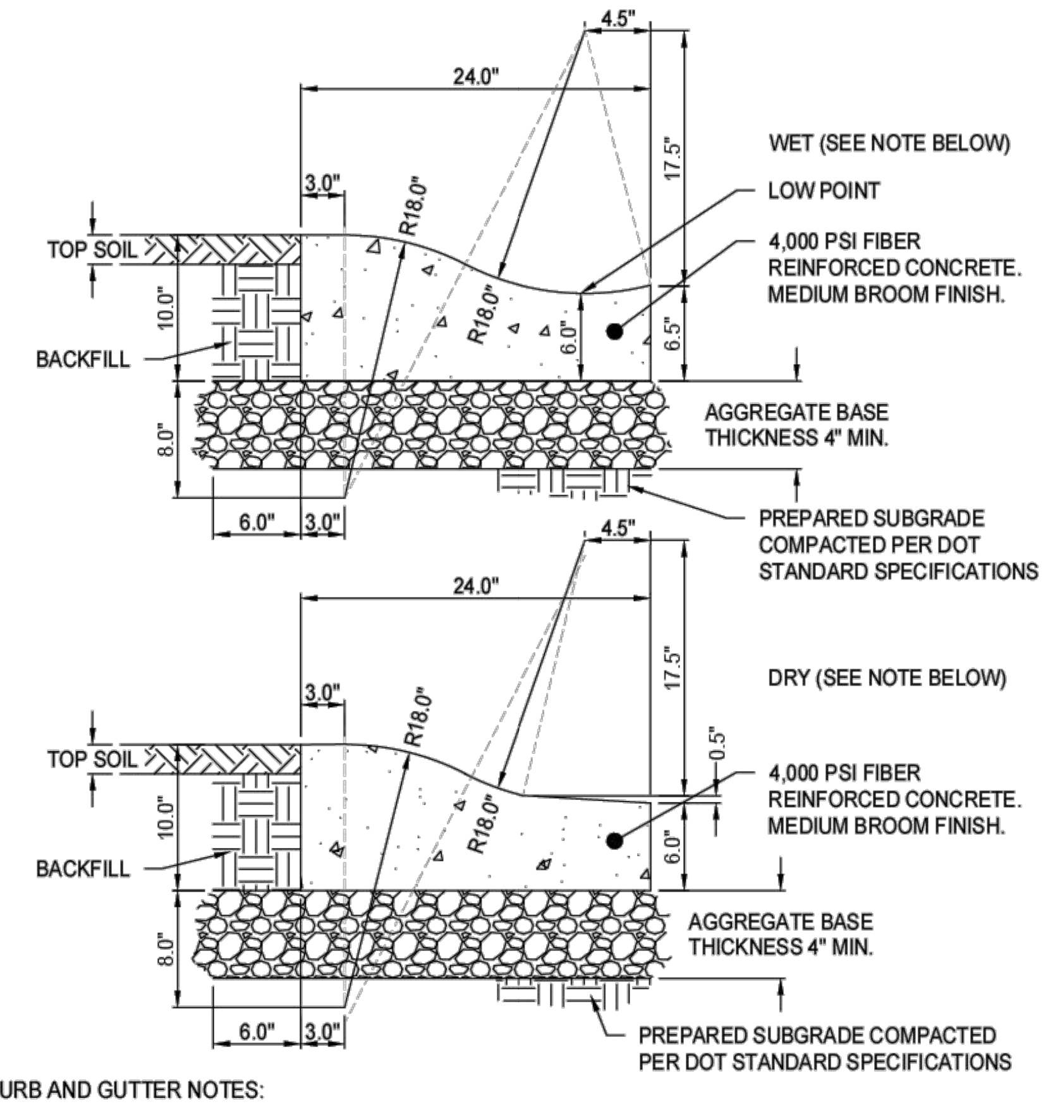

TOOLED SCORE
4,000 PSI C.I.P. CONCRETE WITH FIBER REINFORCING
CONCRETE WALK WITH MEDIUM BROOM FINISH
8"
7"
6"
2"
R1"
HEIGHT OF EXPOSED FACE VARIES - REFER TO GRADING PLAN. NOT TO EXCEED 6"
4"
4"
2"
"BASE" COMPACTED CRUSHED LIMESTONE OR EQUAL
"SUBGRADE" COMPACTED CLEAN EARTH MATERIAL
1'-6" MINIMUM
VARIES SEE PLAN
6"
½" EXPANSION JOINT REQUIRED IF ADJACENT PAVEMENT IS CONCRETE (FULL DEPTH) OF CONCRETE SLAB)
REFER TO PLOT PLAN FOR MATERIAL OF ADJACENT PAVEMENT (NORMAL STRENGTH PAVEMENT SHOWN)

NOTE:
REFERENCE TYPICAL CONCRETE JOINT DETAILS ON 9/CPC-1

NOTES:
1. TYPICALLY THERE IS 0" CURBING AROUND THE BUILDING
2. EXCEPTION: CA REQUIRES SIDEWALK CURBING AROUND THE BUILDING

3 CONCRETE MONOLITHIC CURB AND WALK SECTION

1" = 1'-0"


4.5"
24.0"
17.5"
WET (SEE NOTE BELOW)
LOW POINT
3.0"
R18.0"
R18.0"
TOP SOIL
10.0"
BACKFILL
6.0"
6.5"
4,000 PSI FIBER REINFORCED CONCRETE. MEDIUM BROOM FINISH.
8.0"
AGGREGATE BASE THICKNESS 4" MIN.
6.0"
3.0"
PREPARED SUBGRADE COMPACTED PER DOT STANDARD SPECIFICATIONS
4.5"
24.0"
17.5"
DRY (SEE NOTE BELOW)
3.0"
R18.0"
R18.0"
0.5"
TOP SOIL
10.0"
BACKFILL
6.0"
4,000 PSI FIBER REINFORCED CONCRETE. MEDIUM BROOM FINISH.
8.0"
AGGREGATE BASE THICKNESS 4" MIN.
6.0"
3.0"
PREPARED SUBGRADE COMPACTED PER DOT STANDARD SPECIFICATIONS

ROLLED CURB AND GUTTER NOTES:

1. WET: GUTTER TO BE SLOPED DOWN GRADIENT TOWARDS CURB WHEN SITE GRADE IS TOWARD CURB.
   DRY: GUTTER TO BE SLOPED DOWN GRADIENT AWAY FROM CURB WHEN SITE GRADE IS AWAY FROM CURB.
2. REFERENCE THE CONCRETE PAVEMENT JOINT DETAILS THIS SHEET
3. EXPANSION JOINTS ARE REQUIRED AT STORM INLETS AND 100' MAXIMUM SPACING.
4. CONTRACTION JOINTS SHOULD BE INSTALLED AT 10' SPACINGS. SPACING SHALL BE 5' ON CURVE RADII.
5. CONTRACTION JOINTS SHALL BE TOOLED OR SAWN IN CONTINUOUSLY POURED CURBS TO A DEPTH OF ½" MIN.

ROLLED CURB AND GUTTER IS TO BE USED AT APPROACHES

4 CONCRETE ROLLED CURB AND GUTTER SECTION

1" = 1'-0"

Rev. #	Date	Description

CIVIL STANDARD PROTO

7-ELEVEN, INC.
3200 HACKBERRY ROAD, IRVING, TEXAS 75063

7-ELEVEN #XXXXX
STREET ADDRESS
ANYTOWN, USA 00000

CURB DETAILS

Job#: SEI-XXXXX
Scale: AS NOTED
Date: XX/XX/XXXX
Drawn By: x.x.x.
Checked By: x.x.x.

SHEET:
CPC-2

No.	REVISIONS	DATE	BY

Kimley»Horn
© 2025 KIMLEY-HORN AND ASSOCIATES, INC.
200 S. ORANGE AVENUE, SUITE 600, ORLANDO, FL
PHONE: (407) 898-1511
WWW.KIMLEY-HORN.COM REGISTRY No. 35106

LICENSED PROFESSIONAL
DEREK E. RAMSBURG, P.E.
FLORIDA LICENSE NUMBER 88905
DATE: 8/21/2025

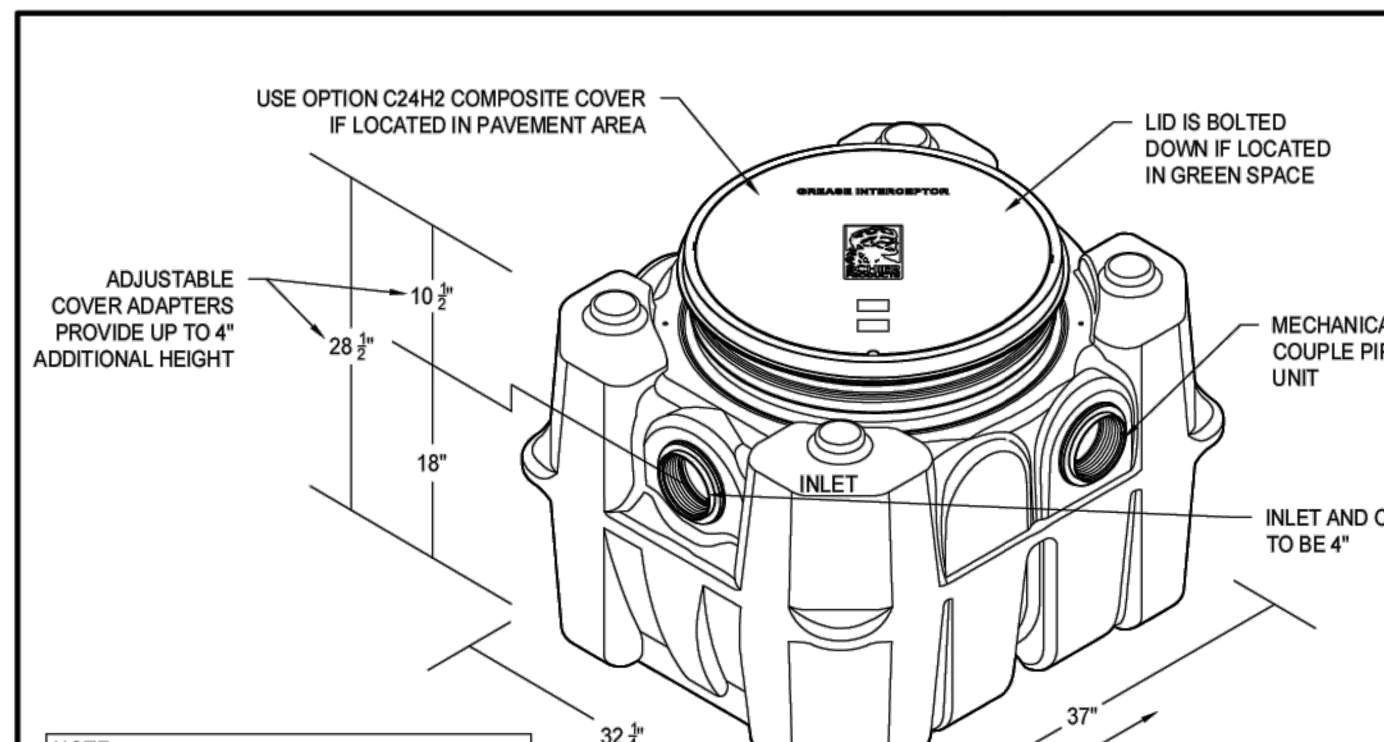
KHA PROJECT
249188006
DATE
8/21/2025
SCALE AS SHOWN
DESIGNED BY BMG
DRAWN BY BMG
CHECKED BY DER

7-11 STANDARD DETAILS

7-11 PALM BAY

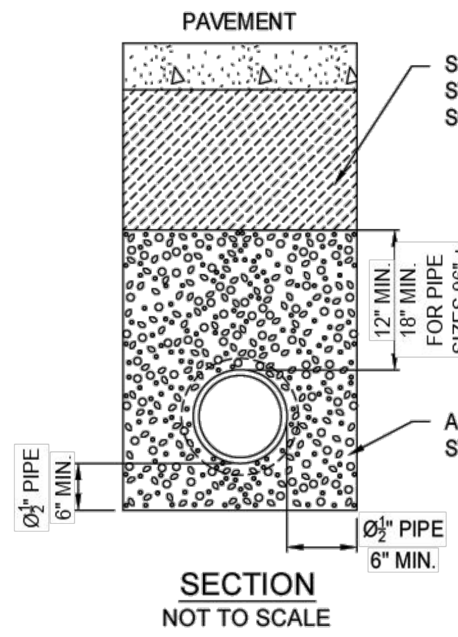
CITY OF PALM BAY FLORIDA

SHEET NUMBER
C7.5


USE OPTION C24H2 COMPOSITE COVER IF LOCATED IN PAVEMENT AREA
LID IS BOLTED DOWN IF LOCATED IN GREEN SPACE
GREASE INTERCEPTOR
ADJUSTABLE COVER ADAPTERS PROVIDE UP TO 4" ADDITIONAL HEIGHT
10 1/2"
28 1/2"
18"
MECHANICALLY COUPLE PIPES TO UNIT
INLET
INLET AND OUTLET TO BE 4"
32 1/4"
37"
FLOW

NOTE:
1. PROVIDE GREAT BASIN GB-50 (BY SHIER PRODUCTS COMPANY) OR APPROVED EQUAL:
FLOW = 50 GPM
WATER CAPACITY = 65 GAL
CAPACITY = 439.5 LBS

8 EXTERIOR GREASE INTERCEPTOR
NOT TO SCALE


PAVEMENT
SELECTED BACKFILL (CRUSHED STONE IN PAVED AREA. CLEAN SOIL FILL IN UNPAVED AREA.)
12" MIN.
18" MIN. FOR PIPE SIZES 96" +
AASHTO CLASS A-1, A-2 OR A-3 STONE PLACED IN 4" LIFTS
Ø1/2" PIPE
6" MIN.
Ø1/2" PIPE
6" MIN.

SECTION
NOT TO SCALE

6 PIPE BEDDING
NOT TO SCALE

GEOTEXTILE FABRIC SPECIFICATIONS

8 OZ. NONWOVEN NEEDLE PUNCHED FABRIC; AMOCO 4553, PHILLIPS SUPAC 8NP, OR EQUAL

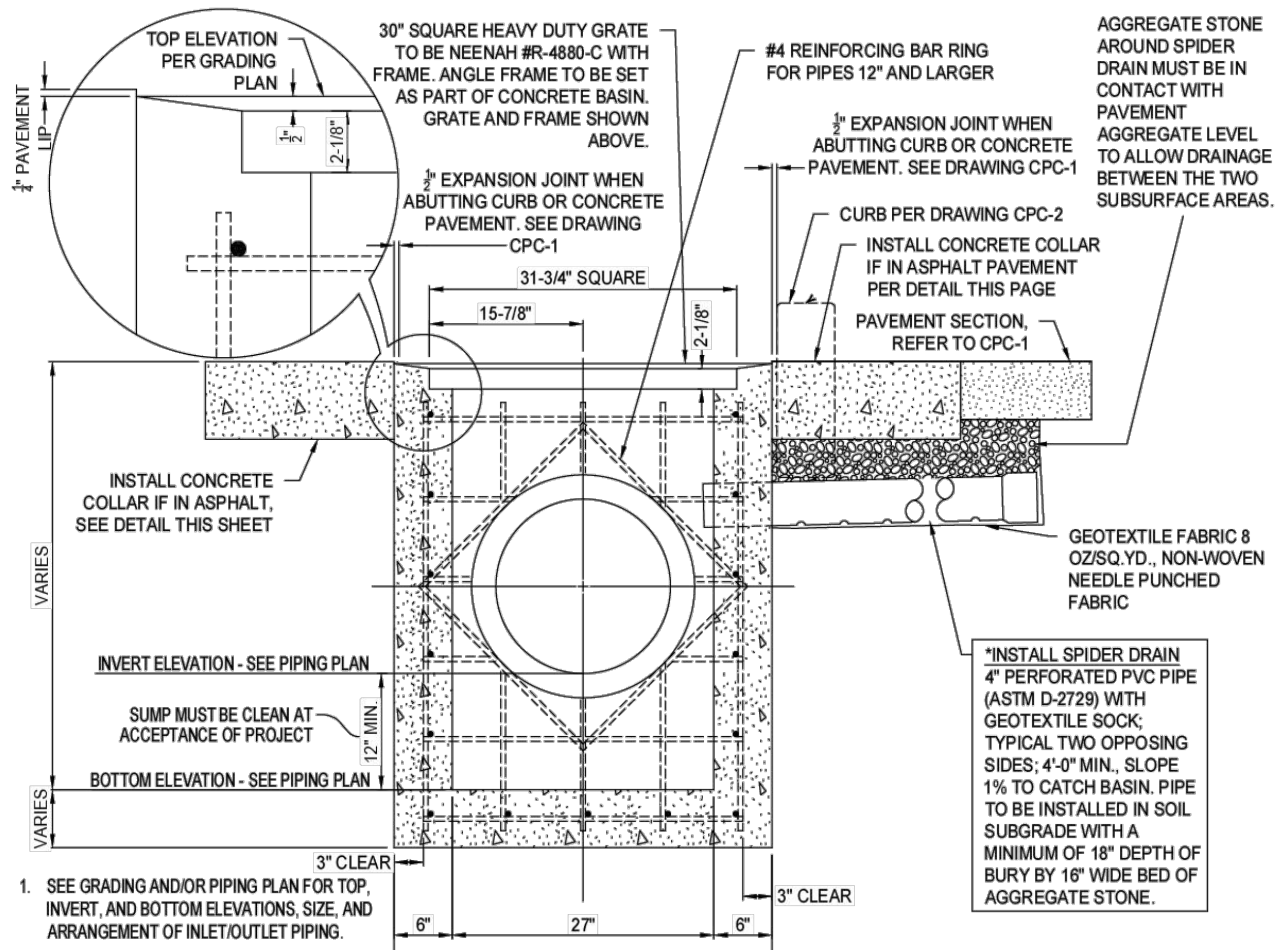
GENERAL NOTES:

1. ALL STORM AND SANITARY PIPING SHALL BE THE SIZE AND TYPE SHOWN ON THE GRADING OR PIPING PLAN, AND SHALL CONFORM TO THE ASTM AND AASHTO STANDARD SPECIFICATIONS LISTED HERE, UNLESS OTHERWISE REQUIRED BY GOVERNING AUTHORITIES.
2. CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS OF 7-ELEVEN'S SPECIFICATIONS.
3. CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES PRIOR TO STARTING ANY BELOW GRADE WORK TO LOCATE UNDERGROUND FACILITIES.
4. ALL SANITARY SEWERS SHALL HAVE "PREMIUM" SEALED JOINTS. STORM SEWERS WITHIN 20' OF HYDROCARBON PRODUCT PIPING OR UNDERGROUND TANKS SHALL HAVE "PREMIUM SEALED JOINTS.
5. THE PIPE INVERT SHALL BE STRAIGHT LINE GRADED BETWEEN ELEVATIONS SHOWN ON THE PLAN.
6. PIPE SHALL BE LAID FROM THE LOWER ELEVATION TO THE HIGHER ELEVATION.
7. CONTRACTOR SHALL VERIFY EXISTING ELEVATIONS PRIOR TO BEGINNING WORK. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE.
8. PIPING TO BE MIN. 12" BELOW TOP OF RIGID PAVEMENT, BOTTOM OF FLEXIBLE PAVEMENT, OR FINISHED GRADE IN NON-TRAFFIC AREAS. APPLICABLE AASHTO OR AISI GUIDELINES SHALL OVERRIDE AND GOVERN MINIMUM COVER HEIGHTS WHEN GREATER THAN STATED ABOVE.
9. SEE DRAWING # SCB-1 FOR CANOPY DOWNSPOUT DRAIN DETAILS.

MINIMUM DEPTH OF BURY:
(SEE NOTE #8)

PVC ------------ 18"
RCP ------------ 12"
HDPE ------------ 18"

7 GEOTEXTILE FABRIC
NOT TO SCALE


TOP ELEVATION PER GRADING PLAN
1/4" PAVEMENT LIP
1/2"
2-1/8"
30" SQUARE HEAVY DUTY GRATE TO BE NEENAH #R-4880-C WITH FRAME. ANGLE FRAME TO BE SET AS PART OF CONCRETE BASIN. GRATE AND FRAME SHOWN ABOVE.
#4 REINFORCING BAR RING FOR PIPES 12" AND LARGER
1/2" EXPANSION JOINT WHEN ABUTTING CURB OR CONCRETE PAVEMENT. SEE DRAWING CPC-1
1/2" EXPANSION JOINT WHEN ABUTTING CURB OR CONCRETE PAVEMENT. SEE DRAWING CPC-1
AGGREGATE STONE AROUND SPIDER DRAIN MUST BE IN CONTACT WITH PAVEMENT AGGREGATE LEVEL TO ALLOW DRAINAGE BETWEEN THE TWO SUBSURFACE AREAS.
CURB PER DRAWING CPC-2
INSTALL CONCRETE COLLAR IF IN ASPHALT PAVEMENT PER DETAIL THIS PAGE
PAVEMENT SECTION, REFER TO CPC-1
31-3/4" SQUARE
15-7/8"
2-1/8"
INSTALL CONCRETE COLLAR IF IN ASPHALT, SEE DETAIL THIS SHEET
VARIES
GEOTEXTILE FABRIC 8 OZ/SQ.YD., NON-WOVEN NEEDLE PUNCHED FABRIC
INVERT ELEVATION - SEE PIPING PLAN
SUMP MUST BE CLEAN AT ACCEPTANCE OF PROJECT
12" MIN.
BOTTOM ELEVATION - SEE PIPING PLAN
VARIES
3" CLEAR
3" CLEAR
6"
27"
6"
39" SQUARE

*INSTALL SPIDER DRAIN
4" PERFORATED PVC PIPE (ASTM D-2729) WITH GEOTEXTILE SOCK; TYPICAL TWO OPPOSING SIDES; 4'-0" MIN., SLOPE 1% TO CATCH BASIN. PIPE TO BE INSTALLED IN SOIL SUBGRADE WITH A MINIMUM OF 18" DEPTH OF BURY BY 16" WIDE BED OF AGGREGATE STONE.

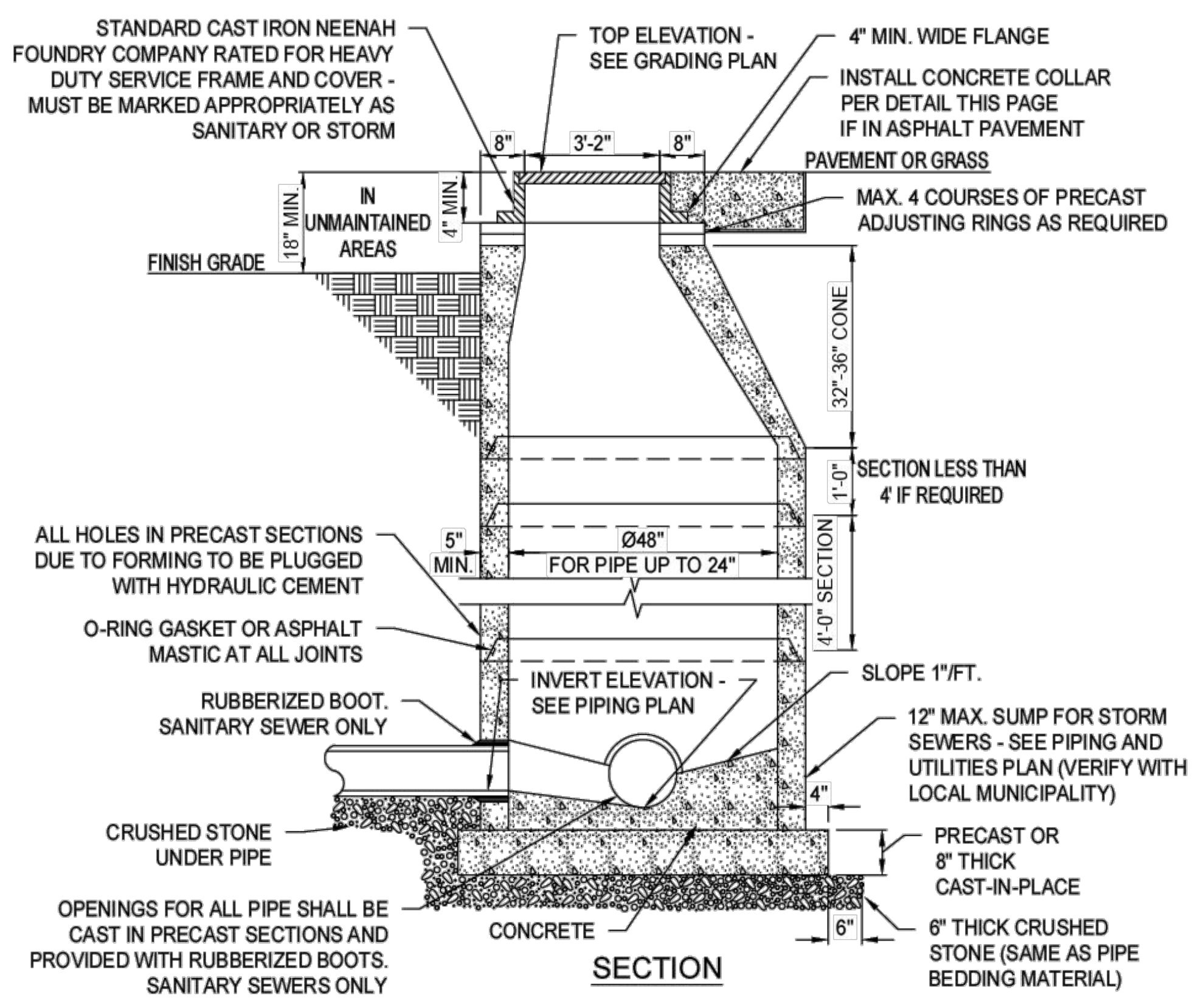
SECTION
NOT TO SCALE

1. SEE GRADING AND/OR PIPING PLAN FOR TOP, INVERT, AND BOTTOM ELEVATIONS, SIZE, AND ARRANGEMENT OF INLET/OUTLET PIPING.
2. MORTAR ALL INLET, OUTLET PIPE OPENINGS WITH HYDRAULIC CEMENT GROUT.
3. REINFORCEMENT: PLACE #4 REBARS AT 8" ~ CENTER TO CENTER BOTH WAYS IN WALLS AND FLOOR. INCLUDE #4 REBAR RING AROUND ALL OPENINGS 12" AND LARGER.
4. ADDITIONAL MASONRY BRICK OR BLOCK WORK IS NOT PERMITTED TO MEET SURFACE ELEVATION.

NOTE: PREFAB UNIT, MEETING STRENGTH EQUIVALENCE, MAY BE SUBSTITUTED IF APPROVED BY OWNER'S REP.

FOR OUTLETS UP TO 18" R.C.P. TO BE USED IN HEAVY-DUTY PAVEMENT AREAS.

3 HEAVY-DUTY CATCH BASIN
NOT TO SCALE


STANDARD CAST IRON NEENAH FOUNDRY COMPANY RATED FOR HEAVY DUTY SERVICE FRAME AND COVER - MUST BE MARKED APPROPRIATELY AS SANITARY OR STORM
TOP ELEVATION - SEE GRADING PLAN
4" MIN. WIDE FLANGE
INSTALL CONCRETE COLLAR PER DETAIL THIS PAGE IF IN ASPHALT PAVEMENT
PAVEMENT OR GRASS
8"
3'-2"
8"
MAX. 4 COURSES OF PRECAST ADJUSTING RINGS AS REQUIRED
18" MIN.
IN UNMAINTAINED AREAS
4" MIN.
FINISH GRADE
32"-36" CONE
1'-0"
SECTION LESS THAN 4' IF REQUIRED
ALL HOLES IN PRECAST SECTIONS DUE TO FORMING TO BE PLUGGED WITH HYDRAULIC CEMENT
5" MIN.
Ø48"
FOR PIPE UP TO 24"
4'-0" SECTION
O-RING GASKET OR ASPHALT MASTIC AT ALL JOINTS
INVERT ELEVATION - SEE PIPING PLAN
SLOPE 1"/FT.
RUBBERIZED BOOT. SANITARY SEWER ONLY
12" MAX. SUMP FOR STORM SEWERS - SEE PIPING AND UTILITIES PLAN (VERIFY WITH LOCAL MUNICIPALITY)
4"
CRUSHED STONE UNDER PIPE
PRECAST OR 8" THICK CAST-IN-PLACE
OPENINGS FOR ALL PIPE SHALL BE CAST IN PRECAST SECTIONS AND PROVIDED WITH RUBBERIZED BOOTS. SANITARY SEWERS ONLY
CONCRETE
6"
6" THICK CRUSHED STONE (SAME AS PIPE BEDDING MATERIAL)

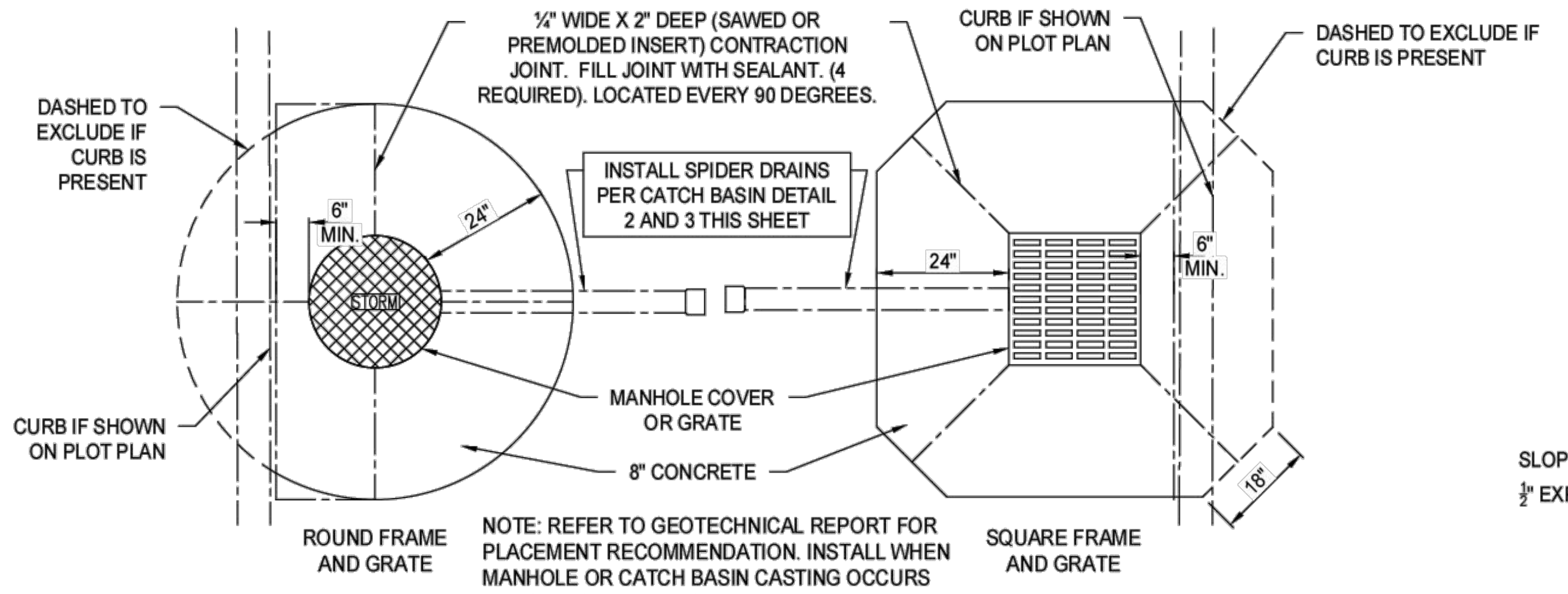
SECTION

1. MANHOLES SHOWN ON THE PLOT OR PIPING PLAN SHALL BE PRECAST CONCRETE AND CONSTRUCTED OF MATERIALS AND IN A MANNER MEETING THE SPECIFICATIONS OF ASTM C-478 AND THE PUBLIC AUTHORITY HAVING JURISDICTION.
2. SEE GRADING AND/OR PIPING PLAN FOR TOP AND INVERT ELEVATIONS, SIZE AND ARRANGEMENT OF INLET/OUTLET PIPING.
3. ADDITIONAL MASONRY BRICK OR BLOCK WORK IS NOT PERMITTED TO MEET SURFACE ELEVATION.
4. OBTAIN APPROVAL OF MANUFACTURER'S STRUCTURAL ENGINEER FOR DEPTHS EXCEEDING 10'.

FOR SANITARY SEWERS ONLY

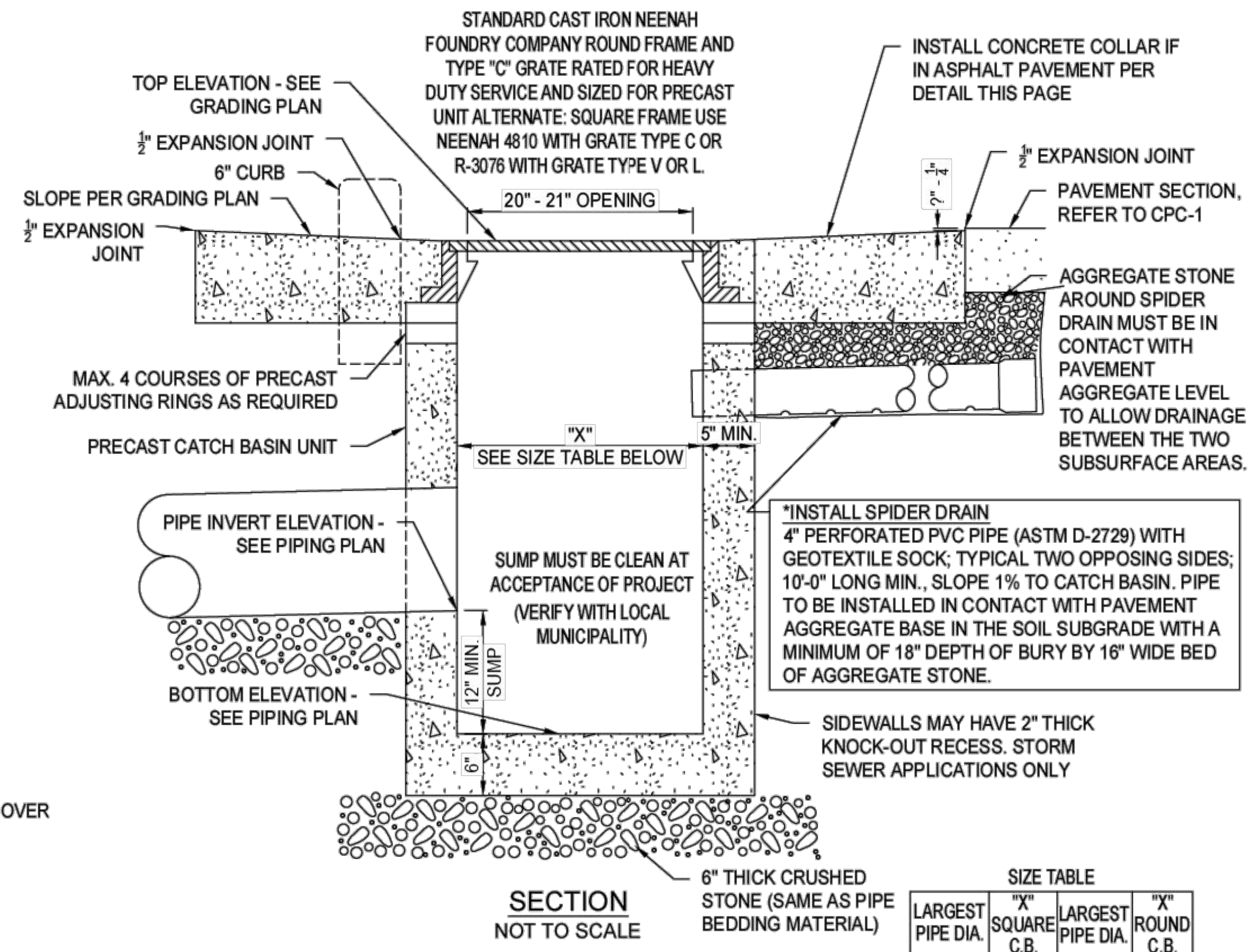
5. THE BOTTOM OF THE MANHOLE SHALL BE CONTOURED WITH CONCRETE TO CHANNEL THE FLOW THROUGH THE MANHOLE.
6. WHEN SPECIFIED ON THE PLANS, AN EXTERIOR "DROP" MANHOLE SHALL BE CONSTRUCTED PER LOCAL SPECIFICATIONS.

1 STANDARD MANHOLE
NOT TO SCALE


1/4" WIDE X 2" DEEP (SAWED OR PREMOLDED INSERT) CONTRACTION JOINT. FILL JOINT WITH SEALANT. (4 REQUIRED). LOCATED EVERY 90 DEGREES.
CURB IF SHOWN ON PLOT PLAN
DASHED TO EXCLUDE IF CURB IS PRESENT
DASHED TO EXCLUDE IF CURB IS PRESENT
6" MIN.
24"
STORM
INSTALL SPIDER DRAINS PER CATCH BASIN DETAIL 2 AND 3 THIS SHEET
24"
6" MIN.
MANHOLE COVER OR GRATE
CURB IF SHOWN ON PLOT PLAN
8" CONCRETE
18"
ROUND FRAME AND GRATE
SQUARE FRAME AND GRATE

NOTE: REFER TO GEOTECHNICAL REPORT FOR PLACEMENT RECOMMENDATION. INSTALL WHEN MANHOLE OR CATCH BASIN CASTING OCCURS AT LOW POINTS AND CLAYEY SUBGRADES. SEE DETAIL 2 AND 3 THIS SHEET.

4 STORM STRUCTURE CONCRETE COLLARS
NOT TO SCALE


STANDARD CAST IRON NEENAH FOUNDRY COMPANY ROUND FRAME AND TYPE "C" GRATE RATED FOR HEAVY DUTY SERVICE AND SIZED FOR PRECAST UNIT ALTERNATE: SQUARE FRAME USE NEENAH 4810 WITH GRATE TYPE C OR R-3076 WITH GRATE TYPE V OR L.
TOP ELEVATION - SEE GRADING PLAN
1/2" EXPANSION JOINT
6" CURB
SLOPE PER GRADING PLAN
1/2" EXPANSION JOINT
20" - 21" OPENING
INSTALL CONCRETE COLLAR IF IN ASPHALT PAVEMENT PER DETAIL THIS PAGE
2" - 1/4"
1/2" EXPANSION JOINT
PAVEMENT SECTION, REFER TO CPC-1
AGGREGATE STONE AROUND SPIDER DRAIN MUST BE IN CONTACT WITH PAVEMENT AGGREGATE LEVEL TO ALLOW DRAINAGE BETWEEN THE TWO SUBSURFACE AREAS.
MAX. 4 COURSES OF PRECAST ADJUSTING RINGS AS REQUIRED
PRECAST CATCH BASIN UNIT
"X"
SEE SIZE TABLE BELOW
5" MIN.
PIPE INVERT ELEVATION - SEE PIPING PLAN
SUMP MUST BE CLEAN AT ACCEPTANCE OF PROJECT (VERIFY WITH LOCAL MUNICIPALITY)
12" MIN. SUMP
BOTTOM ELEVATION - SEE PIPING PLAN
6"
SIDEWALLS MAY HAVE 2" THICK KNOCK-OUT RECESS. STORM SEWER APPLICATIONS ONLY
6" THICK CRUSHED STONE (SAME AS PIPE BEDDING MATERIAL)

*INSTALL SPIDER DRAIN
4" PERFORATED PVC PIPE (ASTM D-2729) WITH GEOTEXTILE SOCK; TYPICAL TWO OPPOSING SIDES; 10'-0" LONG MIN., SLOPE 1% TO CATCH BASIN. PIPE TO BE INSTALLED IN CONTACT WITH PAVEMENT AGGREGATE BASE IN THE SOIL SUBGRADE WITH A MINIMUM OF 18" DEPTH OF BURY BY 16" WIDE BED OF AGGREGATE STONE.

SECTION
NOT TO SCALE

SIZE TABLE

LARGEST PIPE DIA.	"X" SQUARE C.B.	LARGEST PIPE DIA.	"X" ROUND C.B.
21"	24"	15"	30"
33"	36"	24"	42"
42"	48"	30"	48"
54"	60"	36"	60"
60"	72"	48"	72"

NOTE: TRAFFIC RATED REINFORCED PRE-CAST CONCRETE TOP TO BE USED WITH LARGER CATCH BASINS.

VERIFY STRUCTURE SIZE IS ADEQUATE FOR MULTIPLE PIPES AND PIPE ANGLES.

- THE PRECAST CATCH BASIN UNIT SHALL CONFORM TO THE APPLICABLE STANDARD STATE D.O.T. SPECIFICATIONS AND ASTM C913. THE UNIT SHALL BE PROPERLY REINFORCED TO PREVENT DAMAGE DURING TRANSPORT AND INSTALLATION.
- SEE GRADING AND/OR PIPING PLAN FOR TOP, INVERT, AND BOTTOM ELEVATIONS, SIZE, AND ARRANGEMENT OF INLET/OUTLET PIPING.
- MORTAR ALL INLET, OUTLET PIPE OPENINGS WITH HYDRAULIC CEMENT GROUT.
- ADDITIONAL MASONRY BRICK OR BLOCK WORK IS NOT PERMITTED TO MEET SURFACE ELEVATION.

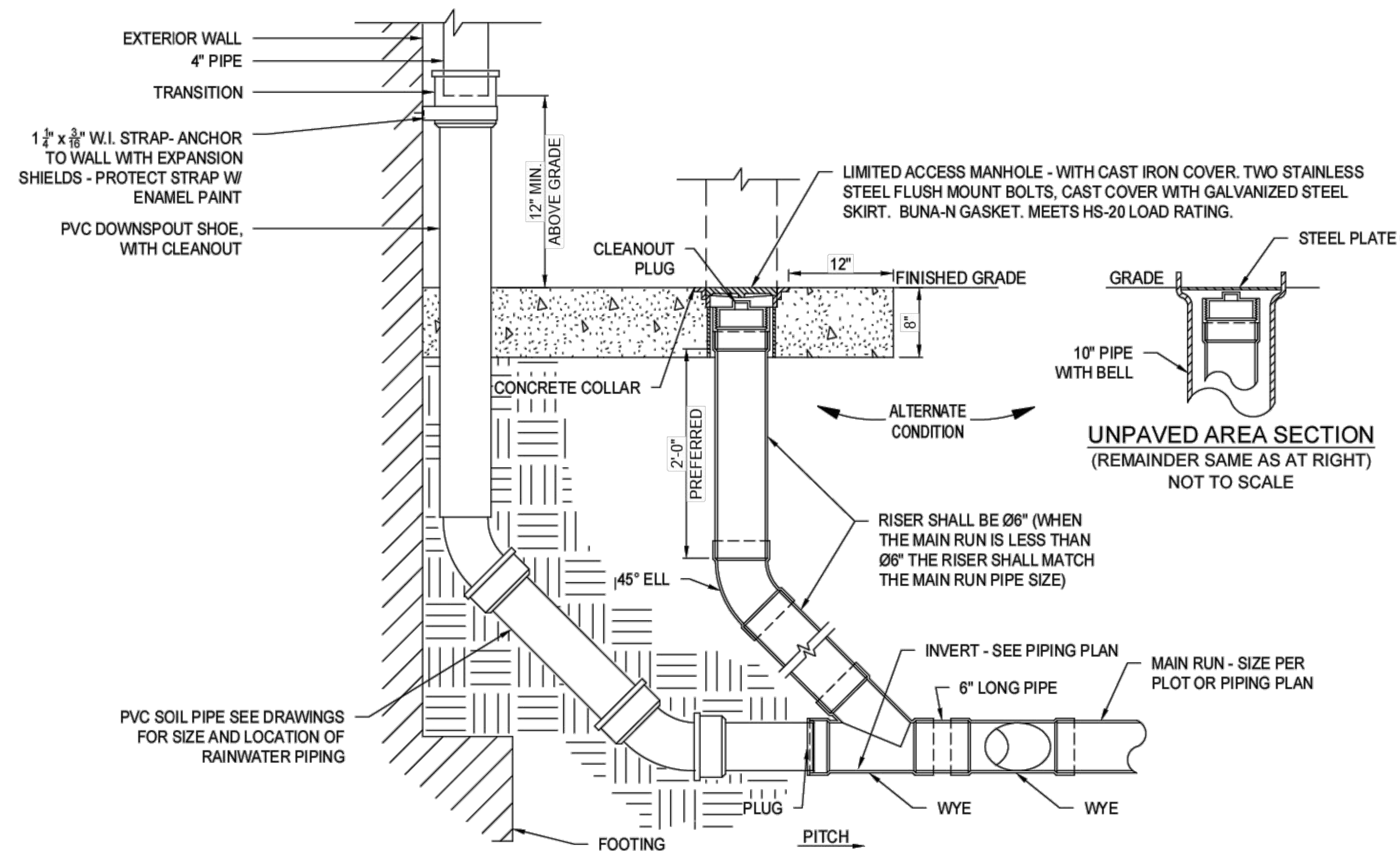
TO BE USED IN STANDARD-DUTY PAVEMENT AREAS ONLY.

2 STANDARD-DUTY CATCH BASIN
NOT TO SCALE

PIPE SPECIFICATIONS

TYPE OF PIPE	"n" VALUES	SIZES PERMITTED	SERVICE AND USE	PIPE SPECIFICATION	INSTALLATION SPECIFICATION	JOINT SPECIFICATION	PREMIUM JOINTS
POLY-VINYL CHLORIDE (PVC)	0.01	6"	SANITARY SEWER	ASTM D-3034 SDR 35 STANDARD SPECIFICATION FOR TYPE PSM PVC SEWER PIPE AND FITTINGS	ASTM D-2321 STANDARD PRACTICE FOR INSTALLATION OF FLEXIBLE THERMOPLASTIC SEWER PIPE PIPE BEDDING PER DETAIL	ASTM D-3212 STANDARD SPECIFICATION FOR JOINTS FOR DRAIN AND SEWER PLASTIC PIPES USING FLEXIBLE ELASTOMERIC SEALS	ASTM F-477 ELASTOMERIC SEALS FOR JOINING PLASTIC PIPE (OIL RESISTANT) HIGH NITRILE (NBR), EPICHLOROHYDRIN (ECO), NEOPRENE (CR), POLYSULFIDE (T), OR FLUORO ELASTOMER (FPM)
		8" - 12"	STORM DRAINAGE				
REINFORCED CONCRETE (RCP)	0.013	Ø12" AND LARGER	STORM DRAINAGE	ASTM C-76, ASTM C1479 CLASS 3, WALL B-TONGUE AND GROOVE STANDARD SPECIFICATION FOR REINFORCED CONCRETE CULVERT, STORM DRAIN, AND SEWER PIPE	PIPE BEDDING PER DETAIL WHEN OUTLETTING TO SURFACE GRADE FLARED END SECTION MUST BE USED	BITUMINOUS MASTIC	ASTM C-443 STANDARD SPECIFICATION FOR JOINTS FOR CIRCULAR CONCRETE SEWER AND CULVERT PIPE, USING RUBBER GASKETS (OIL RESISTANT)
SMOOTH LINED CORRUGATED HDPE N-12 BY ADVANCED DRAINAGE SYSTEMS (800) 733-9554 SURE-LOK BY HANCOR (800) 537-9520	0.012 0.012	8" AND LARGER 12" AND LARGER	STORM DRAINAGE STORM DRAINAGE	AASHTO M294-S AASHTO M294-S	ASTM D-2321 PIPE BEDDING PER DETAIL ASTM D-2321 PIPE BEDDING PER DETAIL	STANDARD COUPLERS (PRO LINK) USE GASKET IN FINE SOILS BELL & SPIGOT WITH GASKET (SURE-LOK)	PVC DOUBLE BELL COUPLER WITH GASKET (PRO LINK 10.8) AVAILABLE THROUGH 24" BELL & SPIGOT WITH POLYISOPRENE GASKET (SURE-LOK 10.8) AVAILABLE THROUGH 30"
DUCTILE IRON (DI)	0.012	4" - 12"	SPECIAL	ASTM A-746 CLASS 50 STANDARD SPECIFICATION FOR DUCTILE IRON GRAVITY SEWER PIPE	PIPE BEDDING PER DETAIL	RUBBER GASKET COMPRESSION TYPE JOINT	GASKET TO BE OIL RESISTANT NITRILE-BUTADIENE (NBR)
POLYETHYLENE (PE)	0.010	4" - 6"	UNDERDRAINS AND SEPTIC DISPOSAL FIELDS ONLY	ASTM F-405 STANDARD SPECIFICATION FOR CORRUGATED POLYETHYLENE TUBING AND FITTINGS	SEE UNDERDRAIN DETAIL	STANDARD COUPLINGS	N/A
CORRUGATED METAL PIPE (CMP)	0.022	Ø12" AND LARGER	STORM DRAINAGE	ASTM A-760 STANDARD SPECIFICATION FOR CORRUGATED METAL PIPE, METALLIC-COATED FOR SEWERS AND DRAINS	ASTM A-807 STANDARD SPECIFICATION FOR INSTALLING CORRUGATED METAL STRUCTURAL PLATE PIPE FOR SEWERS	STANDARD COUPLINGS	N/A
HIGH PERFORMANCE (HP) PIPING	0.012	12" - 60"	STORM DRAINAGE	AASHTO M330 ASTM F2881	ASTM D2321	WATER TIGHT ASTM D-3212	EXTENDED REINFORCED INTEGRAL BELL AND GASKETED SPIGOT

9 PIPE SPECIFICATIONS
NOT TO SCALE


EXTERIOR WALL
4" PIPE
TRANSITION
1 1/4" x 3/16" W.I. STRAP- ANCHOR TO WALL WITH EXPANSION SHIELDS - PROTECT STRAP W/ ENAMEL PAINT
PVC DOWNSPOUT SHOE, WITH CLEANOUT
12" MIN. ABOVE GRADE
LIMITED ACCESS MANHOLE - WITH CAST IRON COVER. TWO STAINLESS STEEL FLUSH MOUNT BOLTS, CAST COVER WITH GALVANIZED STEEL SKIRT. BUNA-N GASKET. MEETS HS-20 LOAD RATING.
STEEL PLATE COVER
CLEANOUT PLUG
12"
FINISHED GRADE
GRADE
8"
10" PIPE WITH BELL
CONCRETE COLLAR
ALTERNATE CONDITION
2'-0" PREFERRED
RISER SHALL BE Ø6" (WHEN THE MAIN RUN IS LESS THAN Ø6" THE RISER SHALL MATCH THE MAIN RUN PIPE SIZE)
45° ELL
INVERT - SEE PIPING PLAN
6" LONG PIPE
MAIN RUN - SIZE PER PLOT OR PIPING PLAN
PVC SOIL PIPE SEE DRAWINGS FOR SIZE AND LOCATION OF RAINWATER PIPING
PLUG
WYE
WYE
FOOTING
PITCH

UNPAVED AREA SECTION
(REMAINDER SAME AS AT RIGHT)
NOT TO SCALE

5 DOWNSPOUT BOOT AND UTILITIES PIPE CLEAN-OUT
NOT TO SCALE

Rev. #	Date	Description

CIVIL STANDARD PROTO

7-ELEVEN, INC.
3200 HACKBERRY ROAD, IRVING, TEXAS 75063
7-ELEVEN #XXXXX
STREET ADDRESS
ANYTOWN, USA 00000
DRAINAGE AND UTILITY DETAILS

ELEVEN

Job#: SEI-XXXXX
Scale: AS NOTED
Date: XX/XX/XXXX
Drawn By: x.x.x.
Checked By: x.x.x.

SHEET:
CUD-1

No.	REVISIONS	DATE	BY

Kimley»Horn

200 S. ORANGE AVENUE, SUITE 600, ORLANDO, FL
PHONE: (407) 898-1511
WWW.KIMLEY-HORN.COM REGISTRY No. 35106

LICENSED PROFESSIONAL
DEREK E. RAMSBURG, P.E.
FLORIDA LICENSE NUMBER
88905
DATE: 8/21/2025

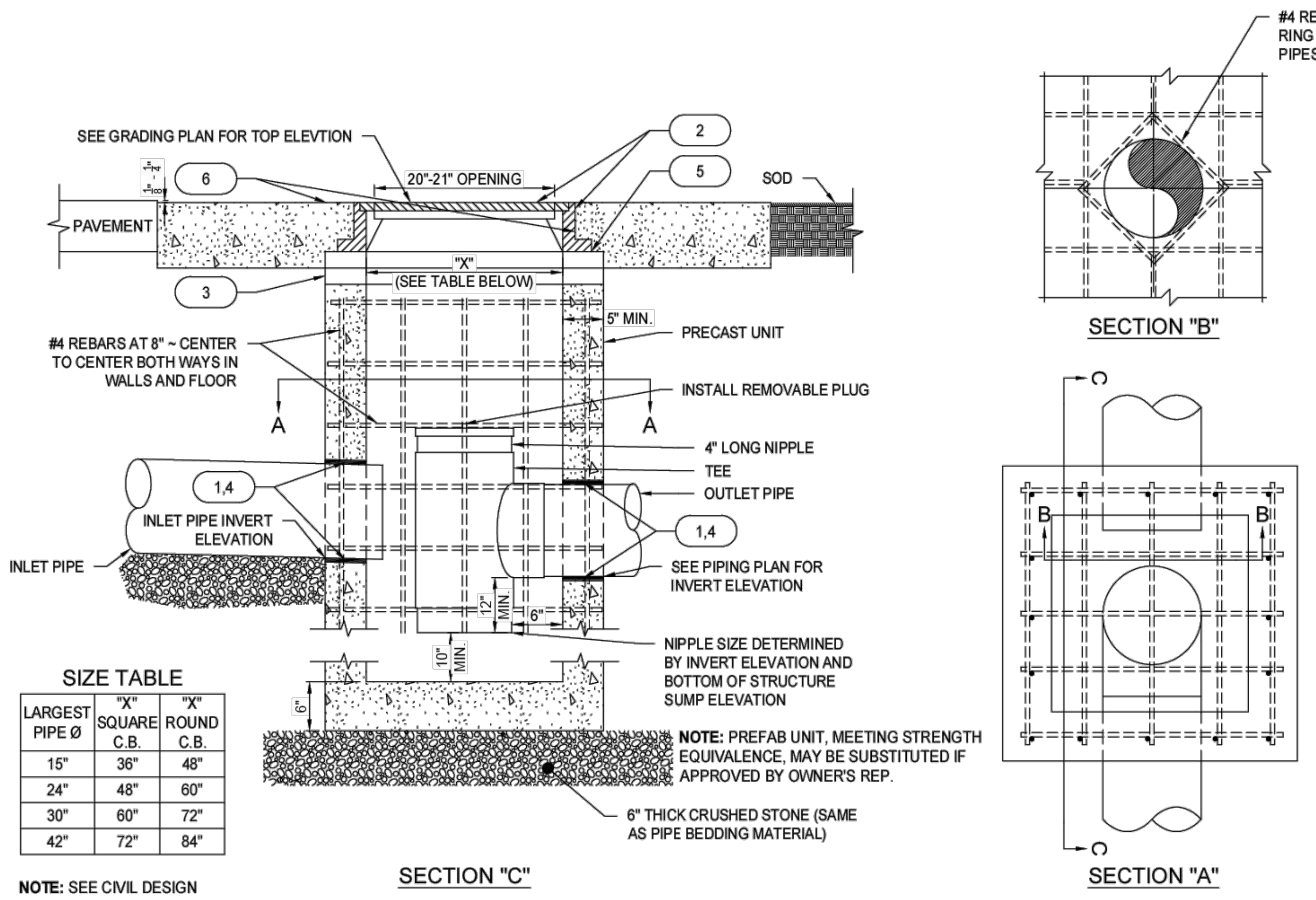
KHA PROJECT
249188006
DATE
8/21/2025
SCALE AS SHOWN
DESIGNED BY BMG
DRAWN BY BMG
CHECKED BY DER

7-11 STANDARD DETAILS

7-11 PALM BAY
CITY OF PALM BAY FLORIDA

SHEET NUMBER
C7.6

Plotted By: Guidry, Blake Sheet Set: 7-11 PALM BAY Layout: C7.6 August 21, 2025 12:52:48pm K:\ORL_Civil\249188006-7-11 Palm Bay\CADD\CONST\PlanSheets\C7.0 GENERAL CONSTRUCTION DETAILS.dwg
This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.


SEE GRADING PLAN FOR TOP ELEVTION
2
6
5
20"-21" OPENING
SOD
PAVEMENT
"X"
(SEE TABLE BELOW)
3
5" MIN.
PRECAST UNIT
#4 REBARS AT 8" ~ CENTER TO CENTER BOTH WAYS IN WALLS AND FLOOR
INSTALL REMOVABLE PLUG
A
A
4" LONG NIPPLE
TEE
OUTLET PIPE
1,4
INLET PIPE INVERT ELEVATION
INLET PIPE
SEE PIPING PLAN FOR INVERT ELEVATION
12" MIN.
6"
10" MIN.
NIPPLE SIZE DETERMINED BY INVERT ELEVATION AND BOTTOM OF STRUCTURE SUMP ELEVATION
6"
NOTE: PREFAB UNIT, MEETING STRENGTH EQUIVALENCE, MAY BE SUBSTITUTED IF APPROVED BY OWNER'S REP.
6" THICK CRUSHED STONE (SAME AS PIPE BEDDING MATERIAL)
#4 REINFORCING BAR RING REQUIRED FOR PIPES 12" AND LARGER
B
B
C
C

SECTION "C"

SECTION "B"

SECTION "A"

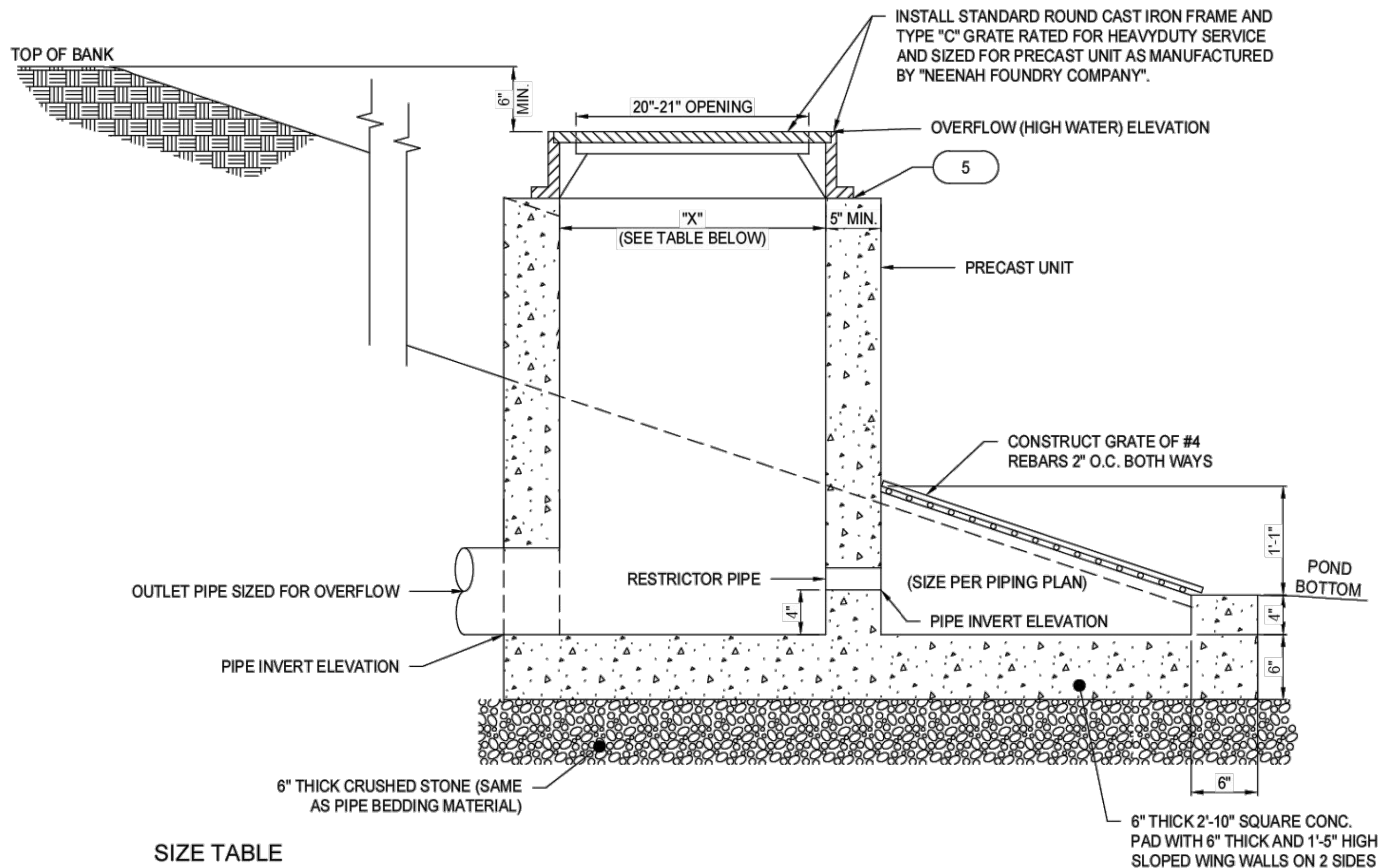
SIZE TABLE

LARGEST PIPE Ø	"X" SQUARE C.B.	"X" ROUND C.B.
15"	36"	48"
24"	48"	60"
30"	60"	72"
42"	72"	84"

NOTE: SEE CIVIL DESIGN GUIDELINES FOR ENVIRONMENTAL CATCH BASIN USE AND LOCATION GUIDANCE.

5 HEAVY-DUTY ENVIRONMENTAL CONTROL STRUCTURE/CATCH BASIN

NOT TO SCALE


TOP OF BANK
6" MIN.
INSTALL STANDARD ROUND CAST IRON FRAME AND TYPE "C" GRATE RATED FOR HEAVYDUTY SERVICE AND SIZED FOR PRECAST UNIT AS MANUFACTURED BY "NEENAH FOUNDRY COMPANY".
20"-21" OPENING
OVERFLOW (HIGH WATER) ELEVATION
5
"X"
(SEE TABLE BELOW)
5" MIN.
PRECAST UNIT
CONSTRUCT GRATE OF #4 REBARS 2" O.C. BOTH WAYS
1'-1"
POND BOTTOM
OUTLET PIPE SIZED FOR OVERFLOW
RESTRICTOR PIPE
(SIZE PER PIPING PLAN)
4"
PIPE INVERT ELEVATION
PIPE INVERT ELEVATION
4"
6"
6"
6" THICK CRUSHED STONE (SAME AS PIPE BEDDING MATERIAL)
6" THICK 2'-10" SQUARE CONC. PAD WITH 6" THICK AND 1'-5" HIGH SLOPED WING WALLS ON 2 SIDES

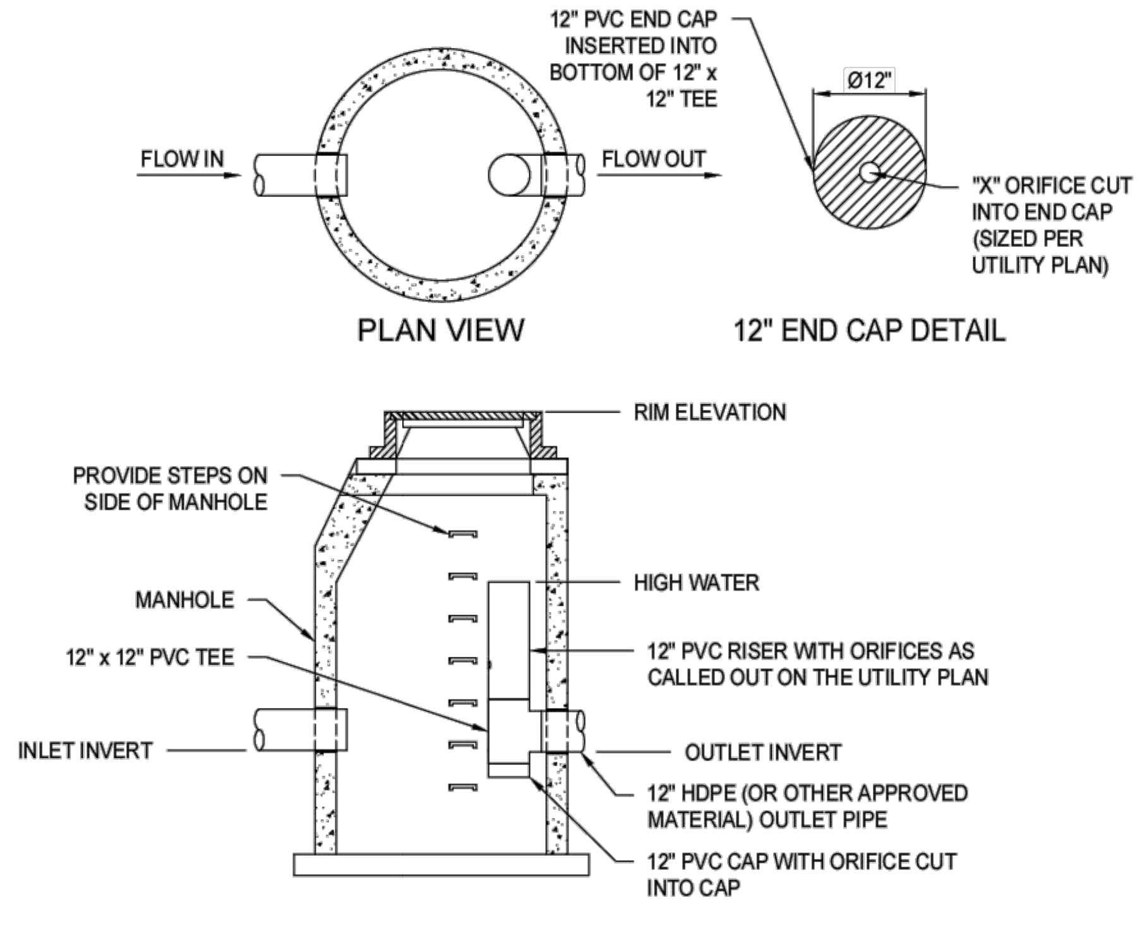
SECTION

SIZE TABLE

LARGEST PIPE Ø	"X" SQUARE C.B.	"X" ROUND C.B.
15"	24"	36"
24"	36"	42"
30"	48"	48"
42"	60"	60"

3 OVERFLOW CONTROL STRUCTURE

NOT TO SCALE


12" PVC END CAP INSERTED INTO BOTTOM OF 12" x 12" TEE
Ø12"
FLOW IN
FLOW OUT
"X" ORIFICE CUT INTO END CAP (SIZED PER UTILITY PLAN)
RIM ELEVATION
PROVIDE STEPS ON SIDE OF MANHOLE
HIGH WATER
MANHOLE
12" x 12" PVC TEE
12" PVC RISER WITH ORIFICES AS CALLED OUT ON THE UTILITY PLAN
INLET INVERT
OUTLET INVERT
12" HDPE (OR OTHER APPROVED MATERIAL) OUTLET PIPE
12" PVC CAP WITH ORIFICE CUT INTO CAP

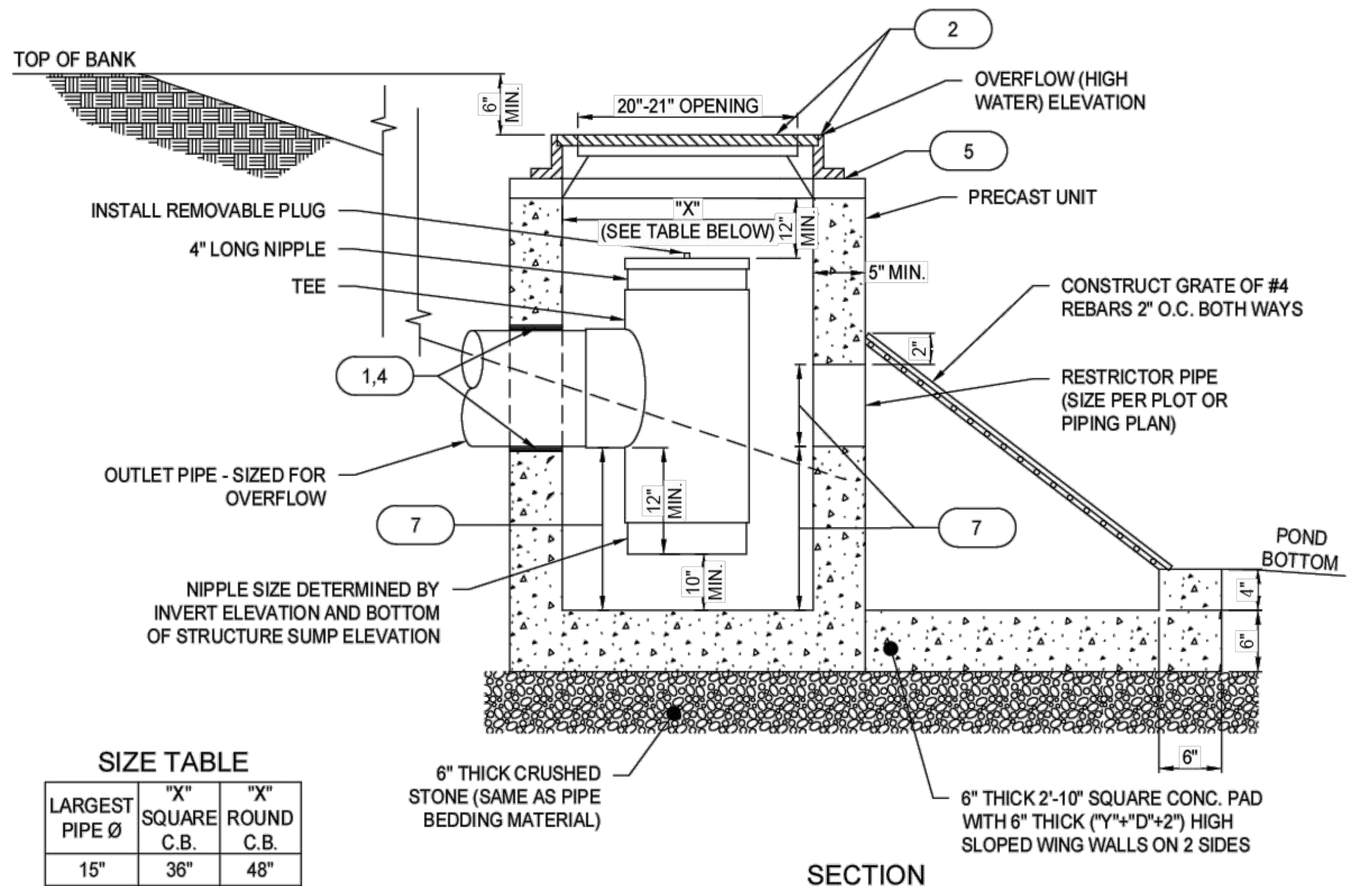
PLAN VIEW

12" END CAP DETAIL

SECTION

1 OUTLET CONTROL STRUCTURE

NOT TO SCALE


TOP OF BANK
6" MIN.
2
20"-21" OPENING
OVERFLOW (HIGH WATER) ELEVATION
5
PRECAST UNIT
INSTALL REMOVABLE PLUG
"X"
(SEE TABLE BELOW)
12" MIN.
4" LONG NIPPLE
5" MIN.
TEE
CONSTRUCT GRATE OF #4 REBARS 2" O.C. BOTH WAYS
2"
1,4
RESTRICTOR PIPE (SIZE PER PLOT OR PIPING PLAN)
OUTLET PIPE - SIZED FOR OVERFLOW
7
12" MIN.
7
POND BOTTOM
NIPPLE SIZE DETERMINED BY INVERT ELEVATION AND BOTTOM OF STRUCTURE SUMP ELEVATION
10" MIN.
4"
6"
6"
6" THICK CRUSHED STONE (SAME AS PIPE BEDDING MATERIAL)
6" THICK 2'-10" SQUARE CONC. PAD WITH 6" THICK ("Y"+"D"+2") HIGH SLOPED WING WALLS ON 2 SIDES

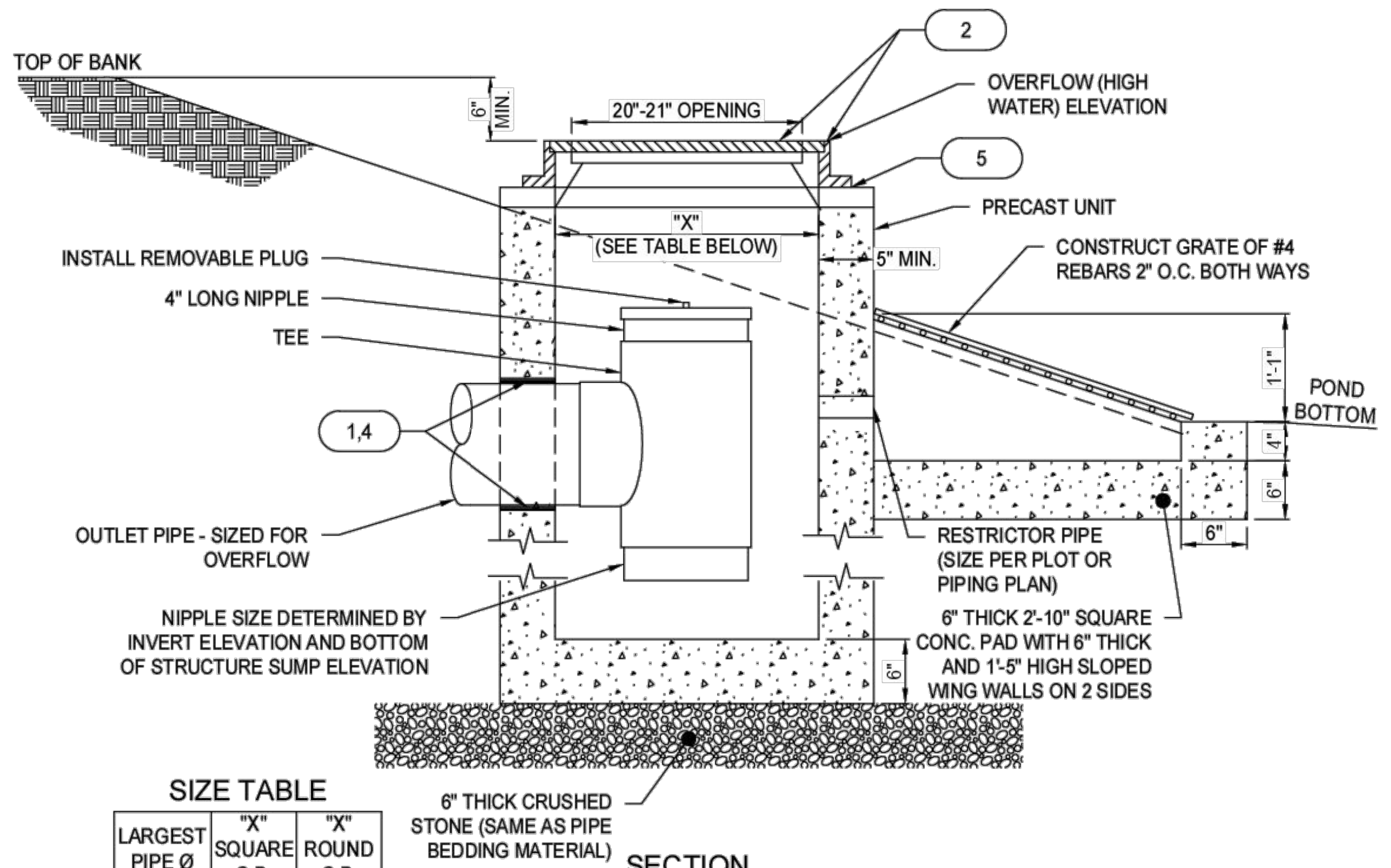
SECTION

SIZE TABLE

LARGEST PIPE Ø	"X" SQUARE C.B.	"X" ROUND C.B.
15"	36"	48"
24"	48"	60"
30"	60"	72"
42"	72"	84"

6 WET BOTTOM POND ENVIRONMENTAL OVERFLOW CONTROL STRUCTURE

NOT TO SCALE


TOP OF BANK
6" MIN.
2
20"-21" OPENING
OVERFLOW (HIGH WATER) ELEVATION
5
PRECAST UNIT
"X"
(SEE TABLE BELOW)
INSTALL REMOVABLE PLUG
5" MIN.
CONSTRUCT GRATE OF #4 REBARS 2" O.C. BOTH WAYS
4" LONG NIPPLE
TEE
1'-1"
POND BOTTOM
1,4
4"
6"
OUTLET PIPE - SIZED FOR OVERFLOW
6"
RESTRICTOR PIPE (SIZE PER PLOT OR PIPING PLAN)
6" THICK 2'-10" SQUARE CONC. PAD WITH 6" THICK AND 1'-5" HIGH SLOPED WING WALLS ON 2 SIDES
NIPPLE SIZE DETERMINED BY INVERT ELEVATION AND BOTTOM OF STRUCTURE SUMP ELEVATION
6"
6" THICK CRUSHED STONE (SAME AS PIPE BEDDING MATERIAL)

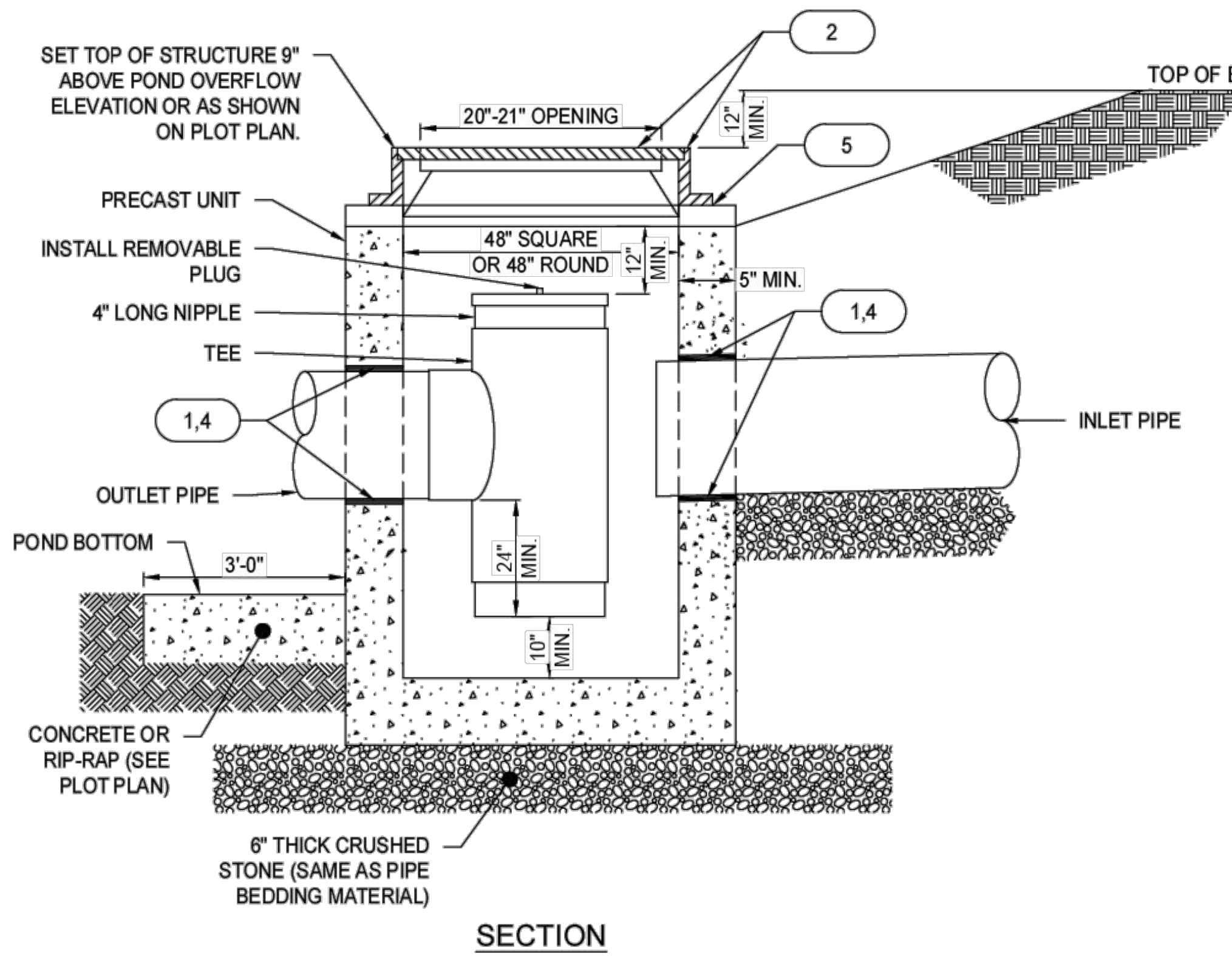
SECTION

SIZE TABLE

LARGEST PIPE Ø	"X" SQUARE C.B.	"X" ROUND C.B.
15"	36"	48"
24"	48"	60"
30"	60"	72"
42"	72"	84"

4 ENVIRONMENTAL OVERFLOW CONTROL STRUCTURE

NOT TO SCALE


SET TOP OF STRUCTURE 9" ABOVE POND OVERFLOW ELEVATION OR AS SHOWN ON PLOT PLAN.
2
20"-21" OPENING
12" MIN.
TOP OF BANK
5
PRECAST UNIT
48" SQUARE OR 48" ROUND
12" MIN.
INSTALL REMOVABLE PLUG
5" MIN.
4" LONG NIPPLE
1,4
TEE
1,4
INLET PIPE
OUTLET PIPE
POND BOTTOM
3'-0"
24" MIN.
10" MIN.
CONCRETE OR RIP-RAP (SEE PLOT PLAN)
6" THICK CRUSHED STONE (SAME AS PIPE BEDDING MATERIAL)

SECTION

2 POND INLET CONTIANMENT STRUCTURE

NOT TO SCALE

GENERAL NOTES:

ALL PRECAST UNIT SHALL CONFORM TO THE APPLICABLE STANDARD STATE D.O.T. SPECIFICATIONS. THE UNIT SHALL BE PROPERLY REINFORCED TO PREVENT DAMAGE DURING TRANSPORT AND INSTALLATION.

A TRAFFIC RATED REINFORCED PRE-CAST CONCRETE TOP SHALL BE USED WITH INSTALLATION OF LARGER PRECAST UNITS.

SEE GRADING AND/OR PIPING PLAN FOR ALL ELEVATIONS, SIZE, AND ARRANGEMENT OF INLET/OUTLET PIPING, PRECAST UNITS, AND/OR DETENTION/RETENTION PONDS.

ALL CONTROL STRUCTURES MUST BE CLEAN AT ACCEPTANCE OF THE PROJECT.

CONSTRUCTION NOTES:

1. MORTAR ALL INLET/OUTLET PIPE OPENINGS WITH HYDRAULIC CEMENT GROUT.
2. INSTALL STANDARD ROUND CAST IRON FRAME AND TYPE "C" GRATE RATED FOR HEAVY DUTY SERVICE AND SIZED FOR PRECAST UNIT AS MANUFACTURED BY "NEENAH FOUNDRY COMPANY". SUBSTITUTE LIGHT DUTY TYPE "B" IN NON TRAFFIC AREAS.
3. INSTALL PRECAST ADJUSTING RINGS AS REQUIRED TO REACH FINISHED ELEVATION. A MAXIMUM OF FOUR (4) COURSES IS PERMITTED. ADDITIONAL MASONRY BRICK OR BLOCK WORK IS NOT PERMITTED TO MEET FINISHED ELEVATION.
4. SIDEWALKS MAY HAVE 2" THICK KNOCK-OUT RECESS.
5. STANDARD CAST FRAME TO BE SEALED TO TOP OF STRUCTURE.
6. INSTALL CONCRETE COLLAR IF WITHIN AN ASPHALT PAVEMENT AREA PER DETAIL 4/CUD-1.
7. SEE SITE SPECIFIC STORM DATA TABLE.

Rev. #	Date	Description

CIVIL STANDARD PROTO

7-ELEVEN, INC.
3200 HACKBERRY ROAD, IRVING, TEXAS 75063

7-ELEVEN #XXXXX
STREET ADDRESS
ANYTOWN, USA 00000

DRAINAGE AND UTILITY DETAILS

Job#: SEI-XXXXX
Scale: NO SCALE
Date: XX/XX/XXXX
Drawn By: x.x.x.
Checked By: x.x.x.

SHEET:
CUD-3

No.	REVISIONS	DATE	BY

Kimley»Horn

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WWW.KIMLEY-HORN.COM REGISTRY No. 35106

LICENSED PROFESSIONAL
DEREK E. RAMSBURG, P.E.
FLORIDA LICENSE NUMBER
88905
DATE: 8/21/2025

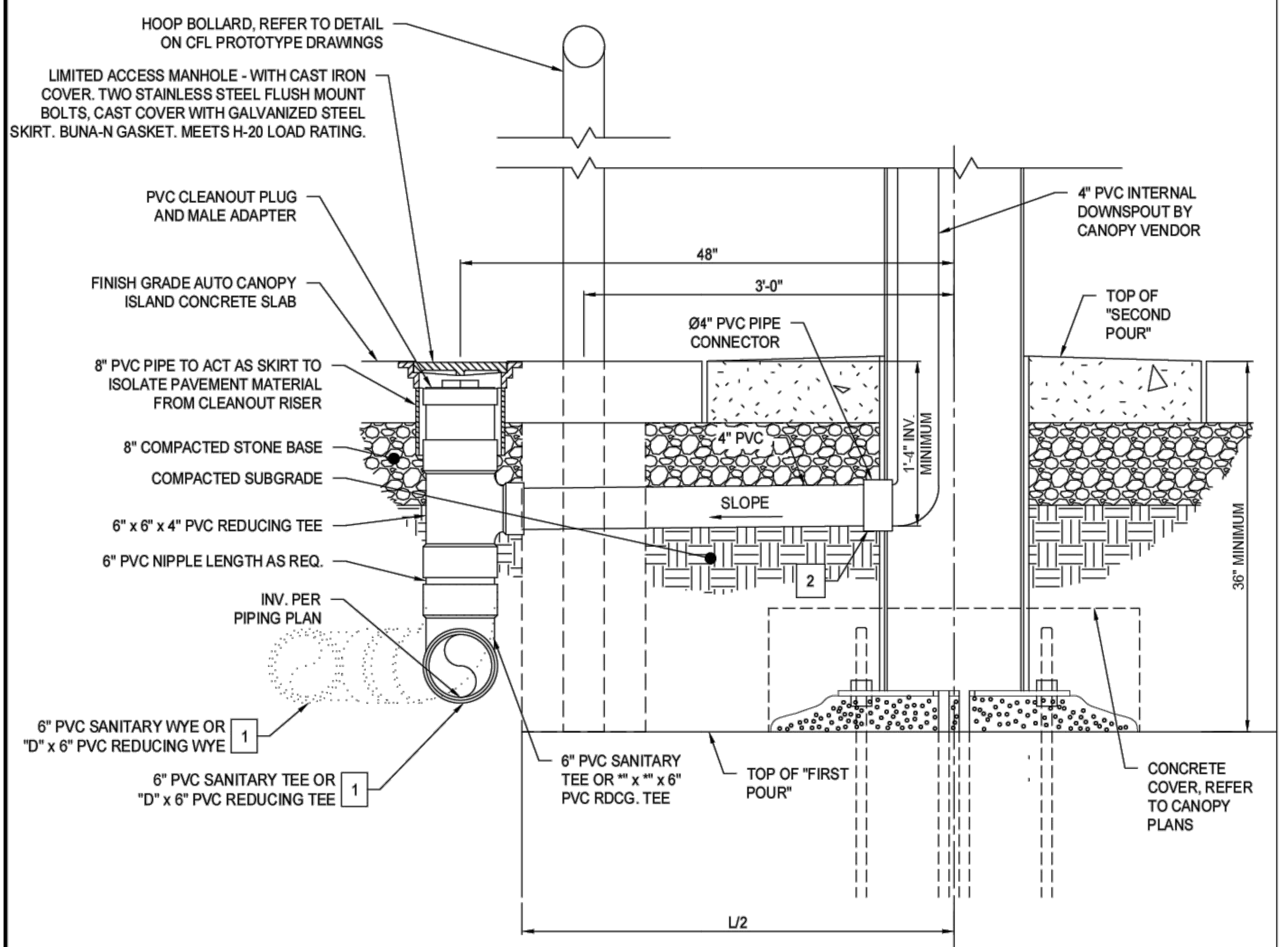
KHA PROJECT
249188006
DATE
8/21/2025
SCALE AS SHOWN
DESIGNED BY BMG
DRAWN BY BMG
CHECKED BY DER

7-11 STANDARD DETAILS

7-11 PALM BAY

CITY OF PALM BAY
FLORIDA

SHEET NUMBER
C7.7

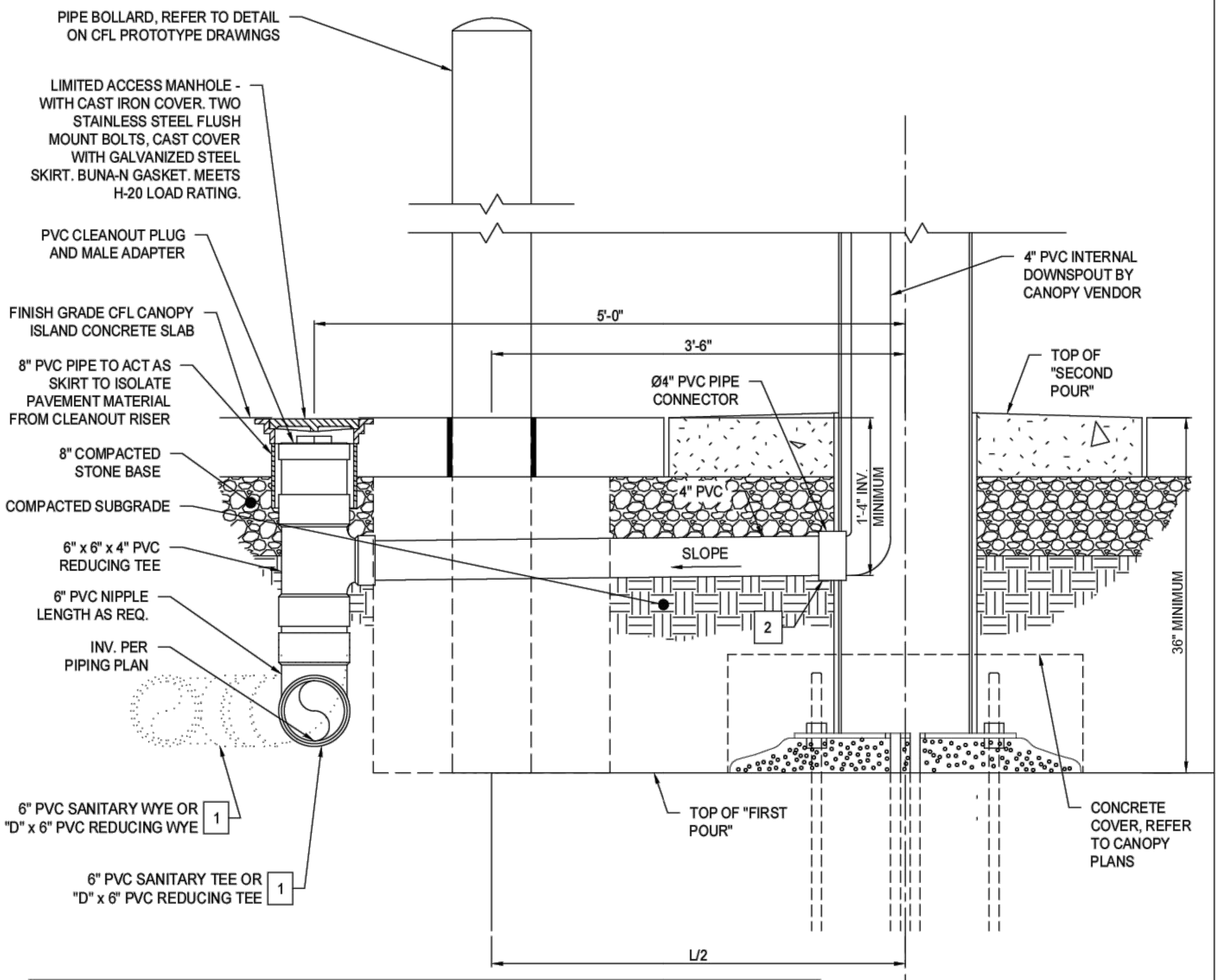

HOOP BOLLARD, REFER TO DETAIL ON CFL PROTOTYPE DRAWINGS
LIMITED ACCESS MANHOLE - WITH CAST IRON COVER. TWO STAINLESS STEEL FLUSH MOUNT BOLTS, CAST COVER WITH GALVANIZED STEEL SKIRT. BUNA-N GASKET. MEETS H-20 LOAD RATING.
PVC CLEANOUT PLUG AND MALE ADAPTER
FINISH GRADE AUTO CANOPY ISLAND CONCRETE SLAB
8" PVC PIPE TO ACT AS SKIRT TO ISOLATE PAVEMENT MATERIAL FROM CLEANOUT RISER
8" COMPACTED STONE BASE
COMPACTED SUBGRADE
6" x 6" x 4" PVC REDUCING TEE
6" PVC NIPPLE LENGTH AS REQ.
INV. PER PIPING PLAN
6" PVC SANITARY WYE OR "D" x 6" PVC REDUCING WYE 1
6" PVC SANITARY TEE OR "D" x 6" PVC REDUCING TEE 1
6" PVC SANITARY TEE OR *" x *" x 6" PVC RDCG. TEE
TOP OF "FIRST POUR"
CONCRETE COVER, REFER TO CANOPY PLANS
4" PVC INTERNAL DOWNSPOUT BY CANOPY VENDOR
48"
3'-0"
Ø4" PVC PIPE CONNECTOR
TOP OF "SECOND POUR"
4" PVC
SLOPE
1'-4" INV. MINIMUM
36" MINIMUM
2
L/2
℄ COL.

GENERAL NOTES
1. CANOPY CLEANOUT LOCATIONS PREFERENCES
   AUTO STARTING GATE - STORE SIDE ROW OF COLUMNS HAVE DRAINS
   AUTO STACKED - BOTH ROWS OF COLUMNS HAVE DRAINS
2. REFER TO FUEL PROTOTYPE DRAWINGS FOR AUTO DISPENSER ISLAND (NOT SHOWN HEREON) DETAILS.
3. REFER TO CIVIL PROTOTYPE DRAWINGS SHEET CPC-1 FOR AUTO CANOPY PAVEMENT DETAIL.

SECTION "A-A" KEY NOTES
1. "D" = SIZE OF ROOF DRAIN COLLECTOR PIPE. REFER TO PIPING PLAN TO VERIFY SIZE OF COLLECTOR PIPE.
2. REFER TO DIVISION OF WORK FOR G.C. CONNECTION TO ROOF DRAIN AT COLUMN.

3 SECTION "A-A" - INTERNAL DOWNSPOUT (AUTO CANOPY COLUMNS)

1"=1'-0"

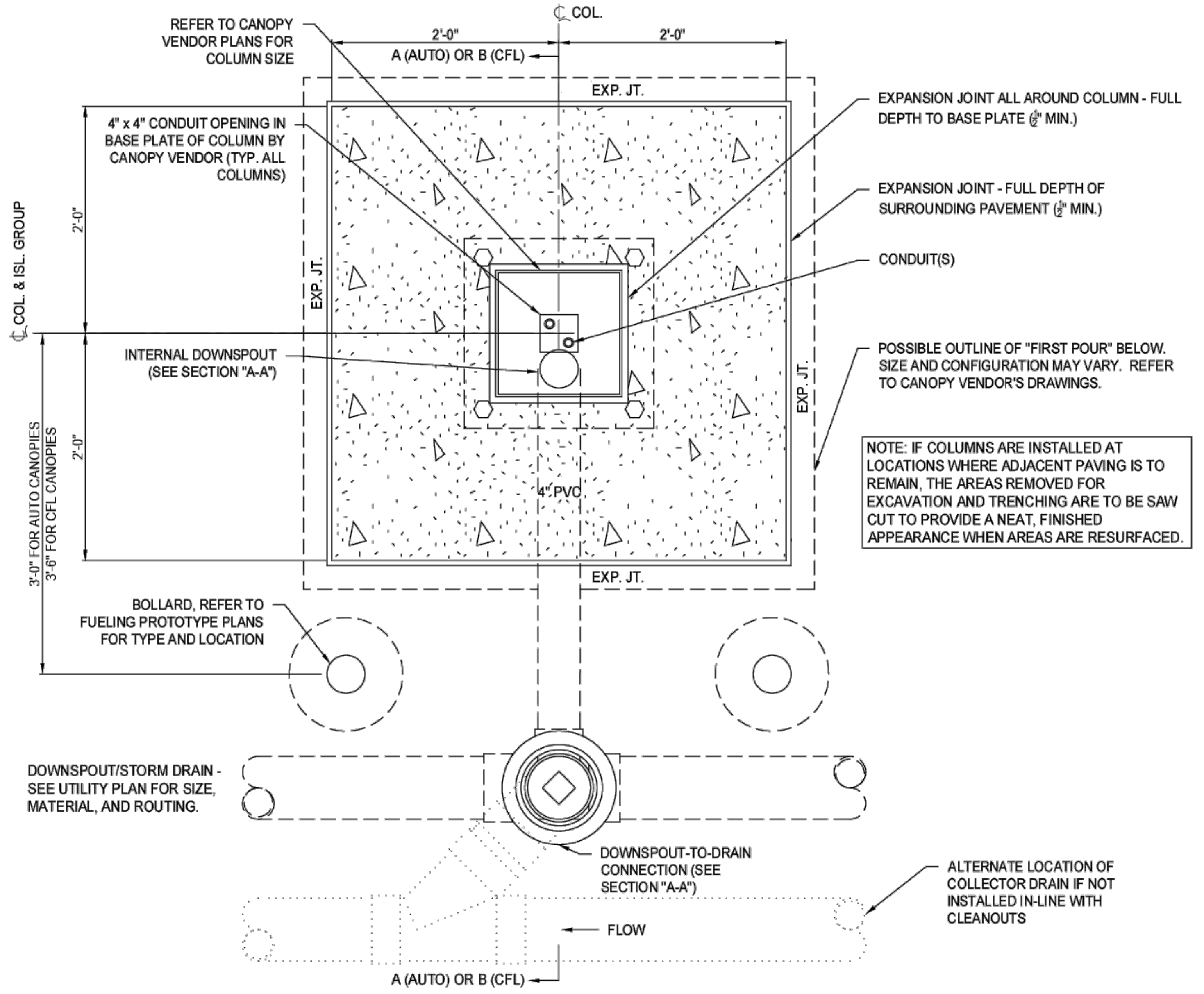

PIPE BOLLARD, REFER TO DETAIL ON CFL PROTOTYPE DRAWINGS
LIMITED ACCESS MANHOLE - WITH CAST IRON COVER. TWO STAINLESS STEEL FLUSH MOUNT BOLTS, CAST COVER WITH GALVANIZED STEEL SKIRT. BUNA-N GASKET. MEETS H-20 LOAD RATING.
PVC CLEANOUT PLUG AND MALE ADAPTER
FINISH GRADE CFL CANOPY ISLAND CONCRETE SLAB
8" PVC PIPE TO ACT AS SKIRT TO ISOLATE PAVEMENT MATERIAL FROM CLEANOUT RISER
8" COMPACTED STONE BASE
COMPACTED SUBGRADE
6" x 6" x 4" PVC REDUCING TEE
6" PVC NIPPLE LENGTH AS REQ.
INV. PER PIPING PLAN
6" PVC SANITARY WYE OR "D" x 6" PVC REDUCING WYE 1
6" PVC SANITARY TEE OR "D" x 6" PVC REDUCING TEE 1
TOP OF "FIRST POUR"
CONCRETE COVER, REFER TO CANOPY PLANS
4" PVC INTERNAL DOWNSPOUT BY CANOPY VENDOR
5'-0"
3'-6"
Ø4" PVC PIPE CONNECTOR
TOP OF "SECOND POUR"
4" PVC
SLOPE
1'-4" INV. MINIMUM
36" MINIMUM
2
L/2
℄ COL.

GENERAL NOTES
1. CANOPY CLEANOUT LOCATION PREFERENCES
   CFL - AWAY FROM PRODUCT PIPING OPPOSITE OF ENTRY SIDE COLUMNS
2. REFER TO CFL PROTOTYPE DRAWINGS FOR CFL DISPENSER ISLAND (NOT SHOWN HEREON) DETAILS.
3. REFER TO CIVIL PROTOTYPE DRAWINGS SHEET CPC-1 FOR CFL CANOPY PAVEMENT DETAIL.

SECTION "B-B" KEY NOTES
1. "D" = SIZE OF ROOF DRAIN COLLECTOR PIPE. REFER TO PIPING PLAN TO VERIFY SIZE OF COLLECTOR PIPE.
2. REFER TO DIVISION OF WORK FOR G.C. CONNECTION TO ROOF DRAIN AT COLUMN.

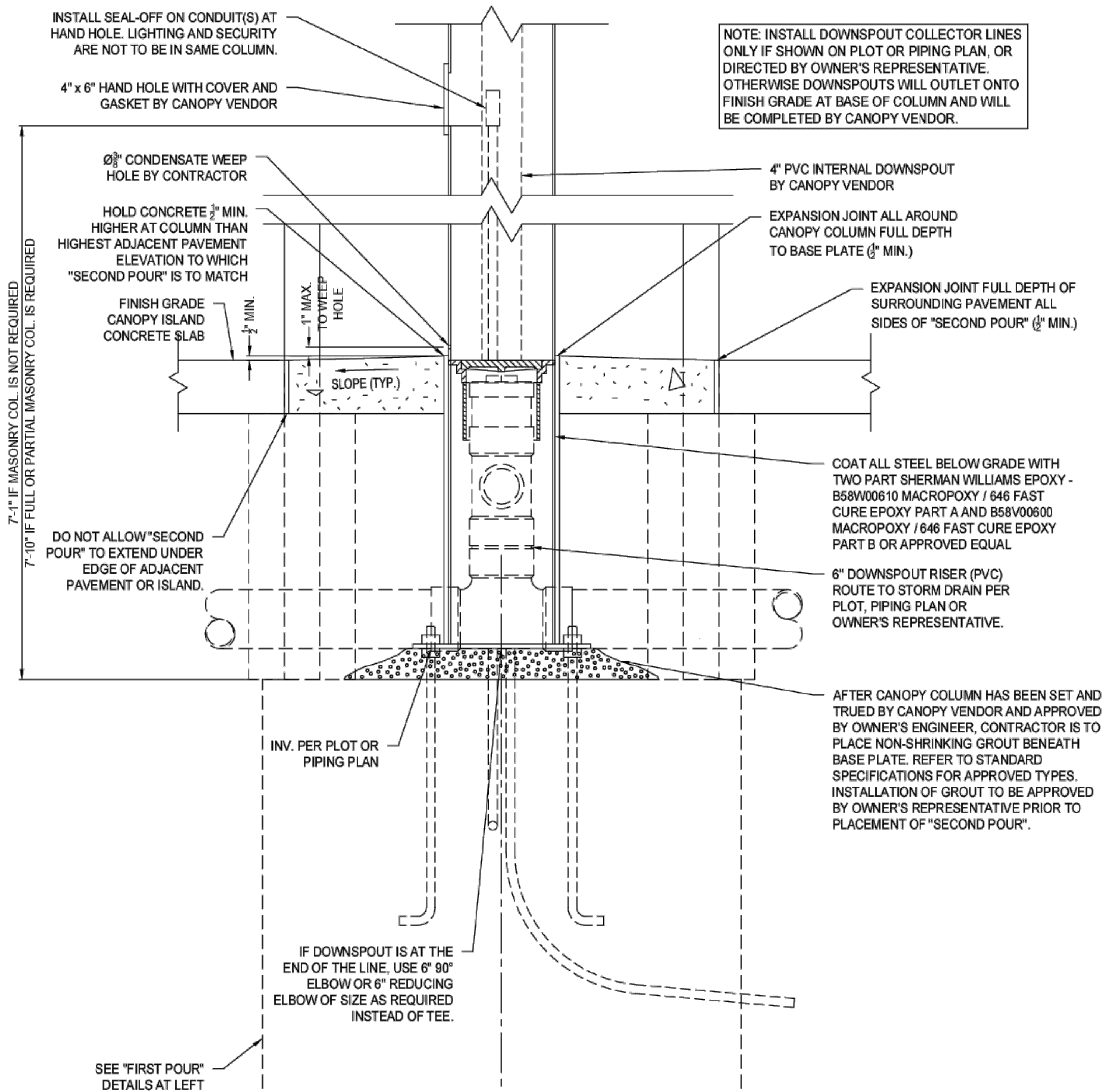
4 SECTION "B-B" - INTERNAL DOWNSPOUT (CFL CANOPY COLUMNS)

1"=1'-0"


REFER TO CANOPY VENDOR PLANS FOR COLUMN SIZE
℄ COL.
2'-0"
2'-0"
A (AUTO) OR B (CFL)
EXP. JT.
4" x 4" CONDUIT OPENING IN BASE PLATE OF COLUMN BY CANOPY VENDOR (TYP. ALL COLUMNS)
INTERNAL DOWNSPOUT (SEE SECTION "A-A")
℄ COL. & ISL. GROUP
3'-0" FOR AUTO CANOPIES 3'-6" FOR CFL CANOPIES
4" PVC
EXPANSION JOINT ALL AROUND COLUMN - FULL DEPTH TO BASE PLATE (½" MIN.)
EXPANSION JOINT - FULL DEPTH OF SURROUNDING PAVEMENT (½" MIN.)
CONDUIT(S)
POSSIBLE OUTLINE OF "FIRST POUR" BELOW. SIZE AND CONFIGURATION MAY VARY. REFER TO CANOPY VENDOR'S DRAWINGS.
BOLLARD, REFER TO FUELING PROTOTYPE PLANS FOR TYPE AND LOCATION
DOWNSPOUT/STORM DRAIN - SEE UTILITY PLAN FOR SIZE, MATERIAL, AND ROUTING.
DOWNSPOUT-TO-DRAIN CONNECTION (SEE SECTION "A-A")
ALTERNATE LOCATION OF COLLECTOR DRAIN IF NOT INSTALLED IN-LINE WITH CLEANOUTS
FLOW

NOTE: IF COLUMNS ARE INSTALLED AT LOCATIONS WHERE ADJACENT PAVING IS TO REMAIN, THE AREAS REMOVED FOR EXCAVATION AND TRENCHING ARE TO BE SAW CUT TO PROVIDE A NEAT, FINISHED APPEARANCE WHEN AREAS ARE RESURFACED.

PLAN VIEW

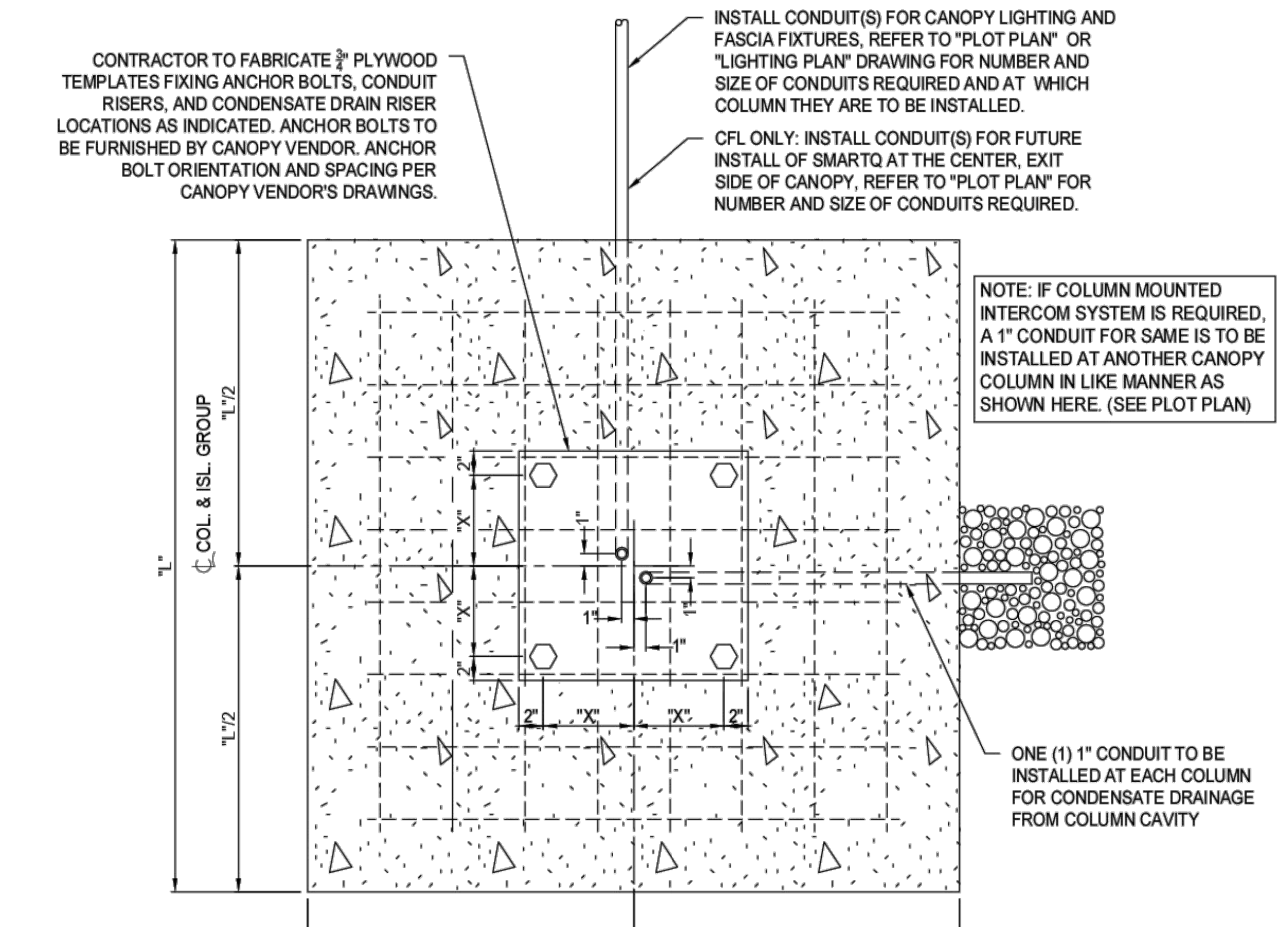

INSTALL SEAL-OFF ON CONDUIT(S) AT HAND HOLE. LIGHTING AND SECURITY ARE NOT TO BE IN SAME COLUMN.
4" x 6" HAND HOLE WITH COVER AND GASKET BY CANOPY VENDOR
Ø⅜" CONDENSATE WEEP HOLE BY CONTRACTOR
HOLD CONCRETE ½" MIN. HIGHER AT COLUMN THAN HIGHEST ADJACENT PAVEMENT ELEVATION TO WHICH "SECOND POUR" IS TO MATCH
FINISH GRADE CANOPY ISLAND CONCRETE SLAB
½" MIN.
1" MAX. TO WEEP HOLE
SLOPE (TYP.)
7'-1" IF MASONRY COL. IS NOT REQUIRED 7'-10" IF FULL OR PARTIAL MASONRY COL. IS REQUIRED
DO NOT ALLOW "SECOND POUR" TO EXTEND UNDER EDGE OF ADJACENT PAVEMENT OR ISLAND.
INV. PER PLOT OR PIPING PLAN
IF DOWNSPOUT IS AT THE END OF THE LINE, USE 6" 90° ELBOW OR 6" REDUCING ELBOW OF SIZE AS REQUIRED INSTEAD OF TEE.
SEE "FIRST POUR" DETAILS AT LEFT
4" PVC INTERNAL DOWNSPOUT BY CANOPY VENDOR
EXPANSION JOINT ALL AROUND CANOPY COLUMN FULL DEPTH TO BASE PLATE (½" MIN.)
EXPANSION JOINT FULL DEPTH OF SURROUNDING PAVEMENT ALL SIDES OF "SECOND POUR" (½" MIN.)
COAT ALL STEEL BELOW GRADE WITH TWO PART SHERMAN WILLIAMS EPOXY - B58W00610 MACROPOXY / 646 FAST CURE EPOXY PART A AND B58V00600 MACROPOXY / 646 FAST CURE EPOXY PART B OR APPROVED EQUAL
6" DOWNSPOUT RISER (PVC) ROUTE TO STORM DRAIN PER PLOT, PIPING PLAN OR OWNER'S REPRESENTATIVE.
AFTER CANOPY COLUMN HAS BEEN SET AND TRUED BY CANOPY VENDOR AND APPROVED BY OWNER'S ENGINEER, CONTRACTOR IS TO PLACE NON-SHRINKING GROUT BENEATH BASE PLATE. REFER TO STANDARD SPECIFICATIONS FOR APPROVED TYPES. INSTALLATION OF GROUT TO BE APPROVED BY OWNER'S REPRESENTATIVE PRIOR TO PLACEMENT OF "SECOND POUR".
℄ COL.

NOTE: INSTALL DOWNSPOUT COLLECTOR LINES ONLY IF SHOWN ON PLOT OR PIPING PLAN, OR DIRECTED BY OWNER'S REPRESENTATIVE. OTHERWISE DOWNSPOUTS WILL OUTLET ONTO FINISH GRADE AT BASE OF COLUMN AND WILL BE COMPLETED BY CANOPY VENDOR.

ELEVATION

2 CANOPY BASE - SECOND POUR PLAN AND ELEVATION

1"=1'-0"

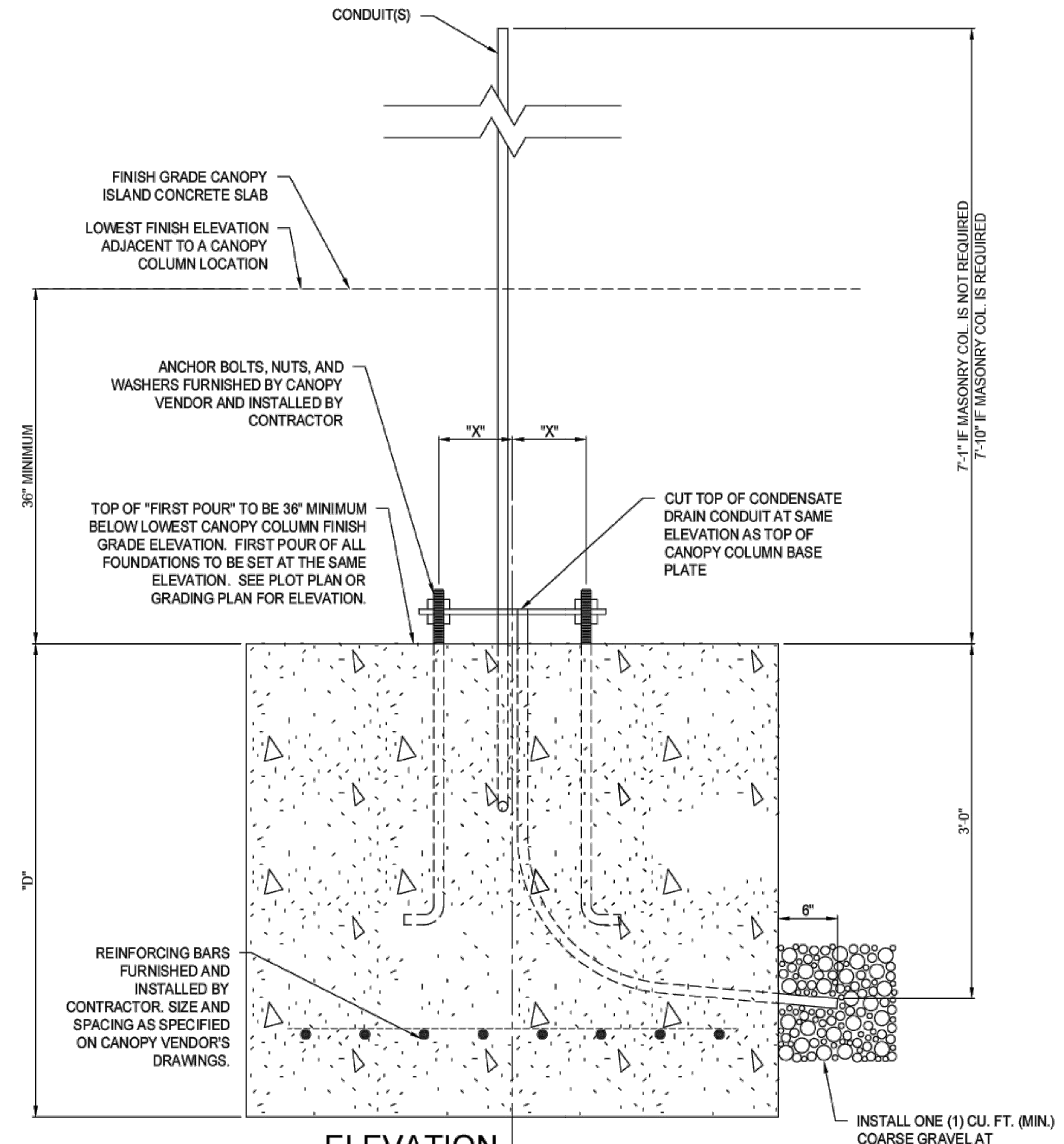

CONTRACTOR TO FABRICATE ¾" PLYWOOD TEMPLATES FIXING ANCHOR BOLTS, CONDUIT RISERS, AND CONDENSATE DRAIN RISER LOCATIONS AS INDICATED. ANCHOR BOLTS TO BE FURNISHED BY CANOPY VENDOR. ANCHOR BOLT ORIENTATION AND SPACING PER CANOPY VENDOR'S DRAWINGS.
INSTALL CONDUIT(S) FOR CANOPY LIGHTING AND FASCIA FIXTURES, REFER TO "PLOT PLAN" OR "LIGHTING PLAN" DRAWING FOR NUMBER AND SIZE OF CONDUITS REQUIRED AND AT WHICH COLUMN THEY ARE TO BE INSTALLED.
CFL ONLY: INSTALL CONDUIT(S) FOR FUTURE INSTALL OF SMARTQ AT THE CENTER, EXIT SIDE OF CANOPY, REFER TO "PLOT PLAN" FOR NUMBER AND SIZE OF CONDUITS REQUIRED.
"L"
℄ COL. & ISL. GROUP
"L"/2
"L"/2
2"
"X"
"X"
2"
1"
1"
1"
1"
"X"
"X"
ONE (1) 1" CONDUIT TO BE INSTALLED AT EACH COLUMN FOR CONDENSATE DRAINAGE FROM COLUMN CAVITY
"W"/2
"W"/2
℄ COL.
"W"

NOTE: IF COLUMN MOUNTED INTERCOM SYSTEM IS REQUIRED, A 1" CONDUIT FOR SAME IS TO BE INSTALLED AT ANOTHER CANOPY COLUMN IN LIKE MANNER AS SHOWN HERE. (SEE PLOT PLAN)

DIMENSIONS "D", "L", "W", & "X" TO BE SPECIFIED ON CANOPY VENDOR'S DRAWINGS. LOCATE FOUNDATIONS AS SPECIFIED ON PLOT PLAN AND CANOPY VENDOR'S DRAWING.

NOTE: COLUMN FOUNDATION MAY BE SQUARE (4 BOLTS) OR RECTANGULAR (6 BOLTS). REFER TO VENDOR'S DRAWINGS TO VERIFY ORIENTATION OF RECTANGULAR BASES RELATIVE TO ISLAND GROUP CENTERLINE.

PLAN VIEW


CONDUIT(S)
FINISH GRADE CANOPY ISLAND CONCRETE SLAB
LOWEST FINISH ELEVATION ADJACENT TO A CANOPY COLUMN LOCATION
ANCHOR BOLTS, NUTS, AND WASHERS FURNISHED BY CANOPY VENDOR AND INSTALLED BY CONTRACTOR
TOP OF "FIRST POUR" TO BE 36" MINIMUM BELOW LOWEST CANOPY COLUMN FINISH GRADE ELEVATION. FIRST POUR OF ALL FOUNDATIONS TO BE SET AT THE SAME ELEVATION. SEE PLOT PLAN OR GRADING PLAN FOR ELEVATION.
36" MINIMUM
"X"
"X"
CUT TOP OF CONDENSATE DRAIN CONDUIT AT SAME ELEVATION AS TOP OF CANOPY COLUMN BASE PLATE
7'-1" IF MASONRY COL. IS NOT REQUIRED 7'-10" IF MASONRY COL. IS REQUIRED
"D"
3'-0"
6"
REINFORCING BARS FURNISHED AND INSTALLED BY CONTRACTOR. SIZE AND SPACING AS SPECIFIED ON CANOPY VENDOR'S DRAWINGS.
INSTALL ONE (1) CU. FT. (MIN.) COARSE GRAVEL AT CONDENSATE DRAIN OUTLET
℄ COL.

ELEVATION

1 CANOPY BASE - FIRST POUR PLAN AND ELEVATION

1"=1'-0"

Rev. #	Date	Description

CIVIL STANDARD PROTO

7-ELEVEN, INC.
3200 HACKBERRY ROAD, IRVING, TEXAS 75063

7-ELEVEN #XXXXX
STREET ADDRESS
ANYTOWN, USA 00000

STANDARD CANOPY BASE DETAILS

Job#: SEI-XXXXX
Scale: AS NOTED
Date: XX/XX/XXXX
Drawn By: x.x.x.
Checked By: x.x.x.

SHEET:
SCB-1

No.	REVISIONS	DATE	BY

Kimley»Horn

200 S. ORANGE AVENUE, SUITE 600, ORLANDO, FL
PHONE: (407) 898-1511
WWW.KIMLEY-HORN.COM REGISTRY No. 35106

LICENSED PROFESSIONAL
DEREK E. RAMSBURG, P.E.
FLORIDA LICENSE NUMBER 88905
DATE: 8/21/2025

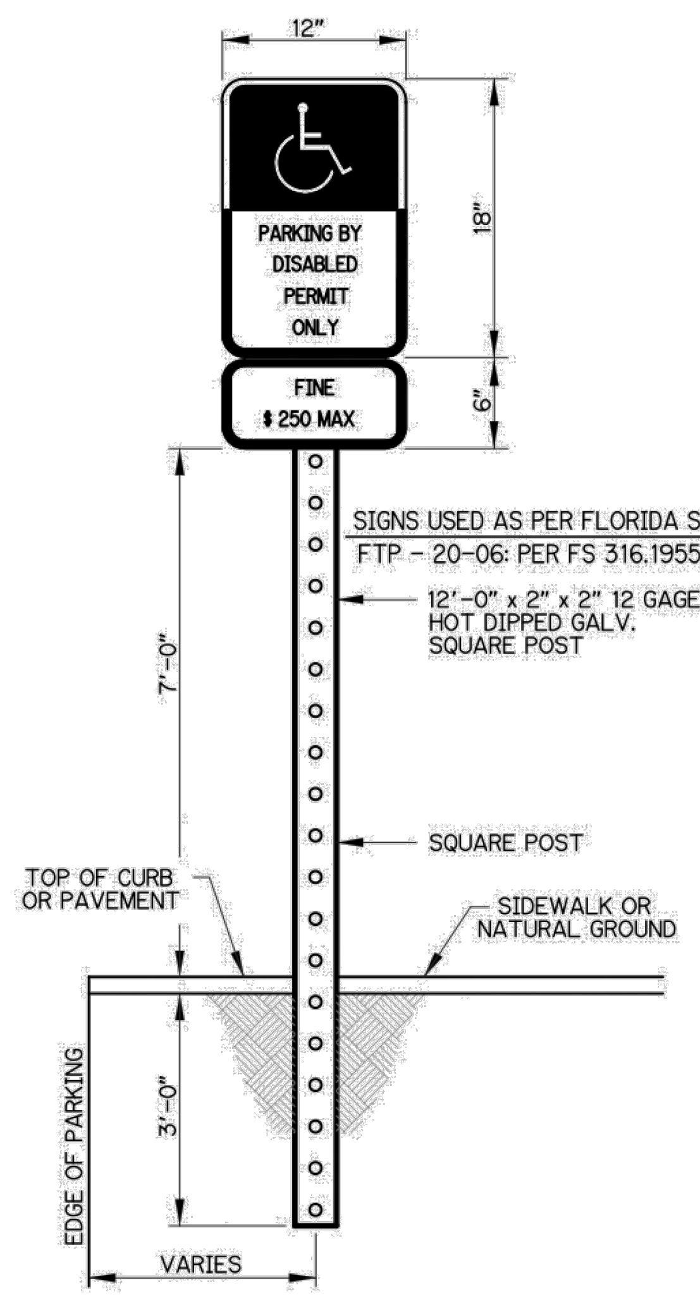
KHA PROJECT 249188006
DATE 8/21/2025
SCALE AS SHOWN
DESIGNED BY BMG
DRAWN BY BMG
CHECKED BY DER

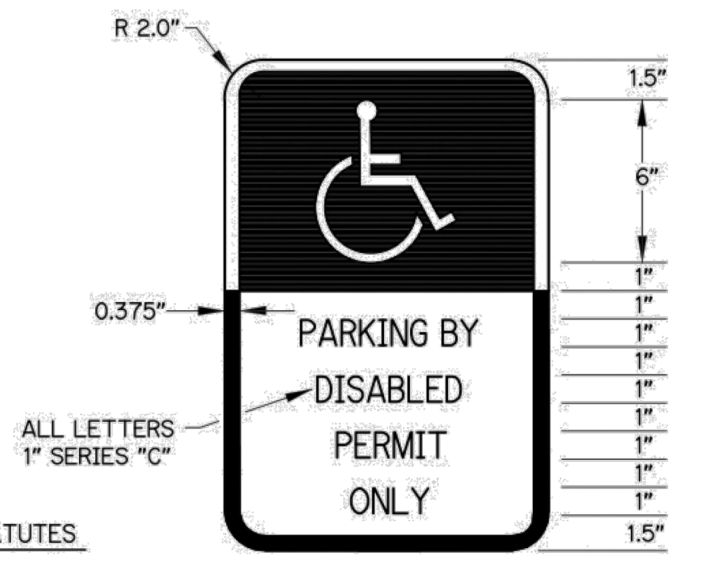
7-11 STANDARD DETAILS

7-11 PALM BAY

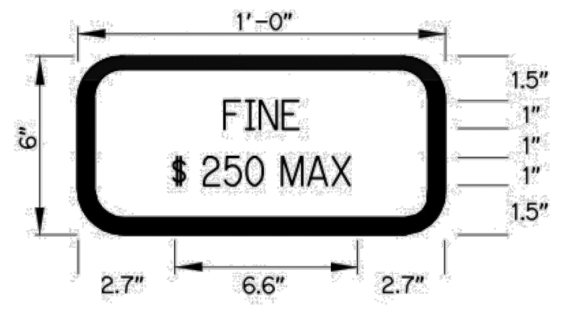
CITY OF PALM BAY FLORIDA

SHEET NUMBER
C7.8


12"
PARKING BY
DISABLED
PERMIT
ONLY
FINE
$ 250 MAX
18"
6"
7'-0"
3'-0"
SIGNS USED AS PER FLORIDA STATUTES
FTP - 20-06: PER FS 316.1955
12'-0" x 2" x 2" 12 GAGE
HOT DIPPED GALV.
SQUARE POST
SQUARE POST
TOP OF CURB
OR PAVEMENT
SIDEWALK OR
NATURAL GROUND
EDGE OF PARKING
VARIES


R 2.0"
0.375"
ALL LETTERS
1" SERIES "C"
PARKING BY
DISABLED
PERMIT
ONLY
1.5"
6"
1"
1"
1"
1"
1"
1"
1"
1"
1"
1.5"

FTP - 20-06


1'-0"
6"
FINE
$ 250 MAX
1.5"
1"
1"
1"
1.5"
2.7"
6.6"
2.7"

FTP - 22-06

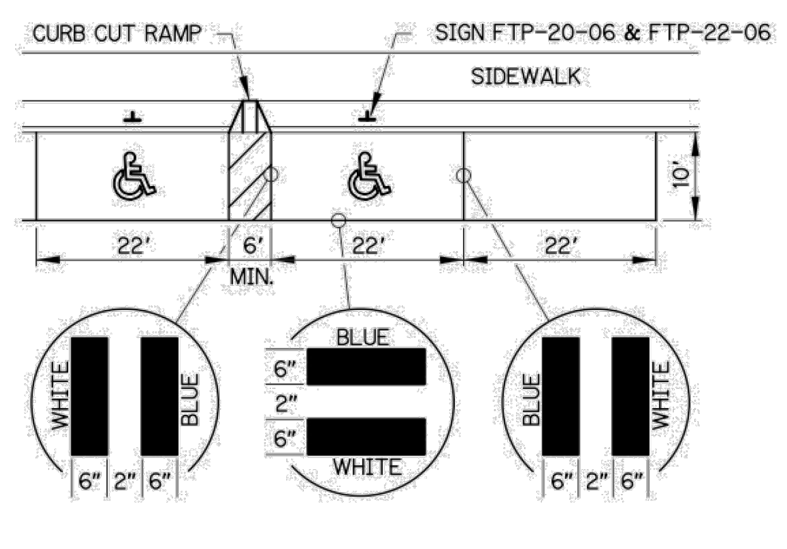
1' x 6"
1" RADII 3/8" BORDER
1" SERIES C LETTERS
WHITE BACKGROUND
BLACK LEGEND & BORDER

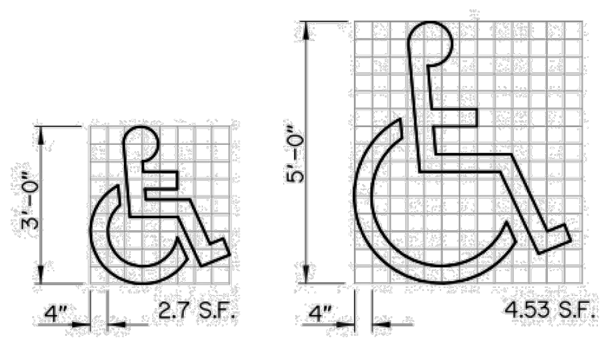
GENERAL NOTES:

1. TOP PORTION OF FTP-20-06 SHALL HAVE A REFLECTIVE BLUE BACKGROUND WITH WHITE REFLECTIVE SYMBOL AND BORDER.
2. BOTTOM PORTION OF FTP-20-06 SHALL HAVE A REFLECTIVE WHITE BACKGROUND WITH BLACK OPAQUE LEGEND AND BORDER.
3. THE SIGN SHALL BE PLACED A MINIMUM OF 3' FROM THE WHEEL STOP OR THE BACK OF CURB (WHERE APPLICABLE).

HANDICAPPED PARKING SIGN INSTALLATION DETAIL

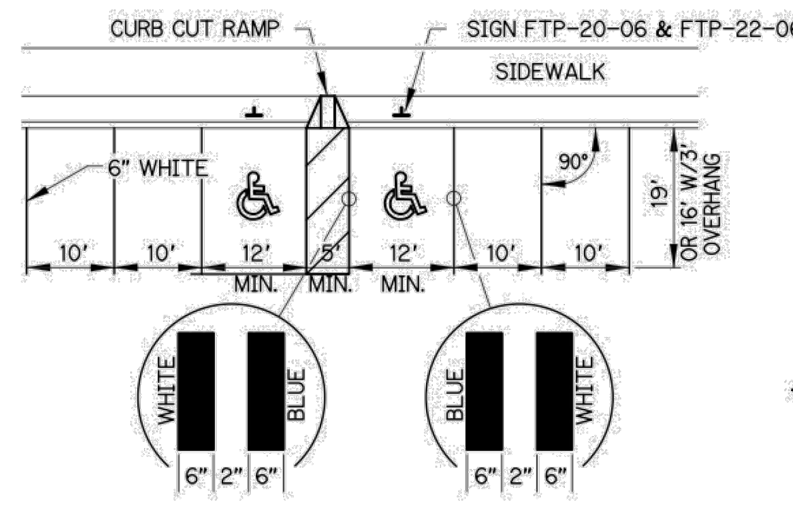
The City of Palm Bay Florida
CITY OF PALM BAY
PUBLIC WORKS DEPARTMENT
STANDARD SIGN DETAIL
SS - 02
DATE: APRIL 2019
APPROVED: ______

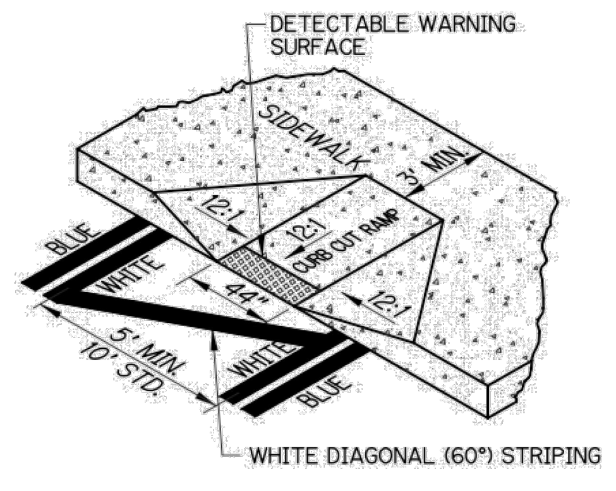

CURB CUT RAMP
SIGN FTP-20-06 & FTP-22-06
SIDEWALK
10'
22'
6'
MIN.
22'
22'
WHITE
BLUE
6"
2"
6"
BLUE
6"
2"
6"
WHITE
BLUE
WHITE
6"
2"
6"


3'-0"
4"
2.7 S.F.
5'-0"
4"
4.53 S.F.

NOTE:
USE OF PAVEMENT SYMBOL IN HANDICAPPED PARKING SPACES IS OPTIONAL. WHEN USED THE SYMBOL SHALL BE 3 OR 5 FT HIGH AND WHITE IN COLOR.

HANDICAPPED
PAVEMENT SYMBOL


CURB CUT RAMP
SIGN FTP-20-06 & FTP-22-06
SIDEWALK
6" WHITE
90°
19'
OR 16' W/3' OVERHANG
10'
10'
12'
MIN.
5'
MIN.
12'
MIN.
10'
10'
WHITE
BLUE
6"
2"
6"
BLUE
WHITE
6"
2"
6"


DETECTABLE WARNING SURFACE
SIDEWALK
3' MIN.
12:1
12:1
CURB CUT RAMP
12:1
44"
BLUE
WHITE
5' MIN.
10' STD.
WHITE
BLUE
WHITE DIAGONAL (60°) STRIPING

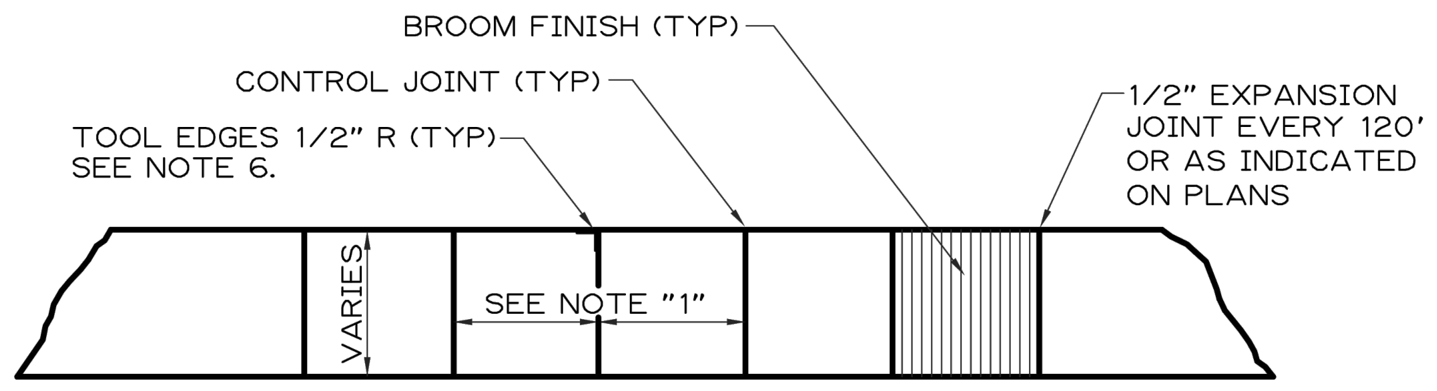
CURB CUT RAMP (TYP.)

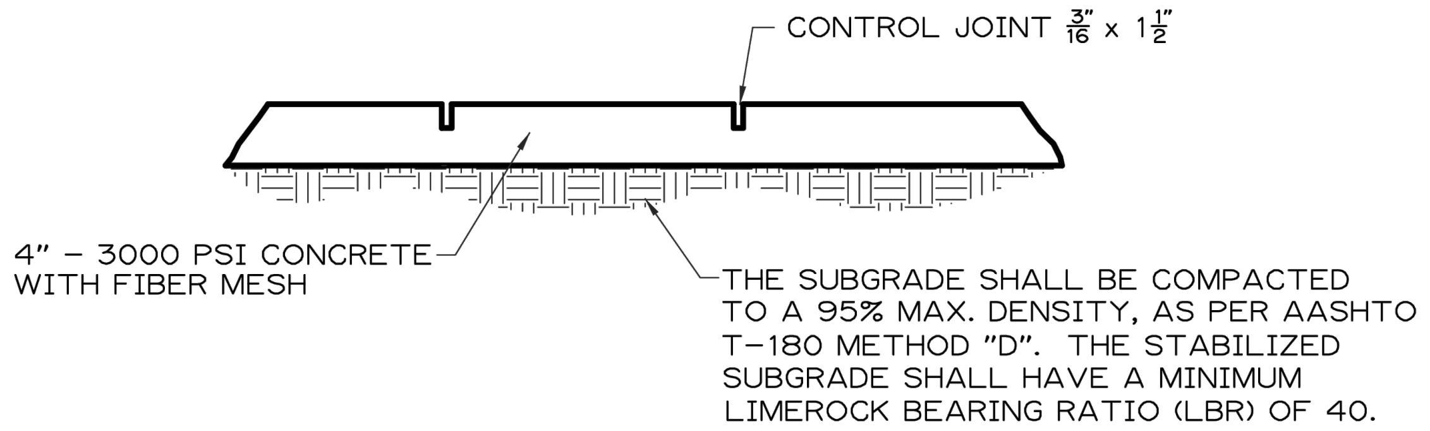
GENERAL NOTES:

1. CRITERIA FOR PAVEMENT MARKINGS ONLY, NOT CURB CUT RAMP LOCATIONS. FOR RAMP CRITERIA SEE FDOT INDEX NO. 304.
2. BLUE PAVEMENT MARKINGS SHALL BE TINTED TO MATCH SHADE 15180 OF FEDERAL STANDARD 595a.
3. ALL CURBS OR CURBSTOPS SHOWN ARE OPTIONAL.
4. FOR ANGLED PARKING, REFER TO FDOT ROADWAY AND TRAFFIC DESIGN STANDARDS INDEX NO. 17346.

HANDICAPPED RAMP AND PAVEMENT MARKING DETAIL

The City of Palm Bay Florida
CITY OF PALM BAY
PUBLIC WORKS DEPARTMENT
STANDARD SIGN DETAIL
SS - 03
DATE: APRIL 2019
APPROVED: ______


BROOM FINISH (TYP)
CONTROL JOINT (TYP)
TOOL EDGES 1/2" R (TYP)
SEE NOTE 6.
1/2" EXPANSION
JOINT EVERY 120'
OR AS INDICATED
ON PLANS
VARIES
SEE NOTE "1"


CONTROL JOINT 3/16" x 1 1/2"
4" - 3000 PSI CONCRETE
WITH FIBER MESH
THE SUBGRADE SHALL BE COMPACTED
TO A 95% MAX. DENSITY, AS PER AASHTO
T-180 METHOD "D". THE STABILIZED
SUBGRADE SHALL HAVE A MINIMUM
LIMEROCK BEARING RATIO (LBR) OF 40.

GENERAL NOTES:

1.

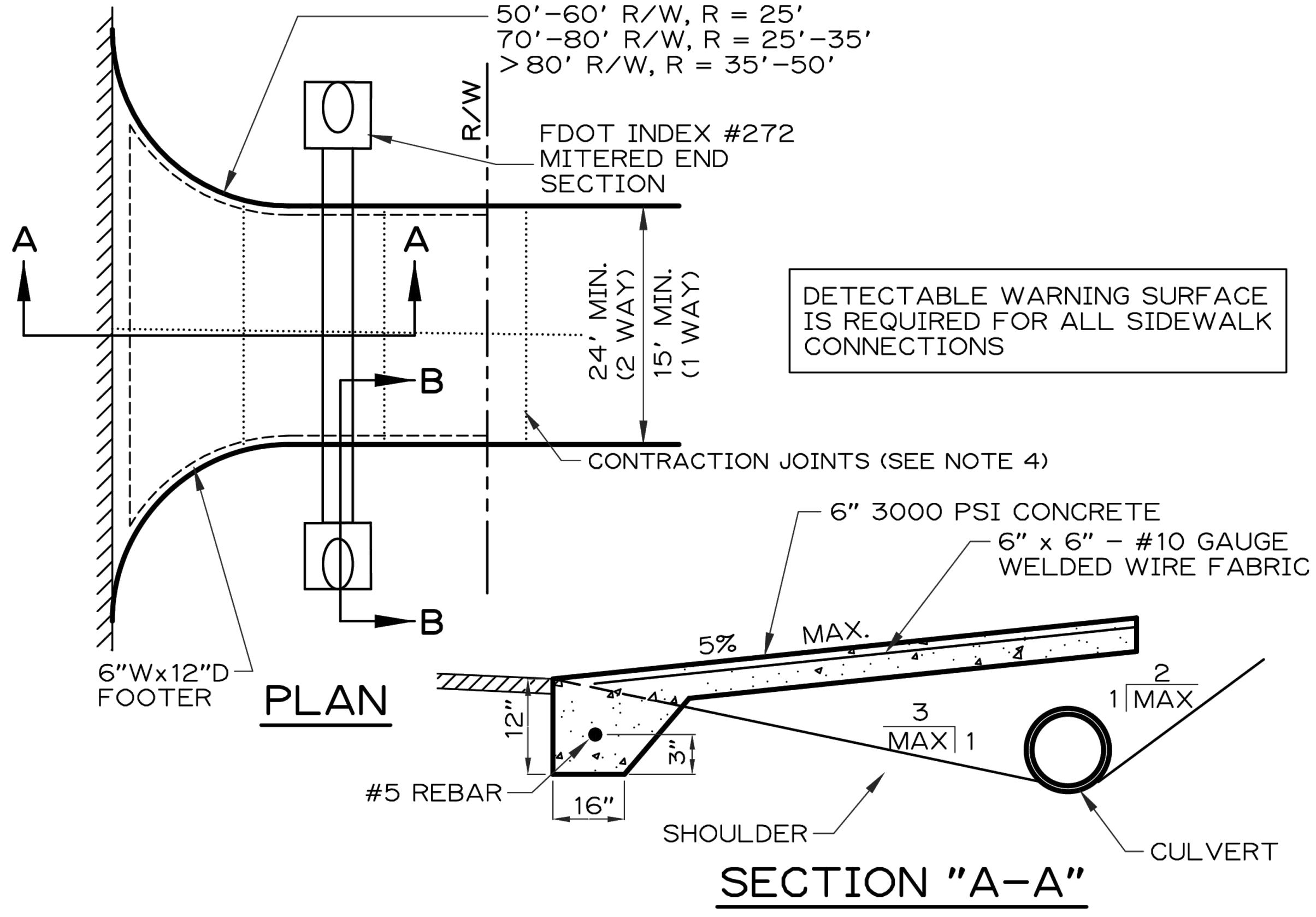
	SIDEWALK		BIKEWAY	
WIDTH	4'	5'	6'	8'
CONTROL JOINT	5'		8'	

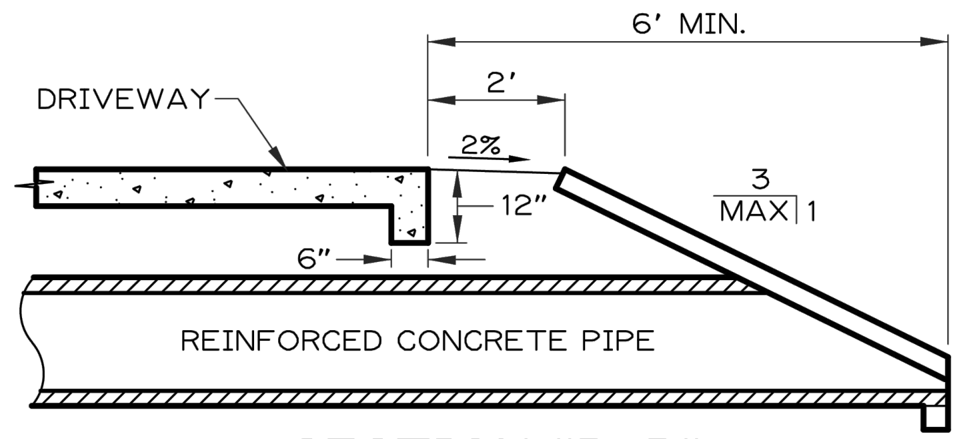
2. ALL SAWCUTS TO BE MADE AT A CONTROL JOINT.
3. THE MINIMUM BIKEWAY/SIDEWALK REPAIR SHALL BE ONE FULL SECTION BETWEEN CONTROL JOINTS.
4. REMOVE ACCUMULATED DEBRIS FROM THE SITE AND DISPOSE OF IN A LAWFUL MANNER.
5. STABILIZE THE DISTURBED AREAS ABUTTING THE BIKEWAY/SIDEWALK WITH A MINIMUM TWO (2) FOOT WIDE STRIP OF MATCHING SOD.
6. TOOL EDGES SHALL BE USED WHERE EXISTING SIDEWALKS HAVE BEEN CONSTRUCTED WITH SIMILAR FINISHES.
7. EXPANSION JOINT MATERIAL REQUIRED AROUND ALL MANHOLES AND STRUCTURES.

CONCRETE BIKEWAY/SIDEWALK TOOLING DETAIL

(N.T.S.)

The City of Palm Bay Florida
CITY OF PALM BAY
PUBLIC WORKS DEPARTMENT
STANDARD SIDEWALK DETAIL
SW - 04
DATE: APRIL 2019
APPROVED: ______


50'-60' R/W, R = 25'
70'-80' R/W, R = 25'-35'
>80' R/W, R = 35'-50'
R/W
FDOT INDEX #272
MITERED END
SECTION
A
A
24' MIN.
(2 WAY)
15' MIN.
(1 WAY)
DETECTABLE WARNING SURFACE
IS REQUIRED FOR ALL SIDEWALK
CONNECTIONS
B
CONTRACTION JOINTS (SEE NOTE 4)
B
6"Wx12"D
FOOTER
PLAN
6" 3000 PSI CONCRETE
6" x 6" - #10 GAUGE
WELDED WIRE FABRIC
5%
MAX.
2
1 MAX
3
MAX 1
12"
3"
#5 REBAR
16"
SHOULDER
CULVERT
SECTION "A-A"


6' MIN.
2'
2%
DRIVEWAY
12"
3
MAX 1
6"
REINFORCED CONCRETE PIPE

SECTION "B-B"

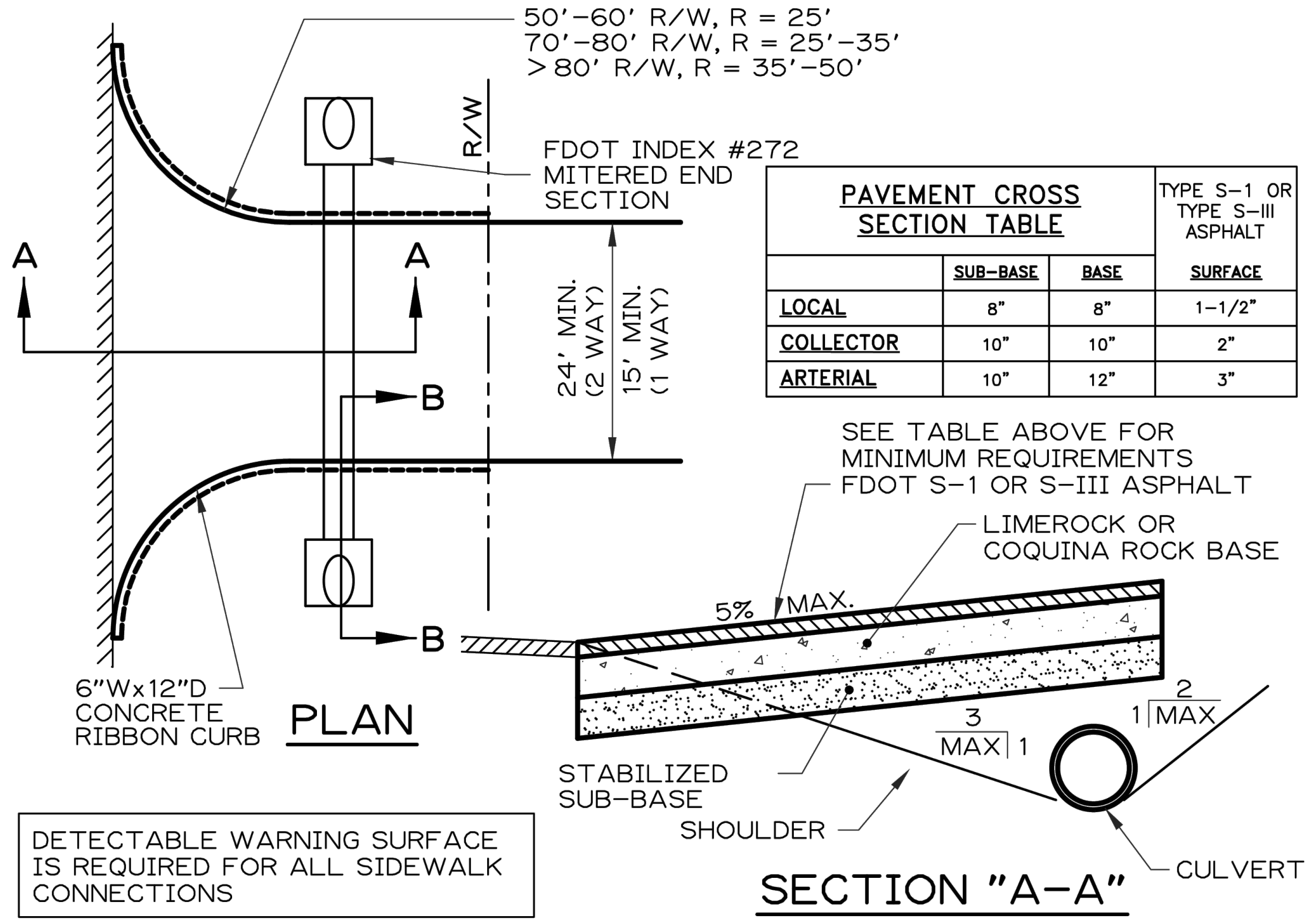
NOTE:

1. REPLACEMENT OF EXISTING DRIVEWAY APRONS SHALL BE TO DIMENSIONS SHOWN OR TO MATCH THAT OF EXISTING.
2. IN CITY RIGHT- OF- WAY, A DRIVEWAY PERMIT SHALL BE REQUIRED. CULVERT SIZE, LOCATION, AND INVERT INFORMATION WILL BE PROVIDED BY THE RIGHT- OF- WAY SERVICES DIVISION. STATE OR COUNTY PERMITS SHALL BE REQUIRED IF WITHIN THOSE RIGHT- OF- WAY.
3. EXISTING SIDEWALKS AND BIKE PATHS SHALL NOT BE CHANGED IN ANY MANNER EITHER IN LOCATION OR ELEVATION, UNLESS OTHERWISE SPECIFIED.
4. DRIVEWAY CONTRACTION JOINTS (CONTROL JOINTS) PER ACI SECTION 5.5.2 REQUIRED.

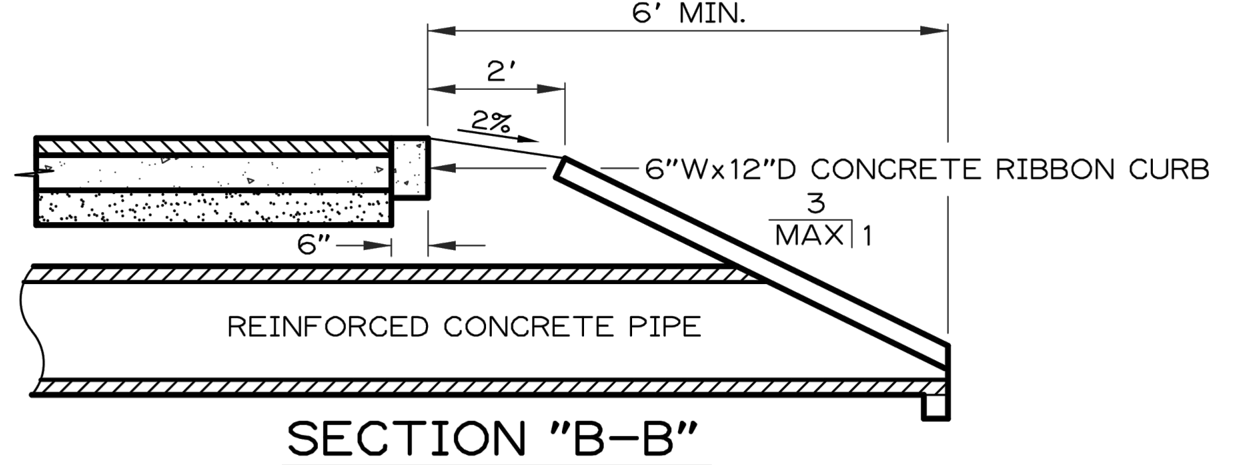
CONCRETE COMMERCIAL DRIVEWAY DETAIL

(N.T.S.)

The City of Palm Bay Florida
CITY OF PALM BAY
PUBLIC WORKS DEPARTMENT
STANDARD DRIVEWAY DETAIL
SDW - 04
DATE: APRIL 2019
APPROVED: ______


50'-60' R/W, R = 25'
70'-80' R/W, R = 25'-35'
>80' R/W, R = 35'-50'
R/W
FDOT INDEX #272
MITERED END
SECTION
A
A
24' MIN.
(2 WAY)
15' MIN.
(1 WAY)
B
B
6"Wx12"D
CONCRETE
RIBBON CURB
PLAN
SEE TABLE ABOVE FOR
MINIMUM REQUIREMENTS
FDOT S-1 OR S-III ASPHALT
LIMEROCK OR
COQUINA ROCK BASE
5%
MAX.
2
1 MAX
3
MAX 1
STABILIZED
SUB-BASE
SHOULDER
CULVERT
DETECTABLE WARNING SURFACE
IS REQUIRED FOR ALL SIDEWALK
CONNECTIONS
SECTION "A-A"

PAVEMENT CROSS SECTION TABLE			TYPE S-1 OR TYPE S-III ASPHALT
	SUB-BASE	BASE	SURFACE
LOCAL	8"	8"	1-1/2"
COLLECTOR	10"	10"	2"
ARTERIAL	10"	12"	3"


6' MIN.
2'
2%
6"Wx12"D CONCRETE RIBBON CURB
3
MAX 1
6"
REINFORCED CONCRETE PIPE

SECTION "B-B"

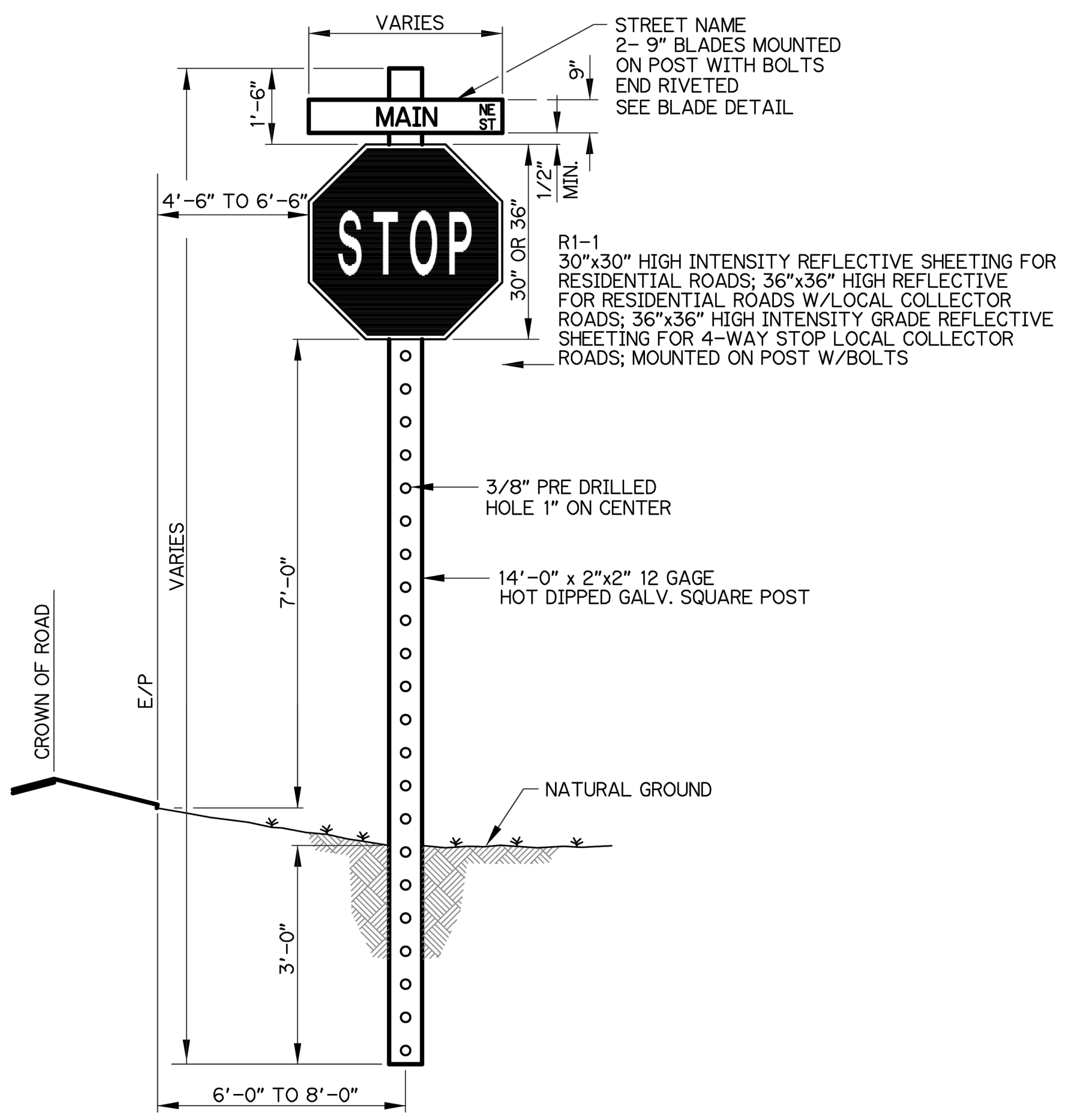
NOTE:

1. REPLACEMENT OF EXISTING DRIVEWAY APRONS SHALL BE TO DIMENSIONS SHOWN OR TO MATCH THAT OF EXISTING.
2. IN CITY RIGHT- OF- WAY, A DRIVEWAY PERMIT SHALL BE REQUIRED. CULVERT SIZE, LOCATION, AND INVERT INFORMATION WILL BE PROVIDED BY THE RIGHT- OF- WAY SERVICES DIVISION. STATE OR COUNTY PERMITS SHALL BE REQUIRED IF WITHIN THOSE RIGHT- OF- WAY.
3. EXISTING SIDEWALKS AND BIKE PATHS SHALL NOT BE CHANGED IN ANY MANNER EITHER IN LOCATION OR ELEVATION, UNLESS OTHERWISE SPECIFIED.

ASPHALT COMMERCIAL DRIVEWAY DETAIL

(N.T.S.)

The City of Palm Bay Florida
CITY OF PALM BAY
PUBLIC WORKS DEPARTMENT
STANDARD DRIVEWAY DETAIL
SDW - 03
DATE: APRIL 2019
APPROVED: ______


VARIES
STREET NAME
2- 9" BLADES MOUNTED
ON POST WITH BOLTS
END RIVETED
SEE BLADE DETAIL
1'-6"
9"
MAIN
NE ST
1/2" MIN.
4'-6" TO 6'-6"
STOP
30" OR 36"
R1-1
30"x30" HIGH INTENSITY REFLECTIVE SHEETING FOR RESIDENTIAL ROADS; 36"x36" HIGH REFLECTIVE FOR RESIDENTIAL ROADS W/LOCAL COLLECTOR ROADS; 36"x36" HIGH INTENSITY GRADE REFLECTIVE SHEETING FOR 4-WAY STOP LOCAL COLLECTOR ROADS; MOUNTED ON POST W/BOLTS
3/8" PRE DRILLED
HOLE 1" ON CENTER
14'-0" x 2"x2" 12 GAGE
HOT DIPPED GALV. SQUARE POST
VARIES
7'-0"
CROWN OF ROAD
E/P
NATURAL GROUND
3'-0"
6'-0" TO 8'-0"

STREET SIGN INSTALLATION DETAIL

The City of Palm Bay Florida
CITY OF PALM BAY
PUBLIC WORKS DEPARTMENT
STANDARD SIGN DETAIL
SS - 01
DATE: APRIL 2019
APPROVED: ______

No.	REVISIONS	DATE	BY

Kimley»Horn

200 S. ORANGE AVENUE, SUITE 600, ORLANDO, FL
PHONE: (407) 898-1511
WWW.KIMLEY-HORN.COM REGISTRY No. 35106

LICENSED PROFESSIONAL
DEREK E. RAMSBURG, P.E.
FLORIDA LICENSE NUMBER
88965
DATE: 8/21/2025

KHA PROJECT
249188006
DATE
8/21/2025
SCALE AS SHOWN
DESIGNED BY BMG
DRAWN BY BMG
CHECKED BY DER

CITY OF PALM BAY
STANDARD DETAILS

7-11 PALM BAY

CITY OF PALM BAY
FLORIDA

SHEET NUMBER
C8.0

Plotted By: Guidry, Blake Sheet Set: 7-11 PALM BAY Layout: C8.0 August 21, 2025 12:54:14pm K:\ORL_Civil\249188006-7-11 Palm Bay\CADD\CONST\PlanSheets\C8.0 CITY OF PALM BAY STANDARD DETAILS.dwg
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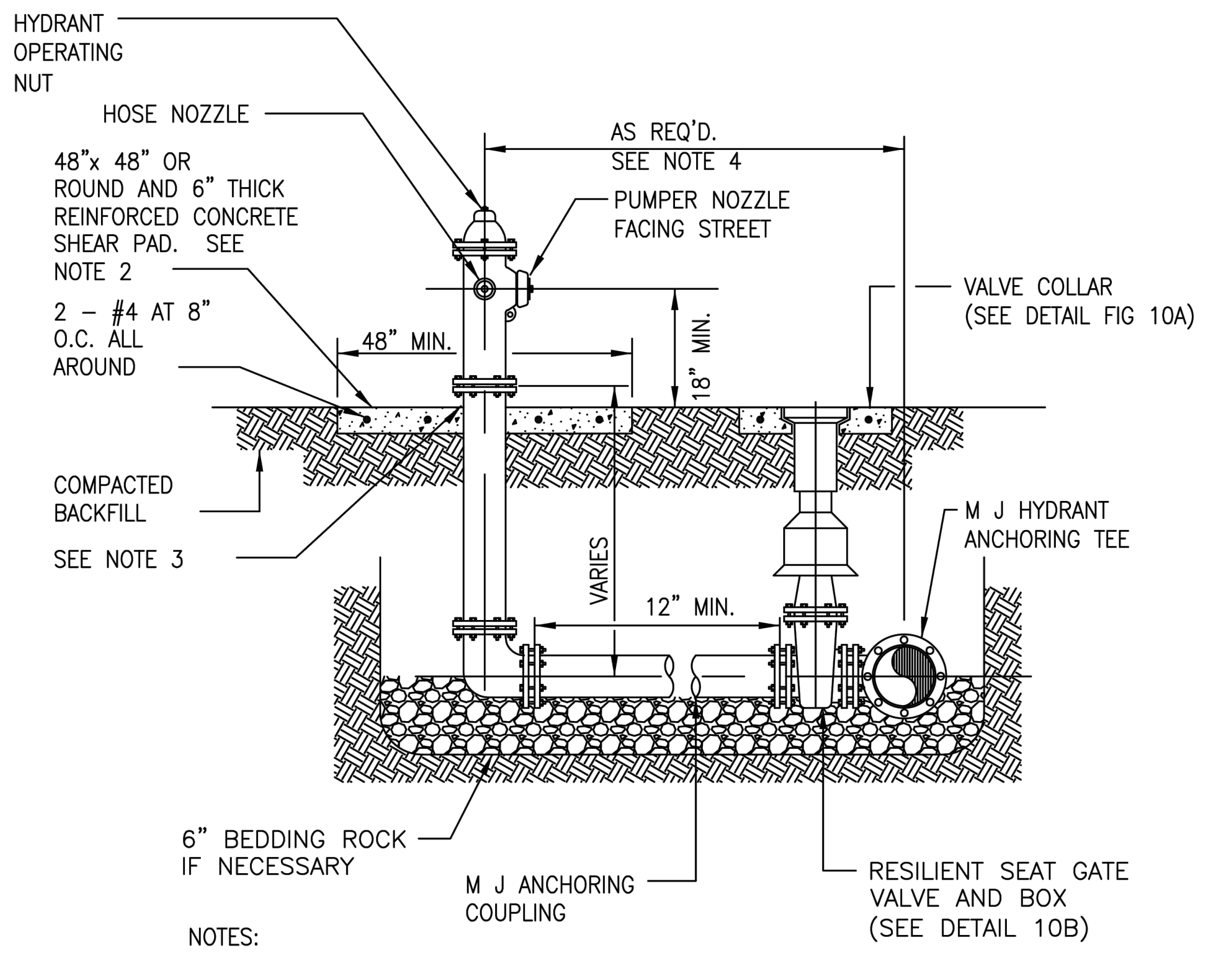

HYDRANT OPERATING NUT
HOSE NOZZLE
48"x 48" OR ROUND AND 6" THICK REINFORCED CONCRETE SHEAR PAD. SEE NOTE 2
2 – #4 AT 8" O.C. ALL AROUND
48" MIN.
AS REQ'D. SEE NOTE 4
PUMPER NOZZLE FACING STREET
18" MIN.
VALVE COLLAR (SEE DETAIL FIG 10A)
COMPACTED BACKFILL
SEE NOTE 3
VARIES
12" MIN.
M J HYDRANT ANCHORING TEE
6" BEDDING ROCK IF NECESSARY
M J ANCHORING COUPLING
RESILIENT SEAT GATE VALVE AND BOX (SEE DETAIL 10B)

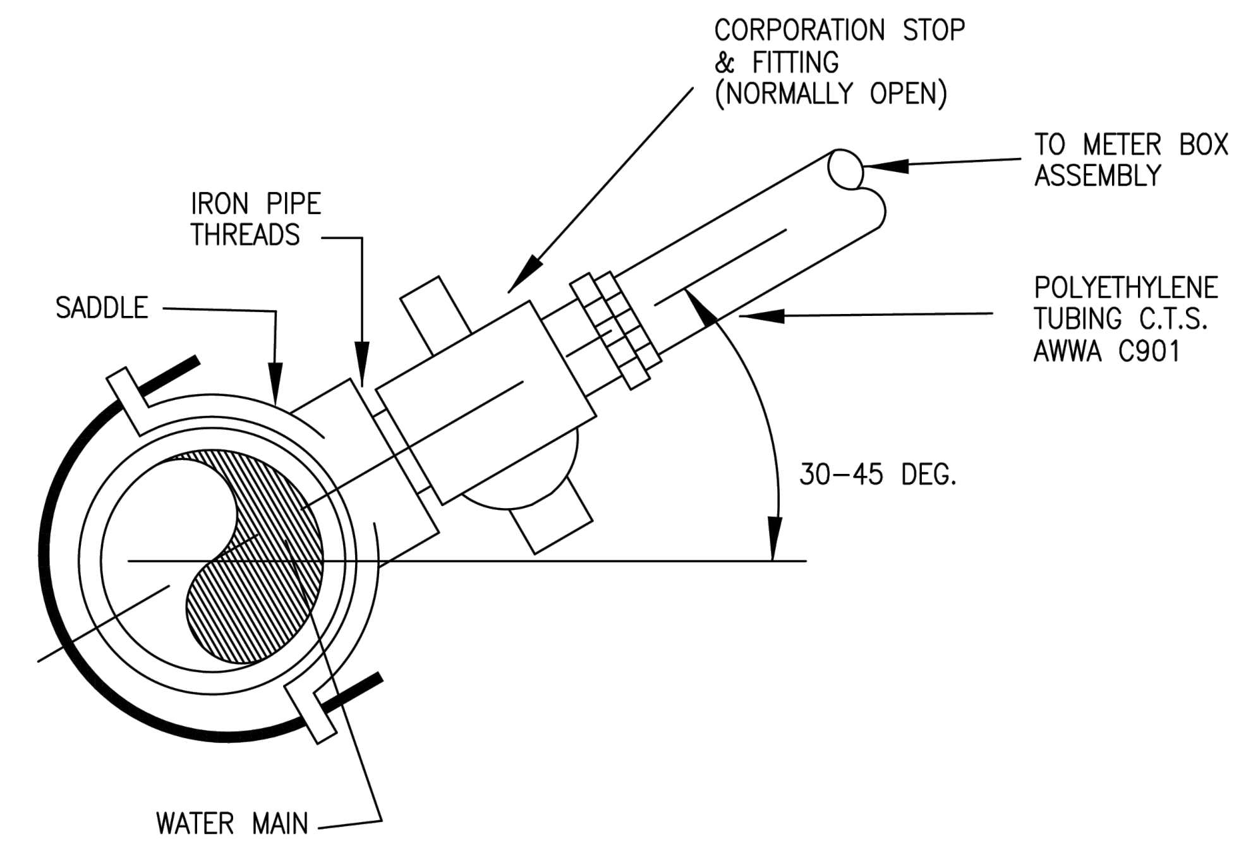
NOTES:

1. FIRE HYDRANT SHALL BE SUPPLIED WITHOUT A WEEP HOLE, OR WITH A PERMANENTLY PLUGGED WEEP HOLE.
2. THE BUILDER MAY INSTALL THE SHEAR PAD RECESSED UP TO 4 INCHES BELOW FINISHED GRADE AND SOD THE RECESSED SECTION.
3. CLEARANCE BETWEEN BOTTOM OF BOLTS AND TOP OF SHEAR PAD SHALL BE A 6" MINIMUM.
4. IF THE HYDRANT IS LOCATED IN THE BOTTOM OF A ROADSIDE SWALE, MOVE THE HYDRANT TO BACKSLOPE OF THE SWALE.
5. CLEARANCE OF SEVEN AND ONE HALF FEET IN FRONT OF AND TO THE SIDES OF FIRE HYDRANTS AND APPLIANCES SHALL BE MAINTAINED. CLEARANCE OF FOUR FEET TO THE REAR OF FIRE HYDRANTS SHALL BE MAINTAINED.
6. FIRE HYDRANTS IN RESIDENTIAL SUBDIVISION/DEVELOPMENTS SHALL BE INSTALLED, WITH INTERMEDIATE HYDRANTS SPACED AT INTERVALS NOT TO EXCEED 1,000 FEET APART. FIRE HYDRANTS SHALL BE LOCATED NOT FURTHER THAN 15 FEET NOR LESS THAN 3 FEET FROM AN IMPROVED SURFACE. City Ord. Sec. 33.28. THE MINUMIM MEASUREMENT STARTS FROM THE OUTSIDE EDGE OF THE CURB.

CITY OF PALM BAY, UTILITIES DEPARTMENT
POLICIES, PROCEDURES AND STANDARDS
INSTALLATION DETAIL

FIRE HYDRANT ASSEMBLY DETAIL

DWN.BY: M.K.L.
DATE: 1-1-08
REV. E.K.R. 2-3-11
DWG. NO. **W-3**


CORPORATION STOP & FITTING (NORMALLY OPEN)
TO METER BOX ASSEMBLY
IRON PIPE THREADS
SADDLE
POLYETHYLENE TUBING C.T.S. AWWA C901
30–45 DEG.
WATER MAIN

NOTES:

1. ALL MATERIALS MUST CONFORM TO THE CITY OF PALM BAY, UTILITIES DEPARTMENT POLICIES, PROCEDURES AND STANDARDS HANDBOOK SPECIFICATIONS

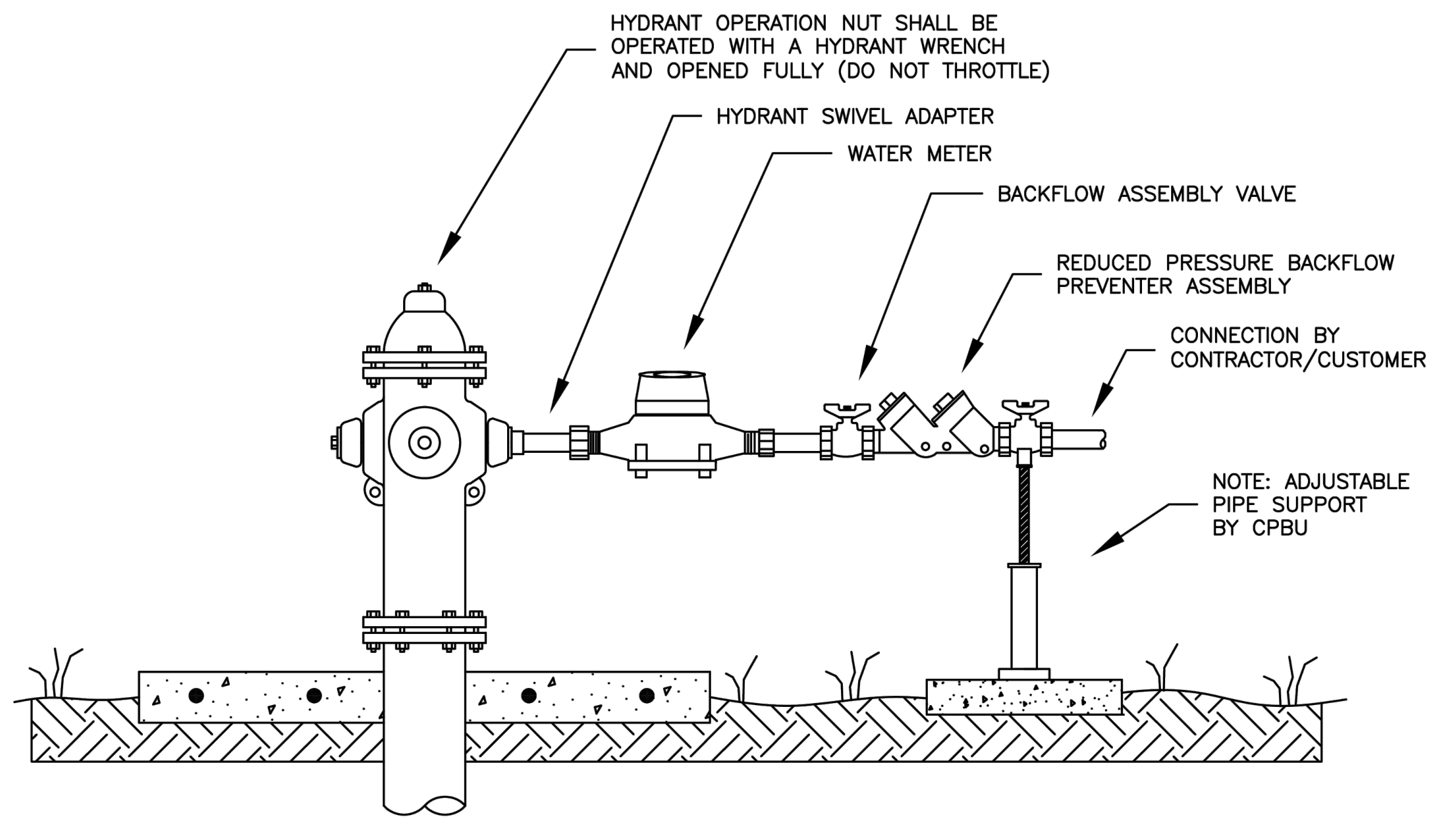
CITY OF PALM BAY, UTILITIES DEPARTMENT
POLICIES, PROCEDURES AND STANDARDS
INSTALLATION DETAIL

TYPICAL MAIN CONNECTION

DWN.BY: M.K.L.
DATE: 1-1-08
REV. E.K.R. 1-29-10
DWG. NO. **W-6A**

WARNING

CONTRACTOR/CUSTOMER SHALL OPERATE BACKFLOW ASSEMBLY VALVE ONLY FOR REGULATING FLOW OF WATER


HYDRANT OPERATION NUT SHALL BE OPERATED WITH A HYDRANT WRENCH AND OPENED FULLY (DO NOT THROTTLE)
HYDRANT SWIVEL ADAPTER
WATER METER
BACKFLOW ASSEMBLY VALVE
REDUCED PRESSURE BACKFLOW PREVENTER ASSEMBLY
CONNECTION BY CONTRACTOR/CUSTOMER
NOTE: ADJUSTABLE PIPE SUPPORT BY CPBU

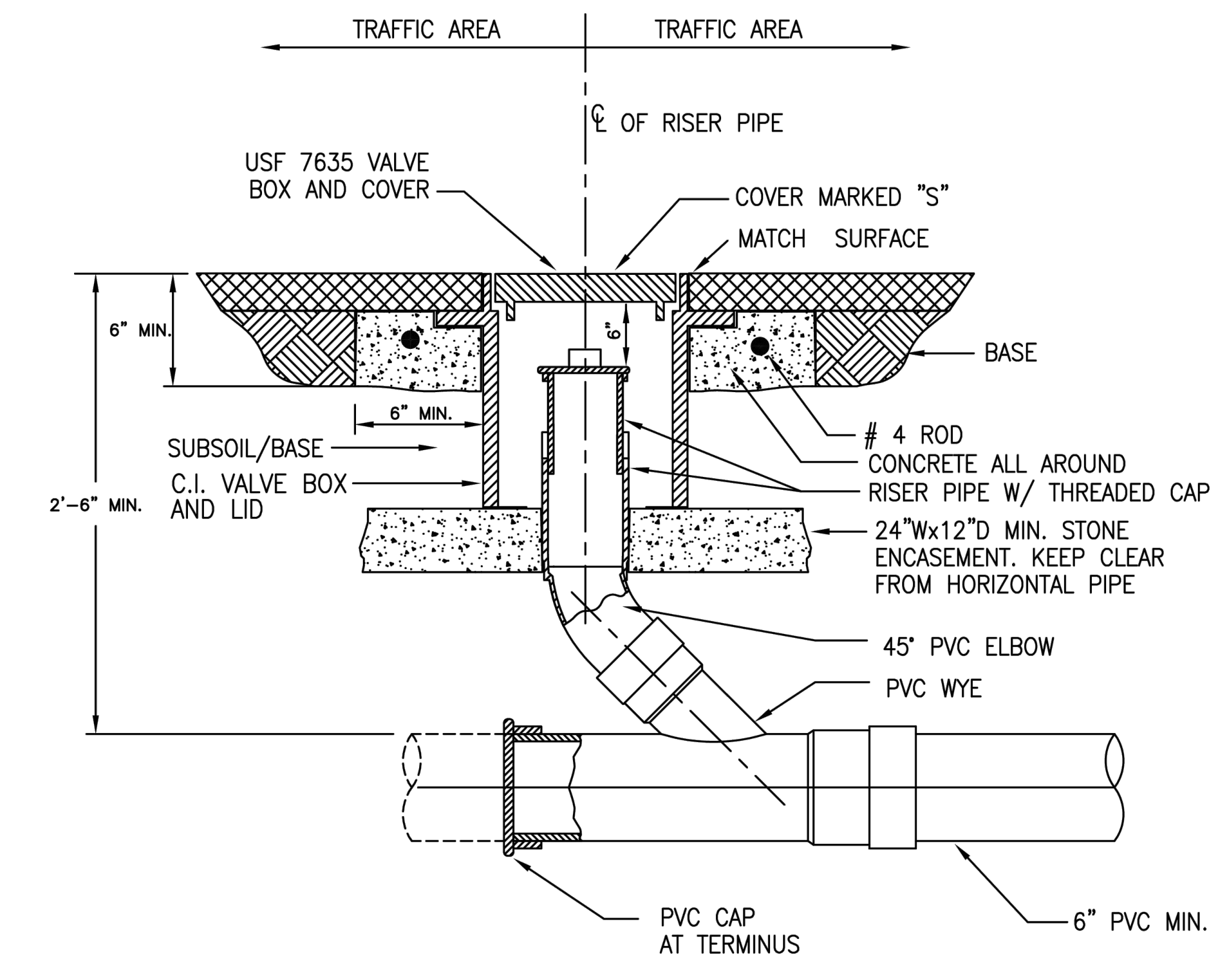
NOTES:

1. CITY OF PALM BAY UTILITIES DEPARTMENT (CPBU) SHALL CONNECT HYDRANT METER, BACKFLOW ASSEMBLY, PIPING, AND SUPPORT STAND AS ILLUSTRATED ABOVE.
2. ALL FITTINGS, PIPING, VALVES AND MATERIALS INCLUDING THE APPROVED REDUCE PRESSURE BACKFLOW PREVENTION ASSEMBLY SHALL BE FURNISHED BY CPBU.
3. BACKFLOW ASSEMBLY SHALL BE TESTED AT TIME OF INSTALLATION, RELOCATION, AND COMPLETION OF JOB.
4. CONTRACTOR/CUSTOMER SHALL PROVIDE PROTECTION FOR ASSEMBLY FROM DAMAGE.
5. CONTRACTOR/CUSTOMER SHALL BE RESPONSIBLE FOR MAKING A SERVICE CONNECTION TO THE EXISTING BACKFLOW ASSEMBLY.
6. A "HYDRANT IN USE" TAG SHALL ALWAYS BE DISPLAYED ON THE HYDRANT WHILE THE BACKFLOW ASSEMBLY IS CONNECTED.

CITY OF PALM BAY, UTILITIES DEPARTMENT
POLICIES, PROCEDURES AND STANDARDS
INSTALLATION DETAIL

TEMPORARY CONSTRUCTION WATER SERVICE DETAIL

DWN.BY: E.K.R.
DATE: 2-1-12
REV.
DWG. NO. **W-9A**


TRAFFIC AREA
TRAFFIC AREA
℄ OF RISER PIPE
USF 7635 VALVE BOX AND COVER
COVER MARKED "S"
MATCH SURFACE
6" MIN.
6"
BASE
6" MIN.
SUBSOIL/BASE
C.I. VALVE BOX AND LID
2'-6" MIN.
# 4 ROD
CONCRETE ALL AROUND
RISER PIPE W/ THREADED CAP
24"Wx12"D MIN. STONE ENCASEMENT. KEEP CLEAR FROM HORIZONTAL PIPE
45° PVC ELBOW
PVC WYE
PVC CAP AT TERMINUS
6" PVC MIN.

CITY OF PALM BAY, UTILITIES DEPARTMENT
POLICIES, PROCEDURES AND STANDARDS
INSTALLATION DETAIL

PARKING LOT/PAVED AREA SEWER CLEAN OUT DETAIL

DWN.BY: M.K.L.
DATE: 1-1-08
REV.
DWG. NO. **S-13**

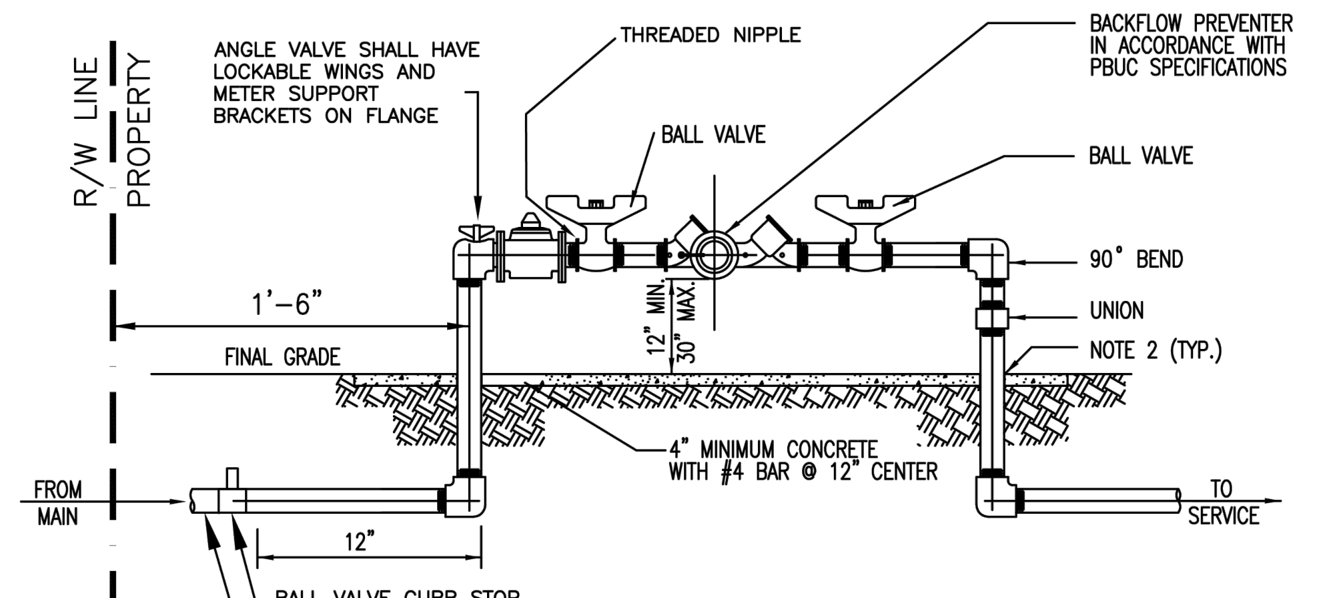
GENERAL NOTES

1. ALL EXPOSED METAL SHALL BE PRIMED WITH TWO COATS OF EXTERIOR ENAMEL PAINT.
2. WET WELL SHALL BE COATED WITH TWO COATS (8 MILS EACH) HIGH SOLIDS EPOXY. THE TWO COATS SHOULD BE ALTERNATING COLORS WITH THE FINAL COLOR BEING BLACK OR GRAY ON THE OUTSIDE AND GRAY ON THE INSIDE. THE INSTALLATION OF A LINER INSIDE OF THE WET WELL MUST BE APPROVED BY THE UTILITIES DEPARTMENT.
3. BASE AND FIRST RISER UNIT TO BE CAST MONOLITHIC.
4. ALL LOCATIONS WHERE PRESSURE PIPES ENTER OR LEAVE THE WET WELL SHALL BE MADE WATER–TIGHT WITH WALL SLEEVES AND SEALS.
5. THERE SHALL BE NO VALVES OR ELECTRICAL JUNCTION BOXES IN THE WET WELL.
6. WET WELL COVER SHALL BE ALUMINUM WITH 316 S.S. HARDWARE AND LOCK BRACKET. SIZE AS REQUIRED BY PUMP MANUFACTURER.
7. ALL HARDWARE IN WET WELL TO BE 316 S.S.
8. FLEXIBLE COUPLING SHALL BE SLEEVE TYPE.
9. REFER TO DETAIL S–2 FOR DROP CONNECTION DETAIL.
10. INSTALL LINK–SEAL BETWEEN PIPE AND CONCRETE.
11. CHECK VALVE, FLANGED, WEIGHT & LEVER TYPE LEVERS WILL BE LOCATED TO THE OUTSIDE OF CHECK VALVE
12. PIPE SHALL BE FLANGED DUCTILE IRON OR 316 S.S. PIPE.
13. CLEARANCE SHALL BE 18" MINIMUM, 24" MAXIMUM MEASURED FROM THE BOTTOM OF THE PIPE.
14. ALL INFLUENT LINES SHALL BE OF PVC OR PE MATERIAL AND USE A WATER TIGHT SEAL OR SLEEVE. INFLUENT LINE SHALL BE A MINIMUM OF 5' ABOVE THE FLOOR ELEVATION.
15. PIPE SHALL BE SUPPORTED PER THE SPECIFICATIONS OF THE PIPE MANUFACTURER. AT A MINIMUM, THE PIPE SHALL BE BRACED AND SUPPORTED AT 5' INTERVALS. ALL PIPE SUPPORT COMPONENTS SHALL BE 316 S.S.
16. PROVIDE 4" VENT WITH VENT CAP AND S.S. INSECT SCREEN WITH $\frac{1}{4}$" OPENINGS. SEAL AROUND CONCRETE TOP WITH NON–SHRINK GROUT. THE VENT AND VENT CAP SHALL EITHER BE EPOXY–COATED DUCTILE IRON OR S.S.
17. ALUMINUM ACCESS HATCH W/ LOCKSET AND RECESSED HANDLE. THE ACCESS DOOR SHALL HAVE THE HINGE ON THE SIDE WHERE THE CHECK VALVES ARE LOCATED. FOR TEMPORARY FALL PROTECTION, AN ALUMINUM GUARD RAIL RETAINING SYSTEM IS REQUIRED TO BE AN INTEGRAL COMPONENT OF THE HATCH FRAME.
18. THE PUMP MANUFACTURER'S SUBMERGENCE REQUIREMENTS SHALL BE MET AS A MINIMUM.
19. THE TOP ELEVATION OF THE WET WELL SHALL BE A MINIMUM OF 1' ABOVE THE 100–YEAR FLOOD ELEVATION.
20. MEET PUMP MANUFACTURER'S SPECIFICATION FOR THE DISTANCE BETWEEN THE FLOOR AND BOTTOM OF PUMP VOLUTE.
21. AIR RELEASE VALVE SHALL BE APPROPRIATELY SIZED PER THE MANUFACTURER'S SPECIFICATIONS

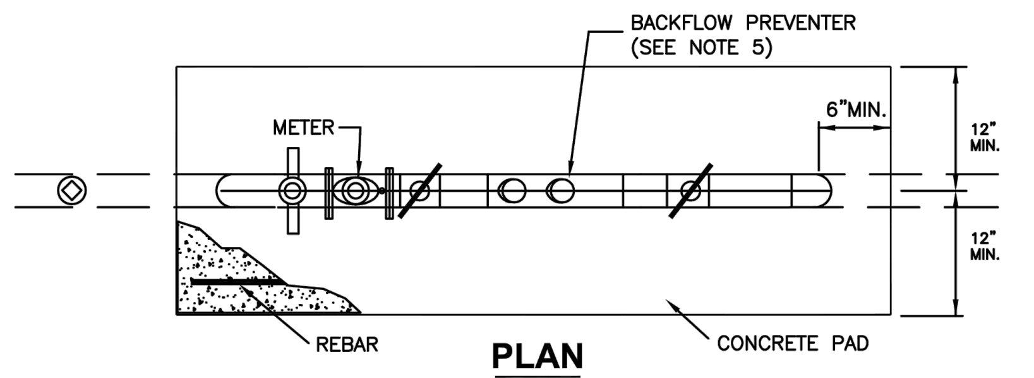
CITY OF PALM BAY, UTILITIES DEPARTMENT
POLICIES, PROCEDURES AND STANDARDS
INSTALLATION DETAIL

PUMP STATION GENERAL NOTES

DWN.BY: E.K.R.
DATE: 8-15-13
REV.
DWG. NO. **LS-1A**


R/W LINE
PROPERTY
ANGLE VALVE SHALL HAVE LOCKABLE WINGS AND METER SUPPORT BRACKETS ON FLANGE
THREADED NIPPLE
BALL VALVE
BACKFLOW PREVENTER IN ACCORDANCE WITH PBUC SPECIFICATIONS
BALL VALVE
90° BEND
UNION
NOTE 2 (TYP.)
1'–6"
FINAL GRADE
12" MIN.
30" MAX.
4" MINIMUM CONCRETE WITH #4 BAR @ 12" CENTER
FROM MAIN
TO SERVICE
12"
BALL VALVE CURB STOP
1" OR 2" POLYETHYLENE SERVICE LINE

PROFILE
N.T.S


BACKFLOW PREVENTER (SEE NOTE 5)
METER
6"MIN.
12" MIN.
12" MIN.
REBAR
CONCRETE PAD

PLAN
N.T.S

NOTES:

1. ALL PIPE AND FITTINGS 2" AND SMALLER SHALL BE THREADED BRASS
2. ALL PIPING PASSING THRU CONCRETE SHALL BE SLEEVED WITH PREFORMED JOINT MATERIAL
3. ALL PIPE AND FITTINGS SHALL BE PAINTED OSHA SAFETY BLUE
4. ALL BACKFLOW PREVENTION DEVICES MUST BE TESTED ON SITE AND CERTIFICATIONS MUST BE SUBMITTED TO PALM BAY UTILITY BEFORE WATER SERVICE TO SITE CAN BE ESTABLISHED
5. A REDUCED PRESSURE ZONE ASSEMBLY IS REQUIRED AT THE SERVICE CONNECTION WHEN THE AUXILIARY WATER SUPPLY IS OR MAY BE CONTAMINATED TO A DEGREE THAT WOULD CONSTITUTE A HIGH HEALTH HAZARD. A DOUBLE CHECK VALVE ASSEMBLY IS REQUIRED AT THE SERVICE CONNECTION WHEN THE AUXILIARY WATER SUPPLY IS BEING OPERATED UNDER A PUBLIC HEALTH PERMIT BUT IS NOT ACCEPTABLE TO THE WATER PURVEYOR AS A SOURCE. REF. AWWA M–14 MANUAL 3rd EDITION

CITY OF PALM BAY, UTILITIES DEPARTMENT
POLICIES, PROCEDURES AND STANDARDS
INSTALLATION DETAIL

2" AND SMALLER COMBINATION METER AND BACKFLOW PREVENTER

DWN.BY: M.K.L.
DATE: 1-1-08
REV. E.K.R. 3-4-11
DWG. NO. **W-10**

No.
REVISIONS
DATE
BY

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LICENSED PROFESSIONAL
DEREK E. RAMSBURG, P.E.
FLORIDA LICENSE NUMBER
88965
DATE: 8/21/2025

KHA PROJECT
249188006
DATE
8/21/2025
SCALE AS SHOWN
DESIGNED BY BMG
DRAWN BY BMG
CHECKED BY DER

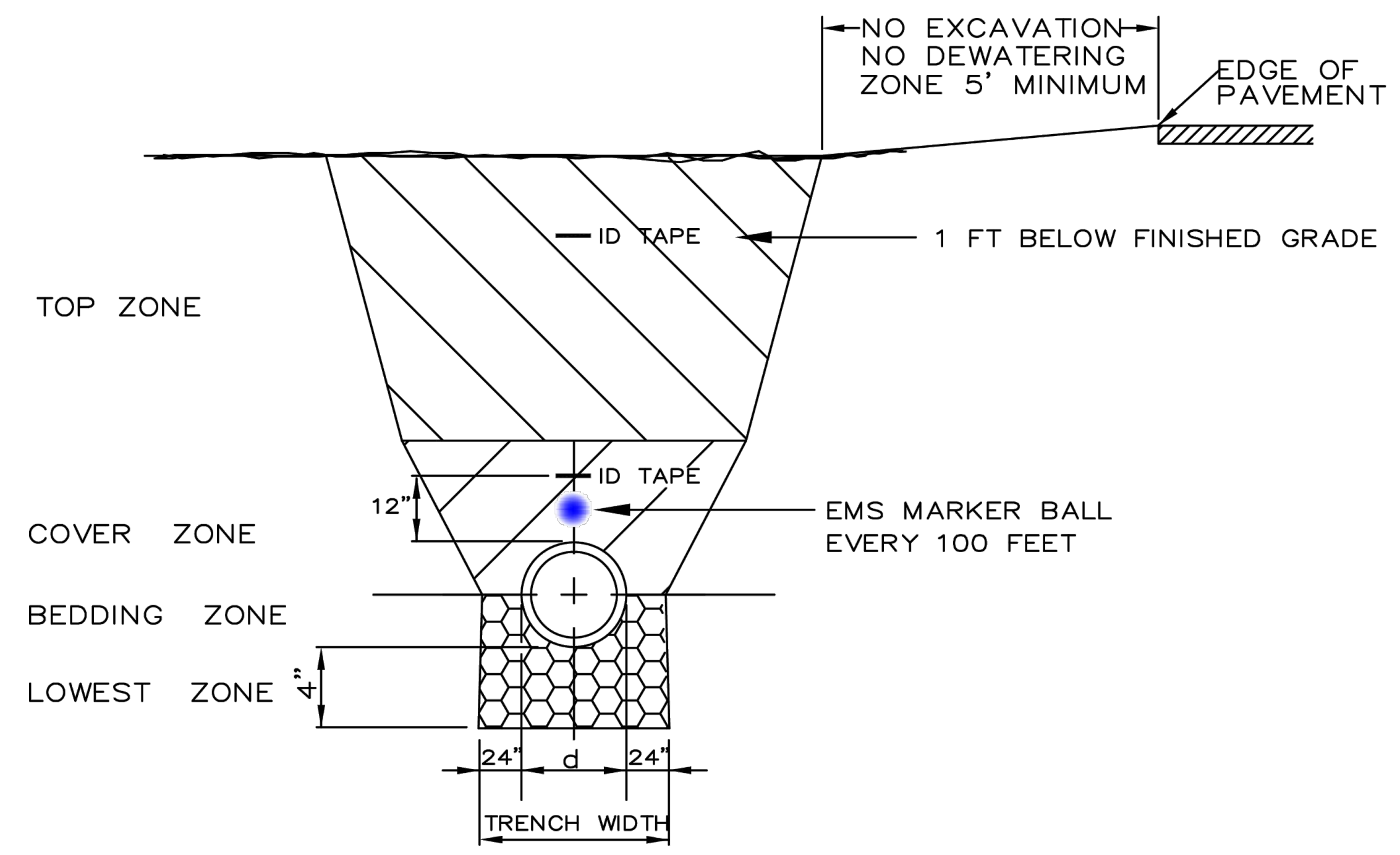
CITY OF PALM BAY STANDARD DETAILS

7-11 PALM BAY

CITY OF PALM BAY
FLORIDA

SHEET NUMBER
C8.1

Plotted By:Gulley, Blake Sheet Set:7-11 PALM BAY Layout:C8.1 August 21, 2025 12:54:26pm K:\ORL_CIVIL\249188006-7-11 Palm Bay\CADD\CONST\PlanSheets\C8.0 CITY OF PALM BAY STANDARD DETAILS.dwg



GENERAL NOTES:

1. WHEN PERFORMING TRENCH EXCAVATION IN EXCESS OF FIVE (5) FEET IN DEPTH, COMPLY WITH THE OCCUPATIONAL SAFETY AND HELATH ADMINISTRATION'S (OSHA) TRENCH SAFETY STANDARDS, 29 C.F.R., S. 1926.650, SUBPART P, AND ALL SUBSEQUENT REVISIONS OR UPDATES ADOPTED BY THE DEPARTMENT OF LABOR AND EMPLOYMENT SECURITY. ENSURE THAT TRENCH BOXES ARE WIDE ENOUGH TO ACCOMODATE COMPACTION AND DENSITY TESTING.

2. PERFORM ALL EXCAVATIONS IN STREAM BEDS TO A DEPTH AT LEASE FOUR (4) FEET BELOW THE PERMANENT BED OF THE STREAM, UNLESS A FIRM FOOTING CAN BE ESTABLISHED ON SOLID ROCK BEFORE SUCH DEPTH IS REACHED, AND EXCAVATE TO SUCH ADDITIONAL DEPTH AS MAY BE NECESSAY TO ELIMINATE ANY DANGER OF UNDERMINING.

3. EXCAVATE TRENCHES FOR WATER MAIN/FORCE MAIN/REUSE/GRAVITY SEWER TO THE ELEVATION OF THE BOTTOM OF THE PIPE AND TO A WIDTH AS NOTED IN DETAILS. REMOVE SOIL NOT MEETING THE CLASSIFICATION SPECIFIED AS SUITABLE BACKFILLL MATERIAL TO A DEPTH OF FOUR (4) INCHES BELOW BOTTOM OF THE PIPE ELEVATION. REMOVE ROCK, BOULDERS OR OTHER HARD LUMPY OR UNYIELDING MATERIALS TO A DEPTH OF TWELVE (12) INCHES BELOW THE BOTTOM OF THE PIPE ELEVATION. REMOVE MUCK OR OTHER SOFT MATERIALS TO A DEPTH NECESSARY TO ESTABLISH A FIRM FOUNDATION. WHERE THE SOILS PERMIT, ENSURE THAT THE TRENCH SIDES ARE VERTICAL UP TO AT LEASE THE MID-POINT OF THE PIPE.

CITY OF PALM BAY, UTILITIES DEPARTMENT
POLICIES, PROCEDURES AND STANDARDS
INSTALLATION DETAIL

EXCAVATION AND BACKFILL FOR UTILITIES PIPE
PAGE 1

DWN.BY: M.K.L.
DATE: 1-1-08
REV. E.K.R. 10-26-10
DWG. NO. **FIG 1**

(CONT. FROM SHEET 1)

GENERAL NOTES:

4. PROVIDE NORMAL DEWATERING EQUIPMENT INCLUDING, BUT NOT LIMITED TO SURFACE PUMPS, SUMP PUMPS, WELLPOINTS AND HEADER PIPE AND TRENCHING/DIGGING MACHINERY.

5. BACKFILL TO THE ORIGINAL GROUND SURFACE OR SUBGRADE SURFACE OF OPENINGS MADE FOR STRUCTURES, WITH A SUFFICIENT ALLOWANCE FOR SETTLEMENT. DO NOT ALLOW HEAVY CONSTRUCTION EQUIPMENT TO CROSS OVER CULVERT OR STORM SEWER PIPES UNTIL PLACING AND COMPACTING BACKFILL MATERIAL TO THE FINISHED EARTHWORK GRADE OR TO AN ELEVATION AT LEASE (4) FEET ABOVE THE CROWN OF THE PIPE.

6. PLACE THE MATERIAL IN HORIZONTAL LAYERS NOT EXCEEDING SIX (6) INCHES COMPACTED THINKNESS, IN DEPTH ABOVE WATER LEVEL, BEHIND ABUTMENTS, WINGWALLS AND END BENTS, UNDER THE HAUNCHES OF THE PIPES AND AROUND BOX CULVERTS AND ALL STRUCTURES INCLUDING PIPE CULVERTS. THE CONTRACTOR MAY ELECT TO PLACE MATERIAL IN THICKER LIFTS OF NO MORE THAN 12 INCHES COMPACTED THICKNESS OUTSIDE THE SOIL ENVELOPE IF HE/SHE CAN DEMONSTRATE WITH THE SUCCESSFULL TEST SECTION THAT DENSITY CAN BE ACHIEVED.

7. MATERIAL:
A) LOWEST ZONE: BACKFILL AREAS UNDERCUT BELOW THE BEDDING ZONE OF A PIPE WITH COURSE SAND, OR OTHER SUITABLE GRANULAR MATERIAL, OBTAINED FROM THE GRADING OPERATIONS ON THE PROJECT, OR A COMMERCIAL MATERIAL IF NO SUITABLE MATERIAL IS AVAILABLE.
(12) INCHES BELOW THE BOTTOM OF THE PIPE ELEVATION. REMOVE MUCK OR OTHER SOFT MATERIALS TO A DEPTH NECESSAY TO ESTABLISH A FIRM FOUNDATION. WHERE THE SOILS PERMIT, ENSURE THAT THE TRENCH SIDES ARE VERTICAL UP TO AT LEASE THE MID-POINT OF THE PIPE.
   - A) LOWEST ZONE: BACKFILL AREAS UNDERCUT BELOW THE BEDDING ZONE OF A PIPE WITH COURSE SAND, OR OTHER SUITABLE GRANULAR MATERIAL, OBTAINED FROM THE THE GRADING OPERATIONS ON THE PROJECT, OR A COMMERCIAL MATERIAL IF NO SUITABLE MATERIAL IS AVAILABLE.
   - B) SOIL ENVELOPE: IN BOTH THE BEDDING ZONE AND THE COVER ZONE OF THE PIPE, BACKFILL WITH MATERIALS CLASSIFIED AS A-1, A-2, OR A-3. MATERIAL CLASSIFIED AS A-4 MAY BE USED IF THE PIPE IS CONCRETE PIPE.
   - C) TOP ZONE: BACKFILL THE AREA OF THE TRENCH ABOVE THE SOIL ENVELOPE OF THE PIPE WITH MATERIALS CLASSIFIED AS A-1 OR A-3. WHEN PIPE IS UNDER ROADWAY, BACKFILL TO BOTTOM OF ROADWAY SUBGRADE. SUBGRADE AND MATERIAL SHALL BE IN ACCORDANCE WITH PLANS.

8. COMPACTION:
   - A) LOWEST ZONE: COMPACT THE SOIL IN THE LOWEST ZONE TO APPROXIMATELY MATCH THE DENSITY OF THE SOIL IN WHICH THE TRENCH WAS CUT.
   - B) BEDDING ZONE: IF THE TRENCH WAS NOT UNDERCUT BELOW THE BOTTOM OF THE PIPE, LOOSEN THE SOIL IN THE BOTTOM OF THE TRENCH IMMEDIATELY BELOW THE APPROXIMATE MIDDLE THIRD OF THE OUTSIDE DIAMETER OF THE PIPE. IF THE TRENCH WAS UNDERCUT, PLACE THE BEDDING MATERIAL AND LEAVE IT IN A LOOSE CONDITION BELOW THE MIDDLE THIRD OF THE OUTSIDE DIAMETER OF THE PIPE. COMPACT THE MATERIAL TO 100% MAXIMUM DENSITY PER AASHTO T-99 METHOD C. PLACE THE MATERIAL IN LIFTS NO GREATER THAN SIX (6) INCHES (COMPACTED THICKNESS).

(CONT. ON SHEET 3)

CITY OF PALM BAY, UTILITIES DEPARTMENT
POLICIES, PROCEDURES AND STANDARDS
INSTALLATION DETAIL

EXCAVATION AND BACKFILL FOR UTILITIES PIPE
PAGE 2

DWN.BY: M.K.L.
DATE: 1-1-08
REV.
DWG. NO. **FIG 1**

(CONT. FROM SHEET 2)

- C) COVER ZONE: BEFORE PLACING THE COVER ZONE MATERIAL, LAY PIPE ACCORDING TO ALIGNMENT AND GRADES GIVEN. DO NOT ALLOW DEPARTURE FROM ALIGNMENT OR GRADE TO EXCEED 1/16 PER FOOT OF NOMINAL PIPE LENGTH. TAKE UP AND RELAY ANY PIPE THAT IS NOT TRUE TO ALIGNMENT OR WHICH SHOWS SELTTLEMENT AFTER LAYING. EXCAVATE FOR PIPE BELLS BEFORE LAYING PIPE. PLACE THE MATERIAL IN SIX (6) INCH LAYERS (COMPACTED THICKNESS), EVENLY DEPOSITED ON BOTH SIDES OF THE PIPE, AND COMPACT WITH MECHANICAL TAMPERS SUITABLE FOR THIS PURPOSE. HAND TAMP MATERIAL BELOW THE PIPE HAUNCH THAT CANNOT BE REACHED BY MECHANICAL TAMPERS. COMPACT THE MATERIAL TO 98% MAXIMUM DENSITY PER AASHTO T-99 METHOD C.
- D) TOP ZONE: PLACE THE MATERIAL IN LAYERS NOT TO EXCEED 12 INCHES IN COMPACTED THICKNESS. COMPACT THE MATERIAL TO 95% MAXIMUM DENSITY PER AASHTO T-99 METHOD C FOR GREATER THAN 12 INCHES OUTSIDE OF ROADWAY, 98% FOR AREAS LESS THAN 12 INCHES TO THE EDGE OF PAVEMENT AND UNDER THE ROADWAY.

9. BACKFILL UNDER WET CONDITIONS: WHERE WET CONDITIONS ARE SUCH THAT DEWATERING BY NORMAL PUMPING METHODS WOULD NOT BE EFFECTIVE, THE USE OF COURSE AGGREGATE BELOW THE ELEVATION AT WHICH MECHANICAL TAMPERS WOULD BE EFFECTIVE WOULD BE ACCEPTABLE. USE COARSE AGGREGATE AS SPECIFIED IN FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE COSNTRUCTION SECTION 901 FOR AGGREGATE SIZE NUMBER 89, 8, 78, 7, 68, 6, OR 57. PLACE THE COURSE AGGREGATE SUCH THAT IT WILL BE STABLE AND FIRM. FULLY WRAP THE AGGREGATE WITH A LAYER OF TYPE D-4 FILTER FABRIC, AS SPECIFIC ON FDOT DESIGN STANDARDS INDEX NO. 199. DO NOT PLACE COARSE AGGREGATE WITHIN FOUR (4) FEET OF THE ENDS OF THE TRENCH OR DITCH. USE NORMALLY ACCEPTED BACKFILL MATERIAL AT THE ENDS.

CITY OF PALM BAY, UTILITIES DEPARTMENT
POLICIES, PROCEDURES AND STANDARDS
INSTALLATION DETAIL

EXCAVATION AND BACKFILL FOR UTILITIES PIPE
PAGE 3

DWN.BY: M.K.L.
DATE: 1-1-08
REV. E.K.R. 1-28-10
DWG. NO. **FIG 1**

THRUST RESTRAINTS FOR DUCTILE IRON PIPE
MINIMUM LENGTH (FT) TO BE RESTRAINED ON EACH SIDE OF FITTING(S)

FITTINGS	PIPE SIZE								
	4"	6"	8"	10"	12"	16"	20"	24"	30"
90° BEND	43(54)	61(76)	79(97)	95(117)	110(137)	140(173)	168(207)	194(239)	229(282)
45° BEND	18(22)	25(31)	33(40)	39(49)	46(57)	58(72)	69(86)	80(99)	95(117)
22.5° BEND	9(11)	12(15)	16(19)	19(23)	22(27)	28(34)	33(41)	39(47)	46(56)
11.25° BEND	4(5)	6(7)	8(10)	9(12)	11(13)	14(17)	17(20)	19(24)	23(28)
TEE BRANCH	43(61)	70(99)	96(137)	121(172)	145(207)	190(272)	233(333)	275(393)	330(475)
DEAD END	67(96)	95(136)	123(176)	149(212)	174(248)	221(316)	266(380)	310(443)	370(528)

THRUST RESTRAINTS FOR PVC AND PE PIPE
MINIMUM LENGTH (FT) TO BE RESTRAINED ON EACH SIDE OF FITTING(S)

FITTINGS	PIPE SIZE								
	4"	6"	8"	10"	12"	16"	20"	24"	30"
90° BEND	58	82	107	128	149	189	227	262	309
45° BEND	24	34	45	53	62	78	93	108	128
22.5° BEND	12	16	22	26	30	38	45	53	62
11.25° BEND	5	8	11	12	15	19	23	26	31
TEE BRANCH	58	95	130	163	196	257	315	371	448
DEAD END	90	128	166	201	235	298	359	419	500

NOTES:

1 FITTINGS SHALL BE RESTRAINED JOINTS UNLESS OTHERWISE INDICATED

2 INSTALL FULL LENGTH JOINTS WITH TOTAL LENGTH EQUAL TO OR GREATER THAN SHOWN IN THE TABLE.

3 WHERE TWO OR MORE FITTINGS ARE TOGETHER, USE FITTING WHICH YIELDS GREATEST LENGTH OF RESTRAINED PIPE.

4 IN LINE VALVES AND THROUGH RUN OF TEES OUTSIDE LIMITS OF RESTRAINED JOINTS FROM OTHER FITTINGS NEED NOT BE RESTRAINED UNLESS OTHERWISE INDICATED

5 LENGTHS SHOWN IN THE TABLE WILL HAVE BEEN CALCULATED IN ACCORDANCE WITH THE PROCEDURE OUTLINED IN "THRUST RESTRAINT DESIGN FOR DUCTILE IRON PIPE" AS PUBLISHED BY DIPRA, WITH THE FOLLOWING ASSUMPTIONS,

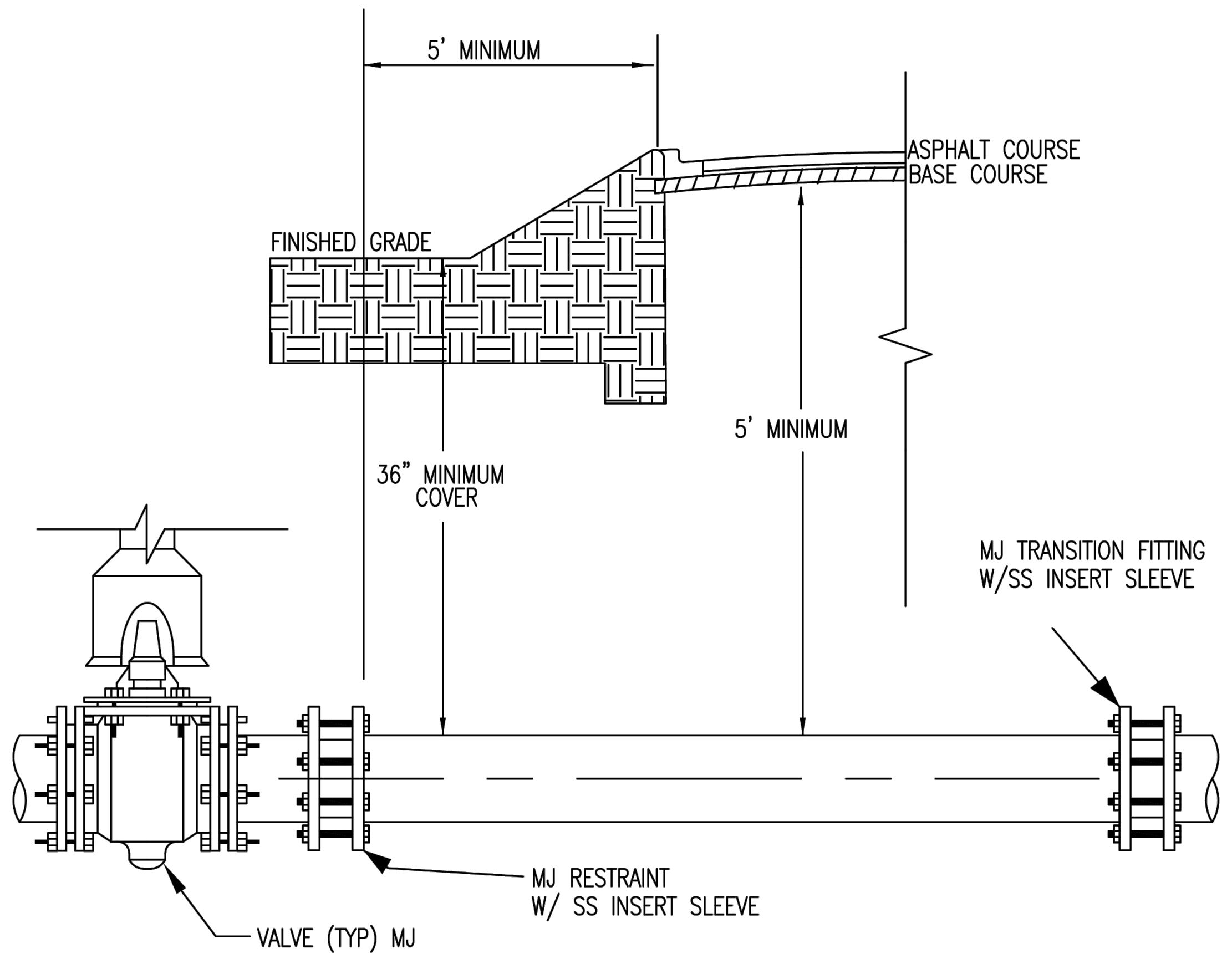
WORKING PRESSURE 70 P.S.I.
SOIL DESIGNATION 2000 P.S.F.
LAYING CONDITION TYPE 2 SAFETY FACTOR 1.5

6 FOR PIPE ENCASED IN POLYETHYLENE, INCREASE THE GIVEN VALUES BY A FACTOR OF 1.2, OR USE VALUES IN PARENTHESIS.

CITY OF PALM BAY, UTILITIES DEPARTMENT
POLICIES, PROCEDURES AND STANDARDS
INSTALLATION DETAIL

RESTRAINED JOINT TABLE

DWN.BY: M.K.L.
DATE: 1-1-08
REV. E.K.R. 2-4-10
DWG. NO. **FIG 6**

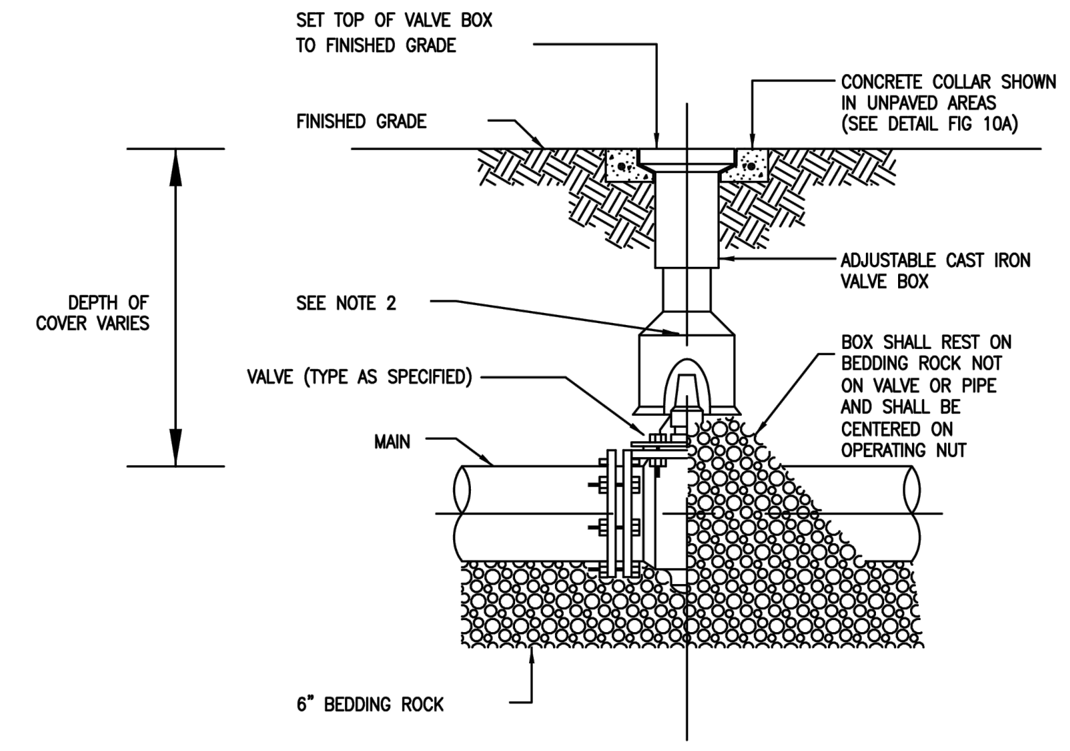


1. PIPE SHALL BE PE 3408 SDR 11 OR FUSIBLE PVC C-905 DR 18
2. ALL DIRECTIONAL BORE INSTALLATION WILL CONFORM TO PALM BAY UTILITIES STANDARD SPECIFICATION SECTION 02541 AND MANUFACTURES INSTALLATION INSTRUCTIONS.
3. ALL ROAD CROSSING PIPING SHALL BE PRESSURE TESTED PER AWWA C-600. SPECIFICATION TO INSURE INTEGRITY OF INSTALLED PIPE PRIOR TO CONNECTION TO THE RUN PIPING.
4. WHEN CONSTRUCTION IS WITHIN F.D.O.T. JURISDICTION, ADDITIONAL REQUIREMENTS OF THE "UTILITY ACCOMMODATION GUIDE" SHALL BE MET.
5. IN ALL CASES, THE PIPE SHALL EXTEND PAST THE EDGE OF PAVEMENT FOR A MINIMUM DISTANCE CORRESPONDING TO A 1:1 SLOPE AS MEASURED FROM THE EDGE OF PAVEMENT TO THE CROWN OF PIPE, OR 5' BEYOND EDGE OF PAVEMENT, WHICHEVER IS GREATER.

CITY OF PALM BAY, UTILITIES DEPARTMENT
POLICIES, PROCEDURES AND STANDARDS
INSTALLATION DETAIL

OPTION "B" DIRECTIONAL BORED MAIN DETAIL

DWN.BY: M.K.L.
DATE: 1-1-08
REV. E.K.R. 02-03-11
DWG. NO. **FIG 9B**



NOTES:
1. AWWA C-900 DR 18 PVC EXTENSIONS ARE ALLOWED FOR VALVES LESS THAN 16" OR LESS THAN 6' DEEP. ALL OTHER VALVES SHALL REQUIRE AN ADJUSTABLE SEALED VALVE BOX.
2. THE VALVE ACTUATING NUT SHALL BE EXTENDED TO BE WITHIN 36" OF FINISHED GRADE.
3. VALVES THAT ARE 16" OR GREATER SHALL BE SIDE-ACTUATED.
4. BEDDING MATERIAL SHALL BE NO.57 AGGREGATE, PER FDOT STANDARDS.

CITY OF PALM BAY, UTILITIES DEPARTMENT
POLICIES, PROCEDURES AND STANDARDS
INSTALLATION DETAIL

GATE/PLUG VALVE AND BOX DETAIL

DWN.BY: M.K.L.
DATE: 1-1-08
REV. E.K.R. 9-19-11
DWG. NO. **FIG 10B**

No.	REVISIONS	DATE	BY

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DEREK E. RAMSBURG, P.E.
FLORIDA LICENSE NUMBER
88965
DATE: 8/21/2025

KHA PROJECT
249188006
DATE
8/21/2025
SCALE AS SHOWN
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CHECKED BY DER

CITY OF PALM BAY STANDARD DETAILS

7-11 PALM BAY

CITY OF PALM BAY FLORIDA

SHEET NUMBER
C8.2

Plotted By: Guidry, Blake Sheet Set: 7-11 PALM BAY Layout: C8.2 August 21, 2025 12:54:38pm K:\ORL_Civil\249188006-7-11 Palm Bay\CADD\CONST\PlanSheets\C8.0 CITY OF PALM BAY STANDARD DETAILS.dwg
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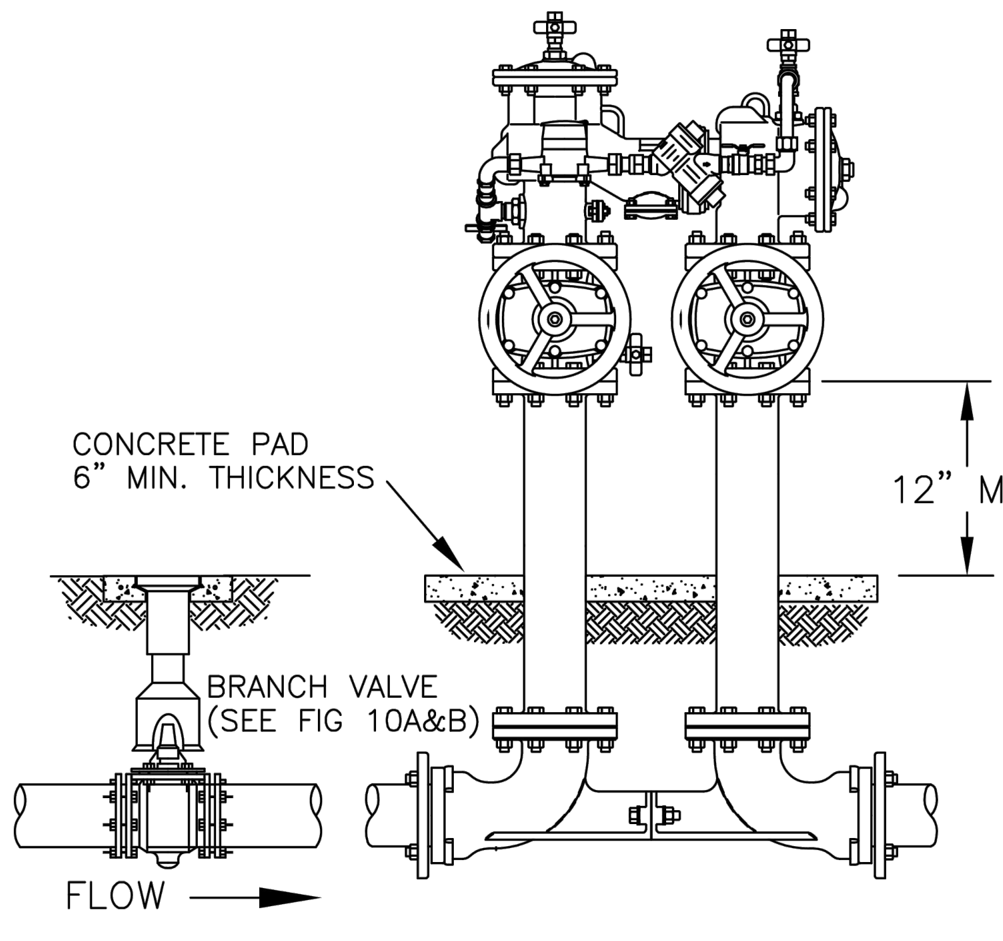
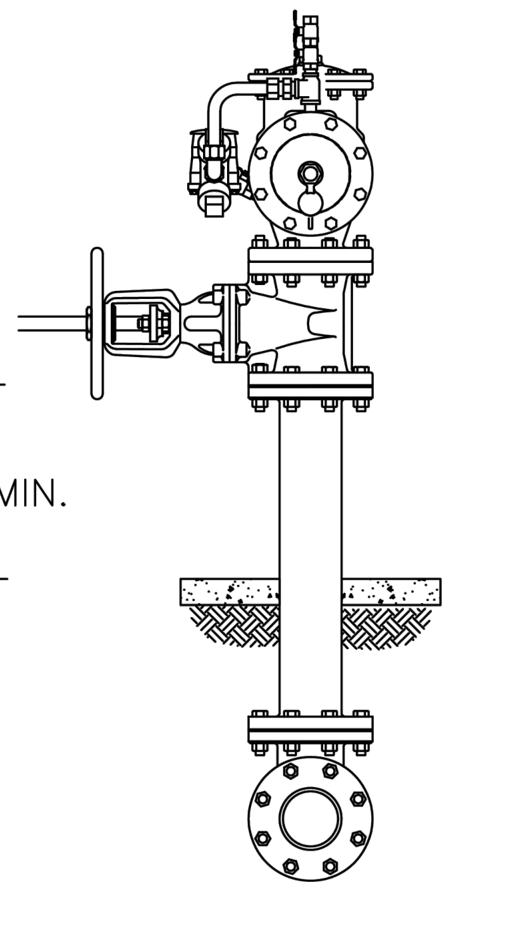

CONCRETE PAD
6" MIN. THICKNESS
12" MIN.
BRANCH VALVE
(SEE FIG 10A&B)
FLOW

FRONT SIDE VIEW

N.T.S.



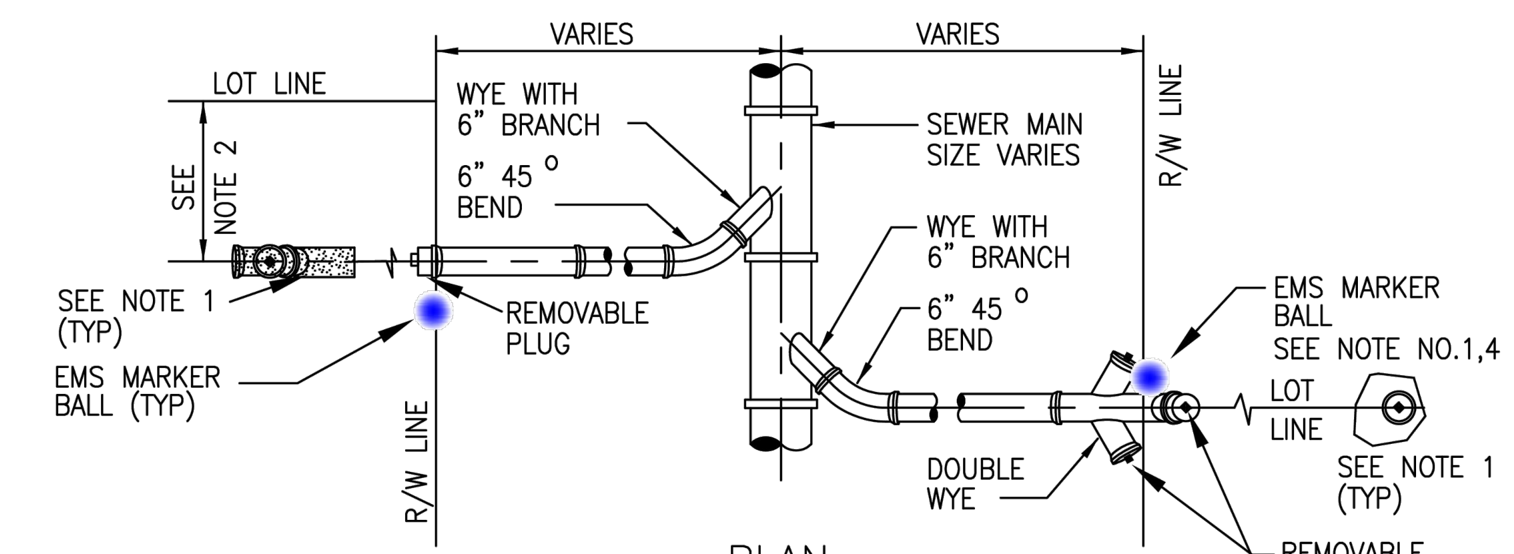
RIGHT SIDE VIEW

N.T.S.

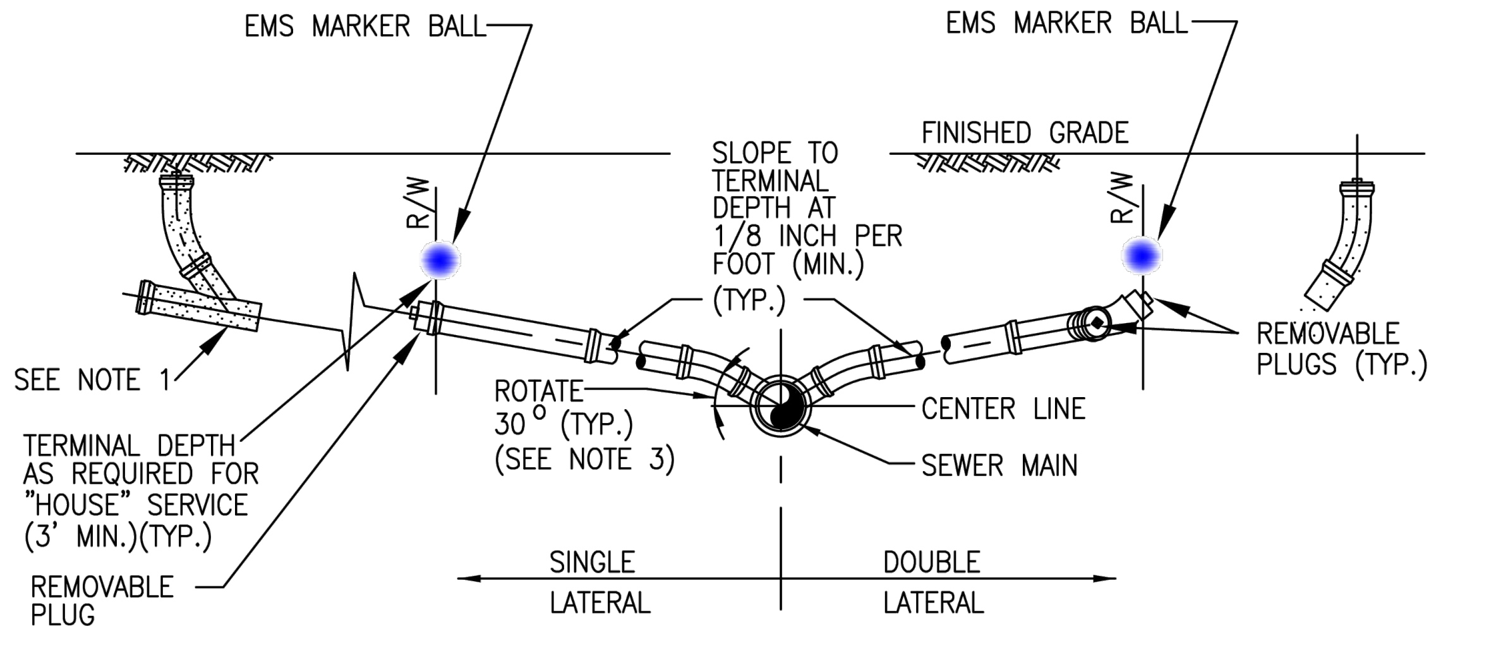
NOTE:

1. ALL PIPES SHOWN SHALL BE FLANGED DUCTILE IRON.
2. DEVICES ARE TO BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURES INSTRUCTIONS.
3. 24" MIN. CLEARANCE MUST BE MAINTAINED AROUND ASSEMBLY.
4. ALL PIPE AND FITTINGS SHALL BE PAINTED.
5. ALL BACK FLOW PREVENTION DEVICES MUST BE TESTED ON SITE AND CERTIFICATIONS MUST BE SUBMITTED TO PALM BAY UTILITY BEFORE WATER SERVICE TO SITE CAN BE ESTABLISHED.

CITY OF PALM BAY, UTILITY CORPORATION POLICIES, PROCEDURES AND STANDARDS INSTALLATION DETAIL	DOUBLE CHECK VALVE BACKFLOW PREVENTER WITH DETECTOR ASSEMBLY FOR FIRE LINES	DWN.BY: M.K.L. REV.	DATE: 1-1-08 DWG. NO. W-13


VARIES
VARIES
LOT LINE
SEE NOTE 2
WYE WITH
6" BRANCH
6" 45 ° BEND
SEWER MAIN
SIZE VARIES
R/W LINE
WYE WITH
6" BRANCH
6" 45 ° BEND
SEE NOTE 1
(TYP)
EMS MARKER
BALL (TYP)
REMOVABLE
PLUG
R/W LINE
EMS MARKER
BALL
SEE NOTE NO.1,4
LOT
LINE
DOUBLE
WYE
SEE NOTE 1
(TYP)
REMOVABLE
PLUGS (TYP.)

PLAN

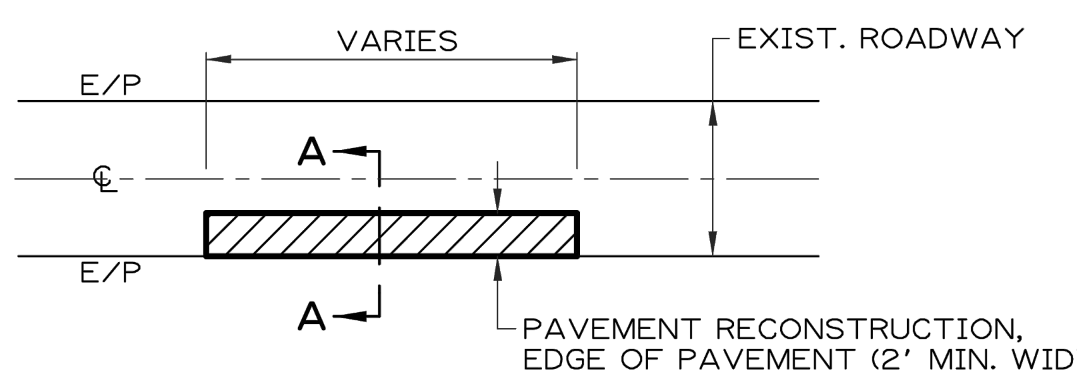

EMS MARKER BALL
EMS MARKER BALL
FINISHED GRADE
SLOPE TO
TERMINAL
DEPTH AT
1/8 INCH PER
FOOT (MIN.)
(TYP.)
R/W
R/W
SEE NOTE 1
TERMINAL DEPTH
AS REQUIRED FOR
"HOUSE" SERVICE
(3' MIN.)(TYP.)
REMOVABLE
PLUG
ROTATE
30 ° (TYP.)
(SEE NOTE 3)
CENTER LINE
SEWER MAIN
REMOVABLE
PLUGS (TYP.)
SINGLE
LATERAL
DOUBLE
LATERAL

PROFILE

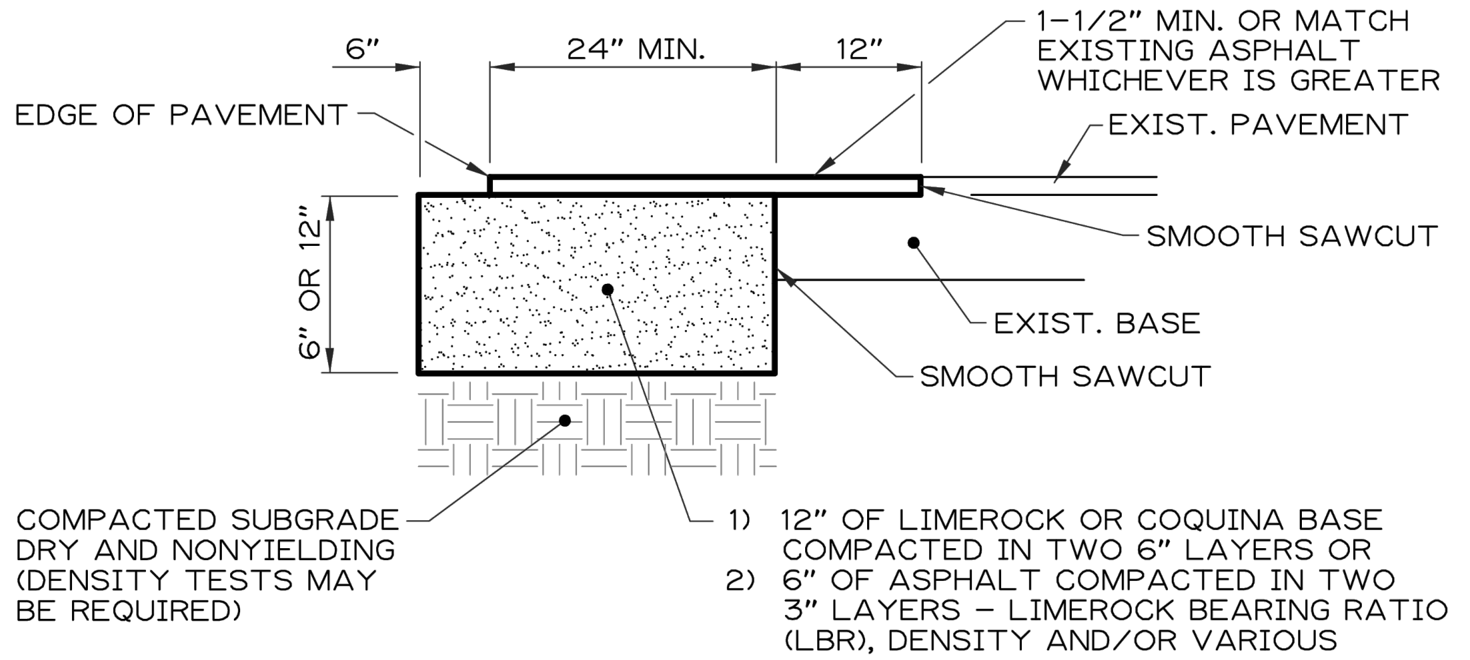
NOTES:

1. CLEAN-OUT (SHOWN SHADED) SHALL BE INSTALLED BY THE BUILDER IN ACCORDANCE WITH STANDARD PLUMBING CODE.
2. LOCATE SINGLE LATERAL AS CLOSE TO LOT LINE AS POSSIBLE, 25' MAXIMUM.
3. INVERT OF SERVICE LATERAL SHALL NOT ENTER SEWER MAIN BELOW HORIZONTAL CENTER LINE.
4. INSTALL EMS MARKER BALL AT THE END OF EACH SERVICE LINE.

CITY OF PALM BAY, UTILITIES DEPARTMENT POLICIES, PROCEDURES AND STANDARDS INSTALLATION DETAIL	SEWER SERVICE LATERAL DETAIL	DWN.BY: M.K.L. REV.	DATE: 1-1-08 DWG. NO. S-3


VARIES
EXIST. ROADWAY
E/P
℄
E/P
A
A
PAVEMENT RECONSTRUCTION,
EDGE OF PAVEMENT (2' MIN. WIDTH)

PLAN VIEW


6"
24" MIN.
12"
1-1/2" MIN. OR MATCH
EXISTING ASPHALT
WHICHEVER IS GREATER
EDGE OF PAVEMENT
EXIST. PAVEMENT
SMOOTH SAWCUT
6" OR 12"
EXIST. BASE
SMOOTH SAWCUT

COMPACTED SUBGRADE DRY AND NONYIELDING (DENSITY TESTS MAY BE REQUIRED)

1) 12" OF LIMEROCK OR COQUINA BASE COMPACTED IN TWO 6" LAYERS OR
2) 6" OF ASPHALT COMPACTED IN TWO 3" LAYERS - LIMEROCK BEARING RATIO (LBR), DENSITY AND/OR VARIOUS ASPHALT TESTS MAY BE REQUIRED

NOTE:
ASPHALT TYPE FDOT S-I OR S-III, VERIFICATION REQUIRED

SECTION "A-A"

GENERAL NOTES:

1. LONGITUDINAL CUTS SHALL BE NEAT SAWCUT LINES PARALLEL TO EDGE OF PAVEMENT.
2. TRANSVERSE CUTS SHALL BE NEAT SAWCUT LINES AT RIGHT ANGLES TO PAVEMENT CENTERLINE.
3. BASE SHALL BE RECONSTRUCTED 6" OUTSIDE OF EDGE OF PAVEMENT.

EDGE OF PAVEMENT RECONSTRUCTION DETAIL

The City of Palm Bay Florida	CITY OF PALM BAY PUBLIC WORKS DEPARTMENT	STANDARD ROAD DETAIL SR - 09	DATE: APRIL 2019 APPROVED: ________

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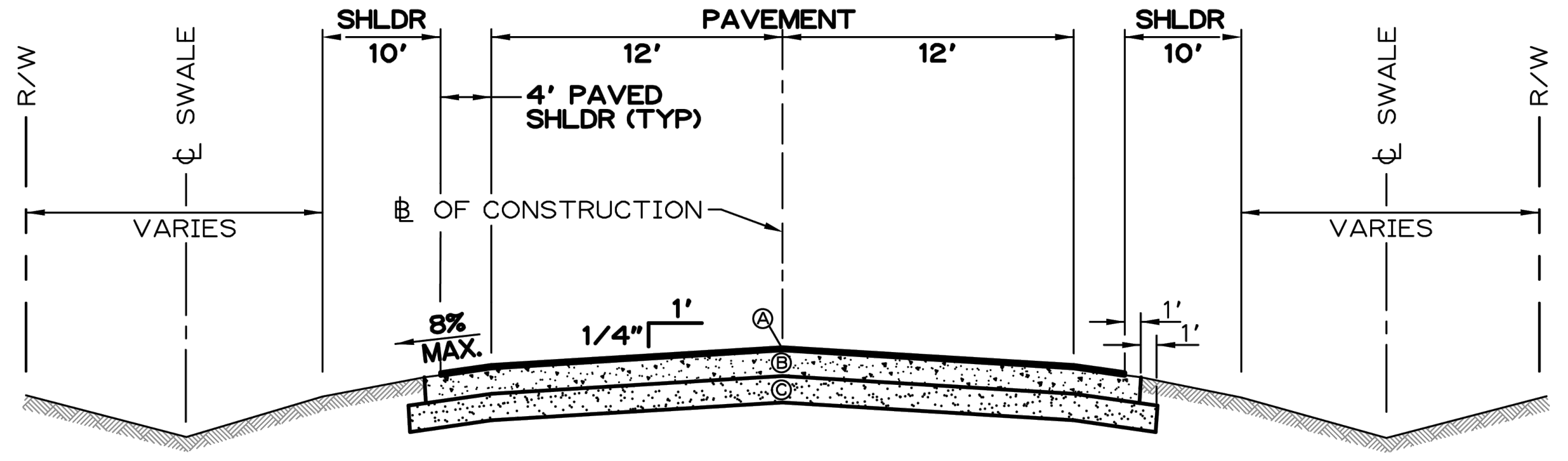
The City of Palm Bay Florida	CITY OF PALM BAY PUBLIC WORKS DEPARTMENT	STANDARD ROAD DETAIL SR - 03	DATE: APRIL 2019 APPROVED: ________


SHLDR
10'
PAVEMENT
12'
12'
SHLDR
10'
R/W
℄ SWALE
4' PAVED
SHLDR (TYP)
℄ OF CONSTRUCTION
VARIES
VARIES
℄ SWALE
R/W
8%
MAX.
1/4"
1'
Ⓐ
Ⓑ
Ⓒ
1'
1'

Ⓐ = 3" FDOT SP-12.5 ASPHALTIC CONCRETE
Ⓑ = 12" LIMEROCK OR CEMENTED COQUINA BASE, LBR 100, 98% MAX. DENSITY PER AASHTO T-180
Ⓒ = 12" TYPE "B" STABILIZED SUBBASE, LBR 40, 98% MAX. DENSITY, PER AASHTO T-180

NOTES:

1. BUILD UP SHOULDER WITH SUITABLE MATERIAL TO MEET NEW PAVEMENT SURFACE.
2. SEED AND MULCH ALL UNDEVELOPED DISTURBED AREAS.
3. SOD 2' STRIP ALONG NEW EDGE OF PAVEMENT.
4. CONTRACTOR SHALL RESTORE ALL DISTURBED AREAS.

ARTERIAL ROAD TYPICAL SECTION

The City of Palm Bay Florida	CITY OF PALM BAY PUBLIC WORKS DEPARTMENT	STANDARD SIDEWALK DETAIL SW - 02	DATE: SEPT. 2024 APPROVED: ________

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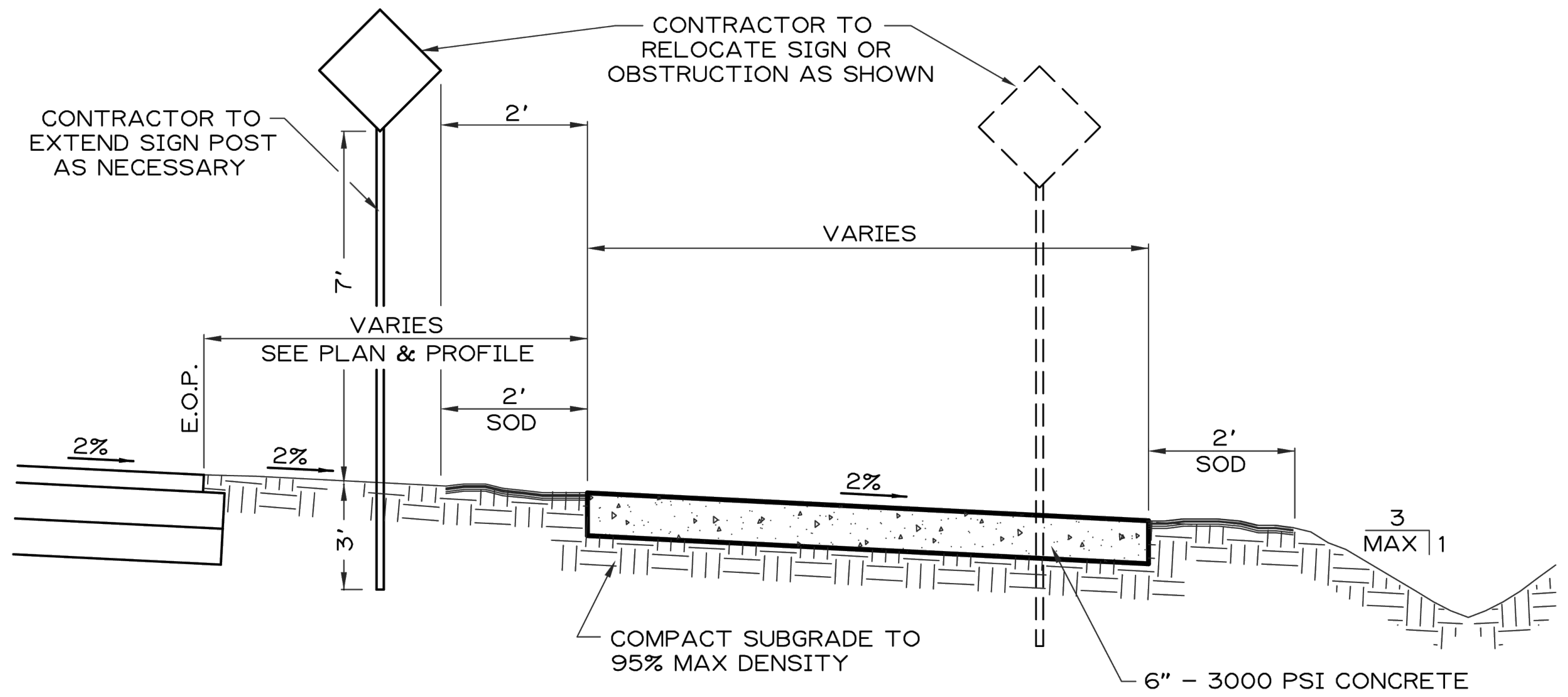
CONTRACTOR TO
RELOCATE SIGN OR
OBSTRUCTION AS SHOWN
CONTRACTOR TO
EXTEND SIGN POST
AS NECESSARY
2'
VARIES
7'
VARIES
SEE PLAN & PROFILE
E.O.P.
2'
SOD
2%
2%
2%
3'
2'
SOD
3
MAX 1
COMPACT SUBGRADE TO
95% MAX DENSITY
6" - 3000 PSI CONCRETE
WITH FIBER MESH

STANDARD CONCRETE SIDEWALK SECTION

(N.T.S.)

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LICENSED PROFESSIONAL
DEREK E. RAMSBURG, P.E.
FLORIDA LICENSE NUMBER
88965
DATE: 8/21/2025

KHA PROJECT	249188006
DATE	8/21/2025
SCALE	AS SHOWN
DESIGNED BY	BMG
DRAWN BY	BMG
CHECKED BY	DER

CITY OF PALM BAY
STANDARD DETAILS

7-11 PALM BAY

CITY OF PALM BAY FLORIDA

SHEET NUMBER
C8.3

Plotted By:Guidry, Blake Sheet Set:7-11 PALM BAY Layout:C8.3 August 21, 2025 12:54:46pm K:\ORL_Civil\249188006-7-11 Palm Bay\CADD\CONST\PlanSheets\C8.0 CITY OF PALM BAY STANDARD DETAILS.dwg
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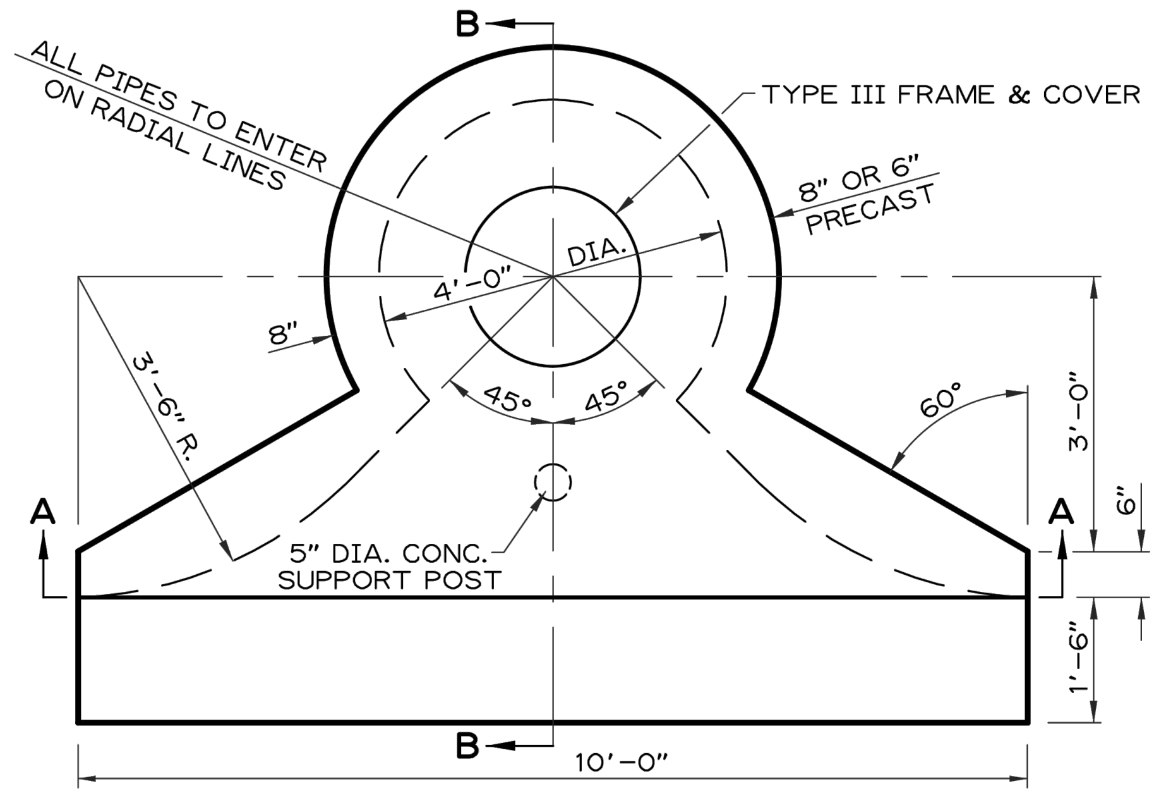
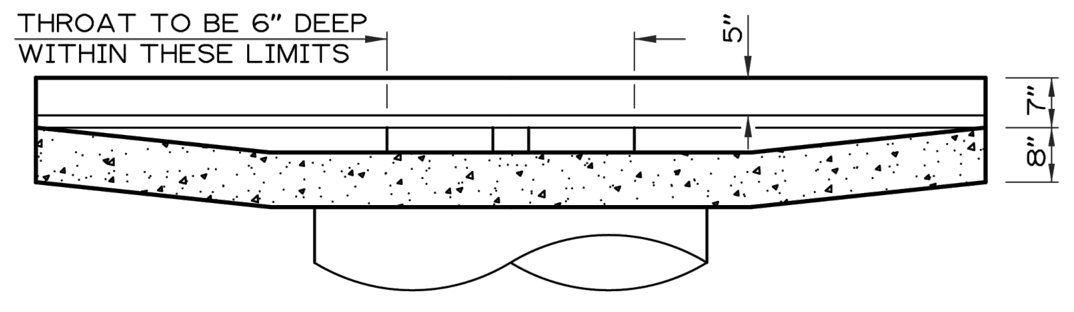
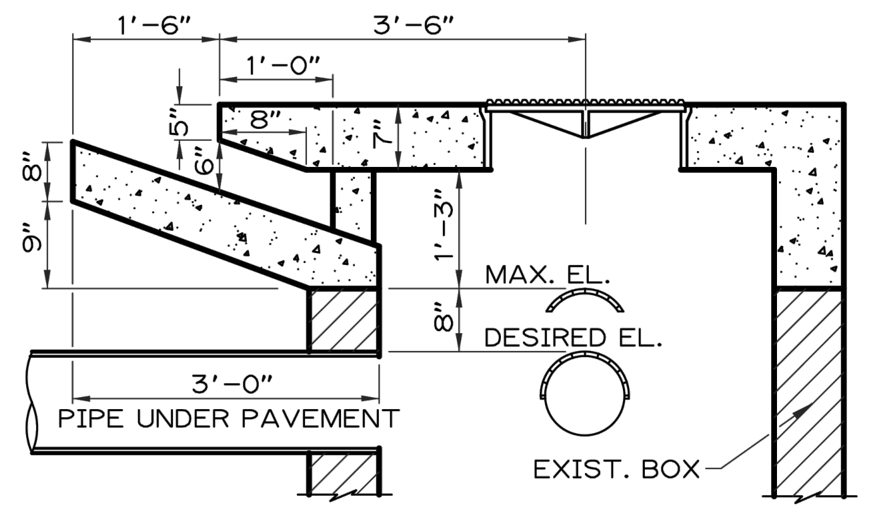
Plotted By: Guidry, Blake Sheet Set: 7-11 PALM BAY Layout: C8.4 August 21, 2025 12:54:53pm K:\ORL_Civil\249188006-7-11 Palm Bay\CADD\CONST\PlanSheets\C8.0 CITY OF PALM BAY STANDARD DETAILS.dwg


B
ALL PIPES TO ENTER ON RADIAL LINES
TYPE III FRAME & COVER
8" OR 6" PRECAST
4'-0" DIA.
8"
3'-6" R.
45°
45°
60°
3'-0"
6"
A
A
5" DIA. CONC. SUPPORT POST
1'-6"
B
10'-0"

TOP VIEW


THROAT TO BE 6" DEEP WITHIN THESE LIMITS
5"
7"
8"

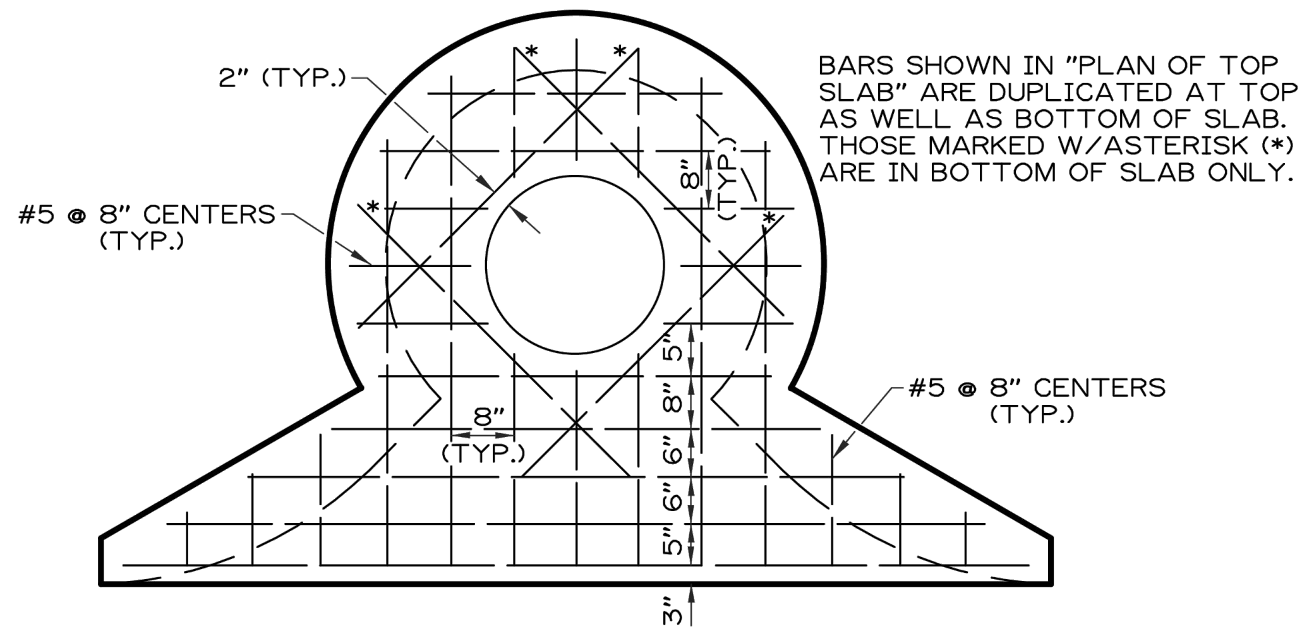
SECTION A-A


1'-6"
3'-6"
1'-0"
5"
8"
6"
7"
8"
9"
1'-3"
MAX. EL.
8"
DESIRED EL.
3'-0"
PIPE UNDER PAVEMENT
EXIST. BOX

SECTION B-B

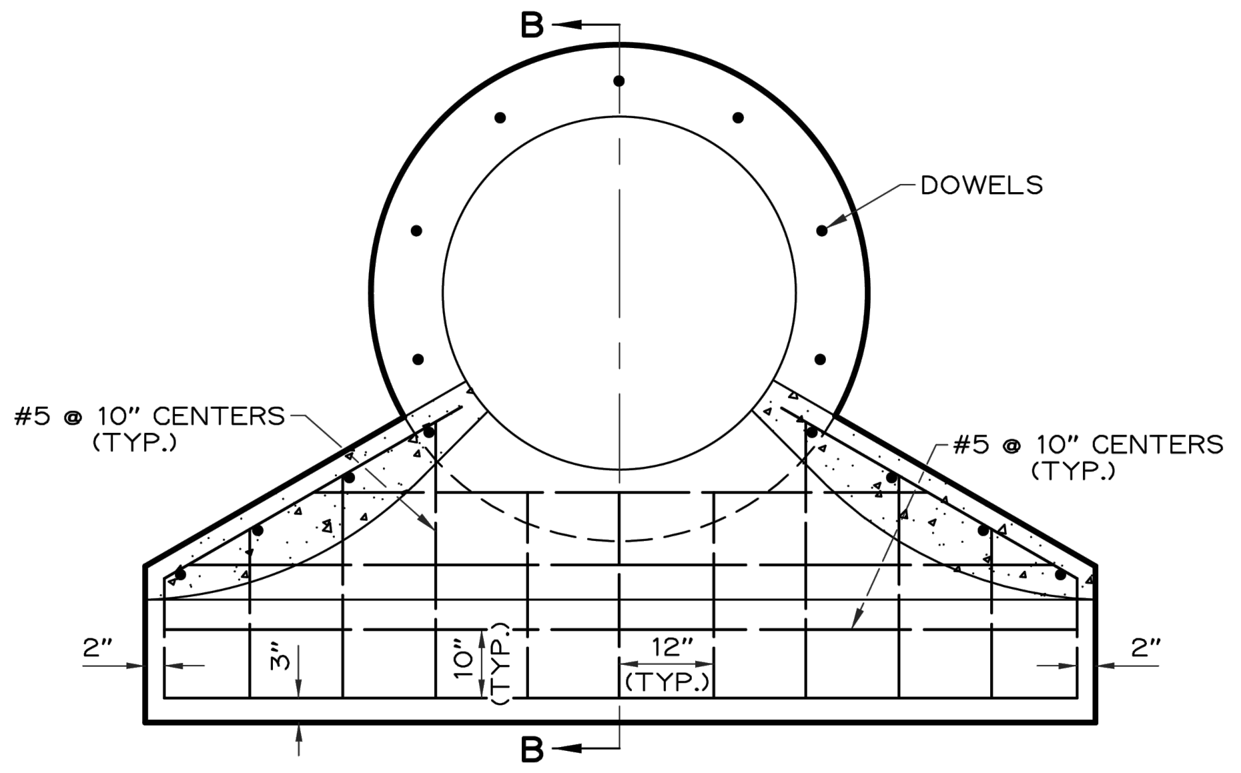
CURB INLET DETAIL

The City of Palm Bay Florida	CITY OF PALM BAY PUBLIC WORKS DEPARTMENT	STANDARD ROAD DETAIL SR - 06 (1 OF 4)	DATE: APRIL 2019 APPROVED: ________

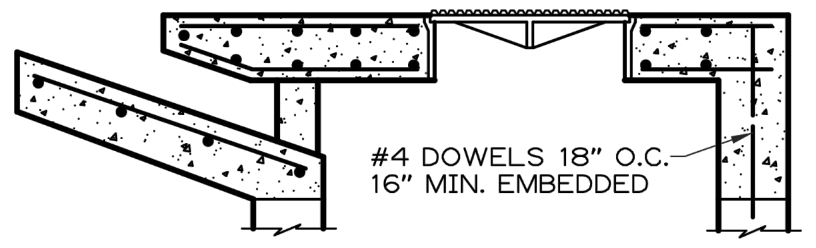

2" (TYP.)
#5 @ 8" CENTERS (TYP.)
*
*
*
*
8" (TYP.)
5"
8"
6"
6"
5"
8" (TYP.)
#5 @ 8" CENTERS (TYP.)
3"

BARS SHOWN IN "PLAN OF TOP SLAB" ARE DUPLICATED AT TOP AS WELL AS BOTTOM OF SLAB. THOSE MARKED W/ASTERISK (*) ARE IN BOTTOM OF SLAB ONLY.

PLAN OF TOP SLAB


B
DOWELS
#5 @ 10" CENTERS (TYP.)
#5 @ 10" CENTERS (TYP.)
2"
3"
10" (TYP.)
12" (TYP.)
2"
B

PLAN BELOW TOP SLAB


#4 DOWELS 18" O.C. 16" MIN. EMBEDDED

SECTION B-B

CURB INLET REINFORCING DETAIL

The City of Palm Bay Florida	CITY OF PALM BAY PUBLIC WORKS DEPARTMENT	STANDARD ROAD DETAIL SR - 06 (2 OF 4)	DATE: APRIL 2019 APPROVED: ________

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CITY OF PALM BAY STANDARD DETAILS

7-11 PALM BAY

CITY OF PALM BAY
FLORIDA

SHEET NUMBER
C8.4