

601 UNIVERSE BOULEVARD,
JUNO BEACH, FL 33408
CIVIL ENGINEERING PLANS

PREPARED FOR:
LIFESPACE COMMUNITIES
WEST DES MOINES, IA 50266



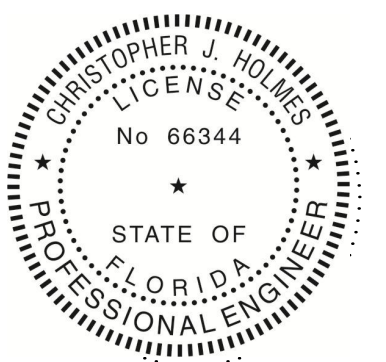
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CONSULTANTS:

PROJECT TITLE:

THE WATERFORD
INDEPENDENT LIVING & MEMORY CARE
EXPANSION
601 UNIVERSE BOULEVARD
JUNO BEACH, FLORIDA 33408

ENGINEER OF RECORD
CHRIS J. HOLMES, PE
P.E. #66344
ON 2025-12-01



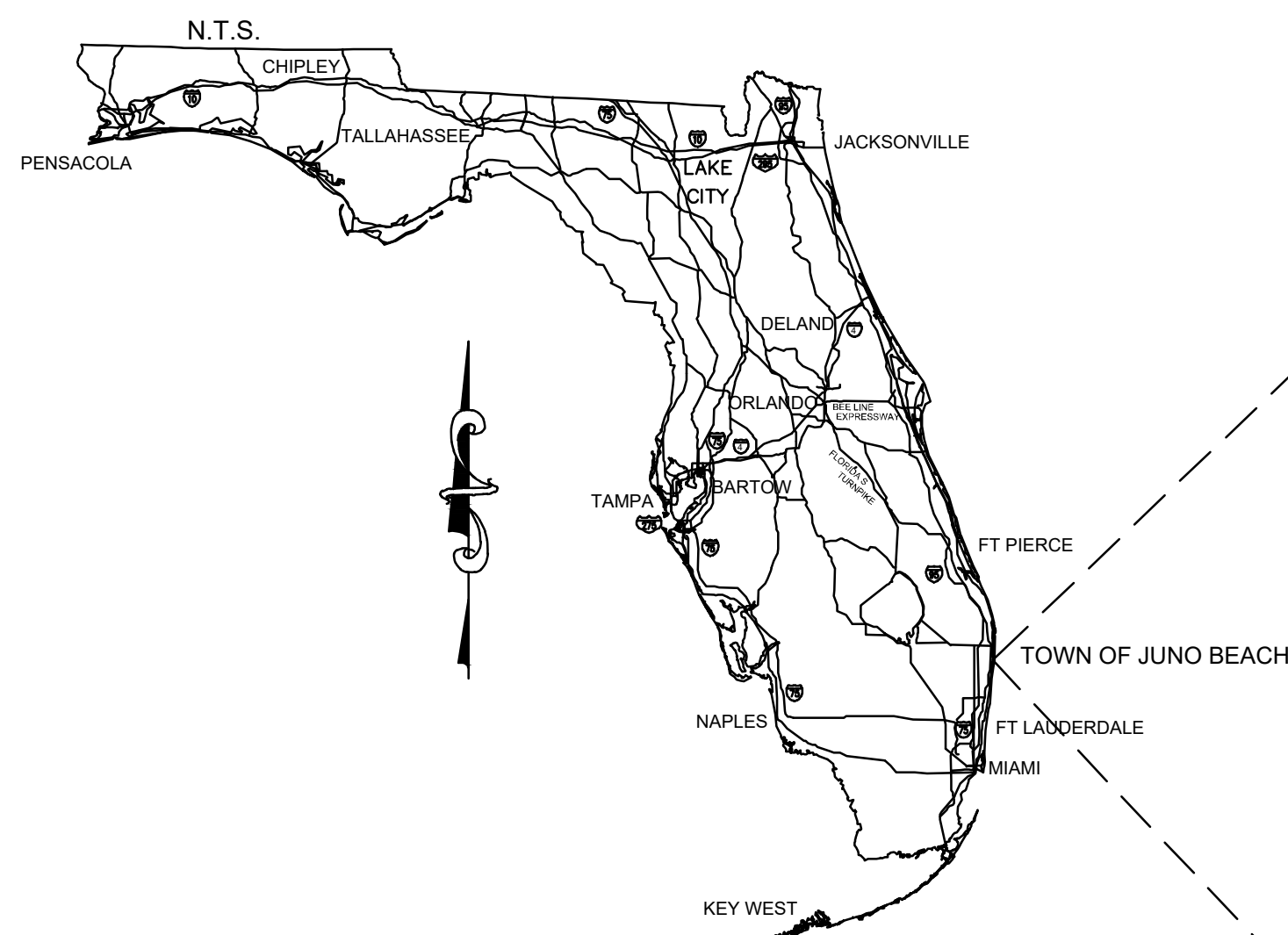
Christopher J Holmes

NO.	DATE:	DESCRIPTION:
1	12/01/2025	ISSUED FOR CONSTRUCTION

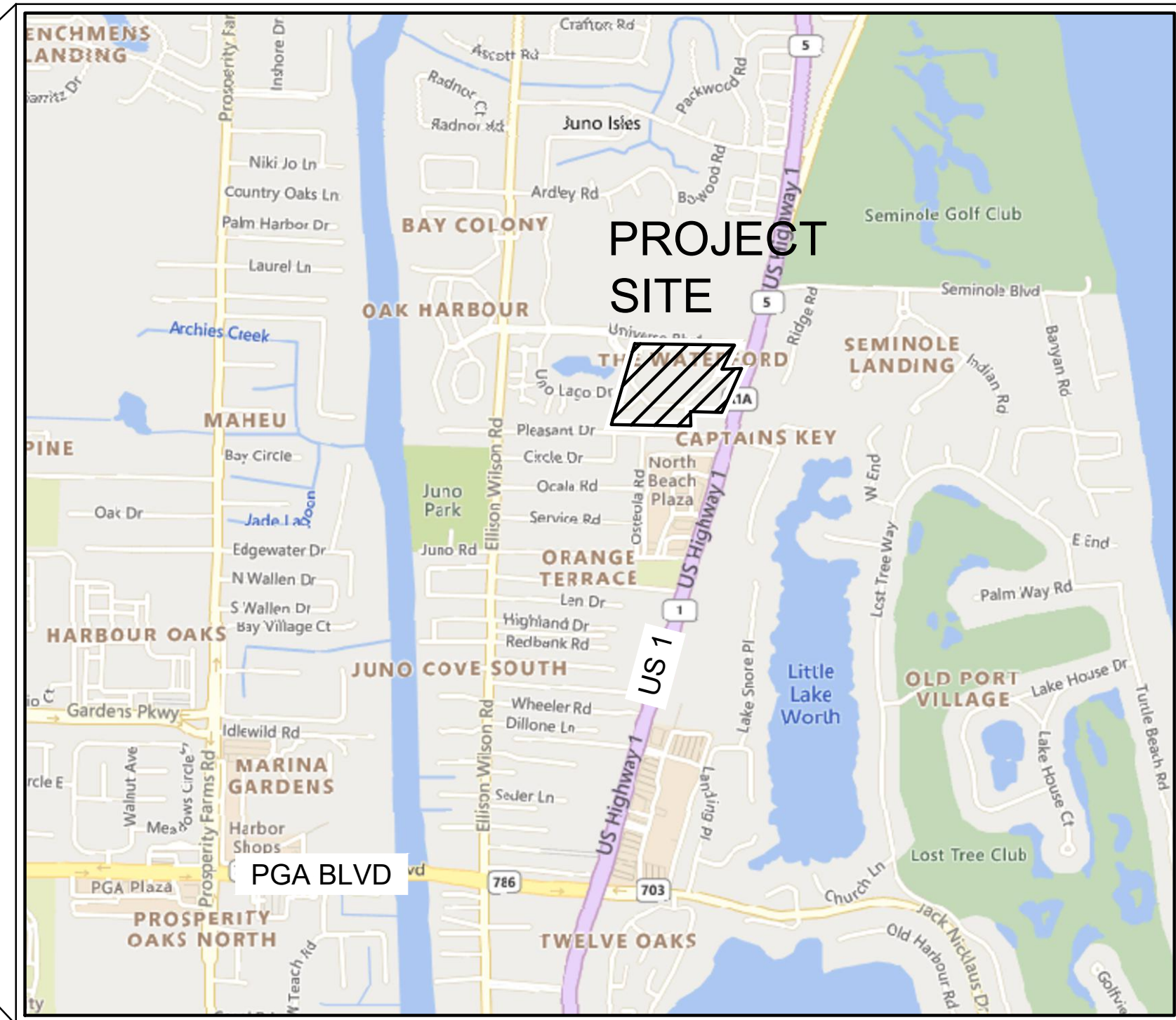
DRAWN DATE:	12/1/2025
DRAWN BY:	LL/GAT
CHECKED BY:	CJH
PROJECT #:	2920.04

CIVIL ENGINEERING PLANS

SHEET #:	TOTAL SHEETS
C-001	23



LOCATION MAP



PROJECT LOCATED IN
SECTION 33 / TOWNSHIP 41 SOUTH / RANGE 43 EAST
PALM BEACH COUNTY, FL

PERMIT TRACKING			
PERMITTING AGENCY	PERMIT NAME	PERMIT NUMBER	EXPIRATION DATE
SFWMD	ERP		
PBC HEALTH DEPARTMENT	WATER PERMIT		
PBC HEALTH DEPARTMENT	SEWER PERMIT		
PBC FIRE RESCUE	FIRE REVIEW		
SEACOAST UTILITY AUTHORITY			

VERTICAL DATUM: NORTH AMERICAN VERTICAL
DATUM OF 1988 (NAVD88)

HORIZONTAL DATUM: NORTH AMERICAN DATUM OF 1983, FLORIDA STATE PLANES, EAST ZONE, U.S. FEET (NAD83)



Sheet Number	Sheet Title
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C-002	GENERAL NOTES
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C-101	SITE DEMOLITION PLAN
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GENERAL CONSTRUCTION NOTES

- STANDARDS AND SPECIFICATIONS: ALL MATERIALS, CONSTRUCTION METHODS, WORKMANSHIP, EQUIPMENT, SERVICES AND TESTING FOR ALL PUBLIC AND PRIVATE IMPROVEMENTS SHALL BE IN ACCORDANCE WITH THE GOVERNING TOWN OF JUNO BEACH ORDINANCES, REGULATIONS, REQUIREMENTS, STATUTES, SPECIFICATIONS AND DETAILS. LATEST PRINTING AND AMENDMENTS THERETO TOWN OF JUNO BEACH PUBLIC WORKS AND WATER DEPARTMENT REQUIREMENTS, PLUMBING CODES, AND FIRE DEPARTMENT REGULATIONS SHALL TAKE PRECEDENCE.
- EXAMINATION OF PLANS: PRIOR TO COMMENCING ANY CONSTRUCTION, THE CONTRACTOR SHALL FAMILIARIZE THEMSELVES WITH THE CONTRACT DOCUMENTS AND SPECIFICATIONS. FAILURE ON THE PART OF THE CONTRACTOR TO FAMILIARIZE THEMSELVES WITH ALL STANDARDS AND SPECIFICATIONS PERTAINING TO THE WORK SHALL IN NO WAY RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR PERFORMING THE WORK IN ACCORDANCE WITH ALL SUCH APPLICABLE STANDARDS AND SPECIFICATIONS.
- EXAMINATION OF SITE: THE CONTRACTOR SHALL BE RESPONSIBLE FOR INVESTIGATING AND SATISFYING THEMSELVES AS TO THE CONDITIONS AFFECTING THE WORK, INCLUDING BUT NOT RESTRICTED TO THOSE BEARING UPON TRANSPORTATION, DISPOSAL, HANDLING AND STORAGE OF MATERIALS, AVAILABILITY OF LABOR, WATER, ELECTRICAL POWER, RADARS AND UNCERTAINTIES OF WEATHER, OR SIMILAR PHYSICAL CONDITIONS AT THE SITE. CONDITIONS OF THE GROUND, THE CHARACTER OF EQUIPMENT AND FACILITIES NEEDED PRELIMINARY TO AND DURING THE PERFORMANCE OF THE WORK, FAILURE BY THE CONTRACTOR TO ACQUAINT THEMSELVES WITH THE AVAILABLE INFORMATION WILL NOT RELIEVE THEM FROM RESPONSIBILITY FOR ESTIMATING THE DIFFICULTY OR COST OF SUCCESSFULLY PERFORMING THE WORK.
- SUBSURFACE INVESTIGATION: SUBSURFACE EXPLORATION TO ASCERTAIN THE NATURE OF SOILS HAS BEEN PERFORMED BY THE GEOTECHNICAL ENGINEER OF RECORD ON THE PROJECT. THE SUBSURFACE INFORMATION WILL BE MADE AVAILABLE FOR THE CONTRACTOR'S USE. THE ENGINEER DISCLAIMS ANY RESPONSIBILITY FOR THE ACCURACY, TRUTH, LOCATION AND EXTENT OF THE SOILS INFORMATION PREPARED BY OTHERS.
- TOPOGRAPHIC SURVEY: TOPOGRAPHIC SURVEY INFORMATION SHOWN ON THE PLANS IS PROVIDED FOR INFORMATIONAL PURPOSES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THAT THE INFORMATION SHOWN IS CORRECT, AND SHALL NOTIFY THE ENGINEER IMMEDIATELY OF ANY ERRORS, DISCREPANCIES OR OMISSIONS TO THE SURVEY INFORMATION PROVIDED.
- COMPLIANCE WITH LAWS: THE CONTRACTOR SHALL FULLY COMPLY WITH ALL LOCAL, STATE AND FEDERAL LAWS, INCLUDING ALL CODES, ORDINANCES AND REGULATIONS APPLICABLE TO THIS CONTRACT AND THE WORK TO BE DONE THEREUNDER, WHICH EXIST OR MAY BE ENACTED LATER BY GOVERNMENTAL BODIES HAVING JURISDICTION OR AUTHORITY FOR SUCH ENACTMENT. ALL WORK REQUIRED UNDER THIS CONTRACT SHALL COMPLY WITH ALL REQUIREMENTS OF LAW, REGULATION, PERMIT OR LICENSE. IF THE CONTRACTOR FINDS THAT THERE IS A VARIANCE, THEY SHALL IMMEDIATELY REPORT THIS TO THE OWNER FOR RESOLUTION.
- PUBLIC CONVENIENCE AND SAFETY: IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERITY DURING THE PERFORMANCE OF THE WORK. THE CONTRACTOR SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO THE NORMAL WORKING HOURS. MATERIALS STORED ON THE WORK SITE SHALL BE PLACED, AND THE WORK SHALL AT ALL TIMES BE SO CONDUCTED, AS TO CAUSE NO GREATER OBSTRUCTION TO THE TRAVELING PUBLIC THAN IS CONSIDERED APPROPRIATE BY THE GOVERNING AUTHORITIES AND THE OWNER AND NOT TO PREVENT FIRE UNINTERRUPTED ACCESS TO ALL FIRE HYDRANTS, WATER VALVES, GAS VALVES, MANHOLES AND FIRE ALARM OR POLICE CALL BOXES IN THE VICINITY.
- STORM WATER POLLUTION PREVENTION PLAN (SWPPP): THE CONTRACTOR SHALL COMPLY WITH THE CONDITIONS OF THE SWPPP WHILE CONDUCTING THEIR ACTIVITIES ON THE PROJECT.
- PERMITS AND LICENSES: THE CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS AND LICENSES NECESSARY FOR THE EXECUTION OF THE WORK AND SHALL FULLY COMPLY WITH ALL THEIR TERMS AND CONDITIONS. WHENEVER THE WORK UNDER THIS CONTRACT REQUIRES THE OBTAINING OF PERMITS FROM THE GOVERNING AUTHORITIES, THE CONTRACTOR SHALL FURNISH DUPLICATE COPIES OF SUCH PERMITS TO THE OWNER BEFORE THE WORK COVERED THEREBY IS STARTED. NO WORK WILL BE ALLOWED TO PROCEED BEFORE SUCH PERMITS HAVE BEEN OBTAINED.
- APPROVED PLANS: THE CONTRACTOR SHALL HAVE AT LEAST ONE SET OF APPROVED PLANS ON-SITE AT ALL TIMES.
- BONDS: PERFORMANCE, PAYMENT AND MAINTENANCE BONDS MAY BE REQUIRED FROM THE CONTRACTOR FOR "PUBLIC" IMPROVEMENTS. IF REQUIRED, THE CONTRACTOR SHALL PROVIDE THE BONDS IN THE FORM AND IN THE AMOUNTS AS REQUIRED BY THE GOVERNING AUTHORITIES. COSTS ASSOCIATED WITH PROVIDING THE BONDS SHALL BE INCLUDED IN THE CONTRACT AMOUNT.
- TESTING: THE TESTING AND CONTROL OF ALL MATERIALS USED IN THE WORK SHALL BE PERFORMED BY AN INDEPENDENT TESTING LABORATORY EMPLOYED AND PAID DIRECTLY BY THE OWNER. IN THE EVENT THE RESULTS OF INITIAL TESTING DO NOT COMPLY WITH THE PLANS AND SPECIFICATIONS, SUBSEQUENT TESTS NECESSARY TO DETERMINE THE ACCEPTABILITY OF MATERIALS OR CONSTRUCTION SHALL BE AT THE CONTRACTOR'S EXPENSE.
- INSPECTION: THE GOVERNING AUTHORITIES AND/OR THE OWNER WILL PROVIDE INSPECTION OF THE PROPOSED CONSTRUCTION. THE OWNER SHALL PAY THE COSTS FOR INSPECTION SERVICES. THE CONTRACTOR SHALL PROVIDE SUFFICIENT NOTICE WELL IN ADVANCE OF PENDING CONSTRUCTION ACTIVITIES TO THE GOVERNING AUTHORITIES AND/OR OWNER FOR SCHEDULING OF INSPECTION SERVICES.
- SHOP DRAWINGS: THE CONTRACTOR SHALL HAVE PREPARED, REVIEW, AND SUBMIT ALL SHOP DRAWINGS, PRODUCT DATA AND SAMPLES REQUIRED BY THE GOVERNING AUTHORITIES AND THE PROJECT CONTRACT DOCUMENTS.
- SURVEYING: ALL SURVEYING REQUIRED FOR CONSTRUCTION STAKING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE OWNER SHALL PROVIDE THE PROPERTY CORNERS AND TWO BENCHMARKS FOR EACH LOT. THE CONTRACTOR SHALL EMPLOY A REGISTERED PROFESSIONAL LAND SURVEYOR TO PERFORM ALL ADDITIONAL SURVEY, LAYOUT AND MEASUREMENT WORK NECESSARY FOR THE COMPLETION OF THE PROJECT. THE COSTS ASSOCIATED WITH THE CONSTRUCTION STAKING SHALL BE INCLUDED IN THE CONTRACT AMOUNT.
- PROTECTION OF PROPERTY CORNERS AND BENCHMARKS: THE CONTRACTOR SHALL PROTECT ALL PROPERTY CORNER MARKERS AND BENCHMARKS. WHEN ANY SUCH MARKERS OR MONUMENTS ARE IN DANGER OF BEING DISTURBED, THEY SHALL BE PROPERLY REFERENCED AND IF DISTURBED SHALL BE RESET BY A REGISTERED PUBLIC SURVEYOR AT THE EXPENSE OF THE CONTRACTOR.
- EXISTING STRUCTURES: THE PLANS SHOW THE LOCATION OF ALL KNOWN SURFACE AND SUBSURFACE STRUCTURES, HOWEVER, THE PROPERTY OWNER AND ENGINEER ASSUME NO RESPONSIBILITY FOR FAILURE TO SHOW ANY OR ALL OF THESE STRUCTURES ON THE PLANS, OR TO SHOW THEM IN THEIR EXACT LOCATION. SUCH FAILURE SHALL NOT BE CONSIDERED SUFFICIENT BASIS FOR CLAIMS FOR ADDITIONAL COMPENSATION FOR EXTRA WORK OR FOR INCREASING THE PAY QUANTITIES IN ANY MANNER WHATSOEVER, UNLESS THE OBSTRUCTION ENCOUNTERED IS SUCH AS TO REQUIRE CHANGES IN THE LINES OR GRADES, OR REQUIRE THE CONSTRUCTION OF SPECIAL WORK, FOR WHICH PROVISIONS ARE NOT MADE IN THE PLANS.
- PROTECTION OF EXISTING UTILITIES: SUNSHINE ONE CALL SYSTEM MUST BE CONTACTED (811) AT LEAST 48 HOURS PRIOR TO EXCAVATION OPERATIONS BEING PERFORMED. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT SUNSHINE ONE CALL SYSTEM. THE LOCATION OF EXISTING UTILITIES SHOWN ON THE PLANS ARE BASED ON THE BEST RECORDS AND/OR FIELD INFORMATION AVAILABLE AND ARE NOT GUARANTEED BY THE OWNER OR ENGINEER TO BE ACCURATE AS TO THE LOCATION AND DEPTH. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY LOCATIONS OF ADJACENT AND/OR CONFLICTING UTILITIES SUFFICIENTLY IN ADVANCE OF THEIR ACTIVITIES IN ORDER THAT THEY MAY NEGOTIATE ANY LOCAL ADJUSTMENTS AS NECESSARY IN THE CONSTRUCTION PROCESS TO PROVIDE ADEQUATE CLEARANCES. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS IN ORDER TO PROTECT ALL EXISTING UTILITIES, SERVICES, AND STRUCTURES ENCOUNTERED, WHETHER OR NOT THEY ARE ON THE PLANS. ANY DAMAGE TO UTILITIES RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED AT HIS EXPENSE. TO AVOID UNNECESSARY INTERFERENCES OR DELAYS, THE CONTRACTOR SHALL COORDINATE ALL UTILITY REMOVALS, REPLACEMENTS AND CONSTRUCTION WITH THE APPROPRIATE GOVERNING AUTHORITIES. THE OWNER WILL NOT BE LIABLE FOR DAMAGES DUE TO DELAY BECAUSE OF THE ABOVE.
- DAMAGE TO EXISTING FACILITIES: ALL EXISTING UTILITIES, PAVEMENT, SIDEWALKS, WALLS, FENCES, ETC. DAMAGED DURING CONSTRUCTION ACTIVITIES SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE TO A CONDITION AS GOOD OR BETTER THAN THE CONDITIONS PRIOR TO STARTING THE WORK.
- FIRE AND SAFETY SYSTEMS: THE CONTRACTOR SHALL NOT REMOVE, DISABLE, OR DISRUPT EXISTING FIRE OR LIFE SAFETY SYSTEMS WITHOUT RECEIVING PRIOR WRITTEN PERMISSION FROM THE GOVERNING AUTHORITY.
- TRENCH SAFETY: THE CONTRACTOR IS RESPONSIBLE FOR HAVING A TRENCH SAFETY PLAN PREPARED IN ACCORDANCE WITH OSHA REQUIREMENTS BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF FLORIDA FOR THE IMPLEMENTATION OF TRENCH SAFETY CONTROL MEASURES THAT WILL BE IN EFFECT DURING THE CONSTRUCTION OF THE PROJECT. THE COSTS FOR PREPARATION OF THE TRENCH SAFETY PLAN SHALL BE INCLUDED IN THE CONTRACT AMOUNT.
- ACCESS ROUTES, STAGING AREAS AND STORAGE AREAS: ALL PRIVATE HAUL ROADS AND ACCESS ROUTES AND THE LOCATION OF ALL STAGING AREAS AND STORAGE AREAS SHALL BE SUBJECT TO THE APPROVAL OF THE OWNER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING AND REPAIRING ALL ROADS AND OTHER FACILITIES USED DURING CONSTRUCTION. UPON COMPLETION OF THE PROJECT, ALL HAUL ROADS, ACCESS ROADS, STAGING AREAS AND STORAGE AREAS SHALL BE RESTORED TO A CONDITION EQUAL TO OR BETTER THAN THAT AT THE TIME THE CONTRACTOR COMMENCES WORK ON THE PROJECT.
- PARKING OF CONSTRUCTION EQUIPMENT: AT NIGHT AND DURING ALL OTHER PERIODS OF TIME WHEN EQUIPMENT IS NOT BEING ACTIVELY USED FOR THE CONSTRUCTION WORK, THE CONTRACTOR SHALL PARK THE EQUIPMENT AT LOCATIONS WHICH ARE APPROVED BY THE OWNER. DURING THE CONSTRUCTION OF THE PROJECT, THE CONTRACTOR SHALL COMPLY WITH THE PRESENT ZONING REQUIREMENTS OF THE GOVERNING AUTHORITIES IN THE USE OF VACANT PROPERTY FOR STORAGE PURPOSES. THE CONTRACTOR SHALL ALSO PROVIDE ADEQUATE BARRICADES, MARKERS AND LIGHTS TO PROTECT THE OWNER, THE GOVERNING AUTHORITIES, THE PUBLIC AND THE OTHER WORK. ALL BARRICADES, LIGHTS AND MARKERS MUST MEET THE REQUIREMENTS OF THE GOVERNING AUTHORITIES' REGULATIONS.
- WATER FOR CONSTRUCTION: THE CONTRACTOR SHALL MAKE THE NECESSARY ARRANGEMENTS FOR PURCHASING WATER FROM THE SEACOAST UTILITY AUTHORITY FOR THEIR USE ON THE PROJECT SITE. COSTS ASSOCIATED WITH THIS SERVICE SHALL BE INCLUDED IN THE CONTRACT AMOUNT.
- TEMPORARY ELECTRIC AND COMMUNICATIONS FOR CONSTRUCTION: THE CONTRACTOR SHALL MAKE THE NECESSARY ARRANGEMENTS FOR INSTALLATION AND PURCHASING OF TEMPORARY ELECTRIC AND COMMUNICATIONS SERVICES FROM FLORIDA POWER AND LIGHT FOR THEIR USE ON THE PROJECT SITE. COSTS ASSOCIATED WITH PURCHASING THESE SERVICES SHALL BE INCLUDED IN THE CONTRACT AMOUNT.
- FENCES: ALL FENCES ENCOUNTERED AND REMOVED DURING CONSTRUCTION, EXCEPT THOSE DESIGNATED TO BE REMOVED OR RELOCATED, SHALL BE RESTORED TO THE ORIGINAL OR BETTER THAN ORIGINAL UPON COMPLETION OF THE PROJECT. WHERE WIRE FENCING, EITHER WIRE MESH OR BARBED WIRE, IS NOT TO BE CROSSED, THE CONTRACTOR SHALL POST THE CROSS-BARRED POSTS WITH THE CROSSING. TEMPORARY FENCING SHALL BE ERECTED IN PLACE OF THE FENCING REMOVED WHENEVER THE WORK IS NOT IN PROGRESS AND WHEN THE SITE IS VACATED OVERNIGHT AND/OR AT ALL TIMES TO PREVENT PERSONS AND/OR LIVESTOCK FROM ENTERING THE CONSTRUCTION AREA. THE COST OF FENCE REMOVAL, TEMPORARY CLOSURES AND REPLACEMENT SHALL BE INCLUDED IN THE CONTRACT AMOUNT.
- COORDINATION WITH OTHERS: IN THE EVENT THAT OTHER CONTRACTORS ARE DOING WORK IN THE SAME AREA SIMULTANEOUSLY WITH THE PROJECT, THE CONTRACTOR SHALL COORDINATE THEIR PROPOSED CONSTRUCTION

WITH THAT OF THE OTHER CONTRACTORS.

- CONDITION OF SITE DURING CONSTRUCTION: THE CONTRACTOR SHALL KEEP THE SITE OF THE WORK AND ADJACENT PREMISES AS FREE FROM MATERIAL, DEBRIS AND RUBBISH AS IS PRACTICABLE. THE CONTRACTOR SHALL REMOVE RUBBISH AND ANY PORTION OF THE SITE IF, IN THE OPINION OF THE OWNER, SUCH MATERIAL, DEBRIS OR RUBBISH CONSTITUTES A NUISANCE OR IS OBJECTIONABLE.
- EXISTING ROADWAYS: THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE CLEANLINESS OF EXISTING PAVED ROADS. COSTS ASSOCIATED WITH MAINTAINING THE CLEANLINESS OF EXISTING ROADS SHALL BE INCLUDED IN THE CONTRACT AMOUNT.
- CONTROL: THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO CONTROL DUST ON THE PROJECT SITE BY SPRINKLING OF WATER, OR ANY OTHER METHODS APPROVED BY THE GOVERNING AUTHORITIES. COSTS ASSOCIATED WITH DUST CONTROL SHALL BE INCLUDED IN THE CONTRACT AMOUNT.
- CLEAN UP FOR FINAL ACCEPTANCE: THE CONTRACTOR SHALL MAKE A FINAL CLEAN UP OF ALL PARTS OF THE WORK PRIOR TO ACCEPTANCE BY THE OWNER. THIS CLEAN UP SHALL INCLUDE REMOVAL OF ALL OBJECTIONABLE MATERIALS AND, IN GENERAL, PREPARING THE SITE OF THE WORK IN AN ORDERLY MANNER OF APPEARANCE.
- REMOVAL OF DEFECTIVE AND UNAUTHORIZED WORK: ALL WORK, WHICH HAS BEEN REJECTED OR CONDEMNED, SHALL BE REPAIRED, OR IF IT CANNOT BE REPAIRED SATISFACTORILY, IT SHALL BE REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE. DEFECTIVE MATERIALS SHALL BE IMMEDIATELY REMOVED FROM THE WORK SITE. WORK DONE BEYOND THE LINE OR NOT IN CONFORMITY WITH THE GRADES SHOWN ON THE DRAWINGS OR AS PROVIDED, WORK DONE WITHOUT REQUIRED INSPECTION, OR ANY EXTRA OR UNCLASSIFIED WORK DONE WITHOUT WRITTEN AUTHORITY AND PRIOR AGREEMENT IN WRITING AS TO PRICES, SHALL BE AT THE CONTRACTOR'S RISK, AND WILL BE CONSIDERED UNAUTHORIZED, AND AT THE OPTION OF THE OWNER MAY NOT BE MEASURED AND PAID FOR AND MAY BE ORDERED REMOVED AT THE CONTRACTOR'S EXPENSE. UPON FAILURE OF THE CONTRACTOR TO REPAIR SATISFACTORILY OR TO REMOVE AND REPLACE, IF SO DIRECTED, REJECTED, UNAUTHORIZED OR CONDEMNED WORK OR MATERIALS IMMEDIATELY AFTER RECEIVING NOTICE FROM THE OWNER, THE OWNER WILL, AFTER GIVING WRITING NOTICE TO THE CONTRACTOR, HAVE THE AUTHORITY TO CAUSE DEFECTIVE WORK TO BE REMEDIED OR REMOVED AND REPLACED, OR TO CAUSE UNAUTHORIZED WORK TO BE REMOVED AND TO DEDUCT THE COST THEREOF ANY MONIES DUE TO OR BECOME DUE TO THE CONTRACTOR.
- DISPOSITION AND DISPOSAL OF EXCESS AND UNSUITABLE MATERIAL: ALL MATERIALS TO BE REMOVED FROM THE SITE INCLUDING BUT NOT LIMITED TO EXCESS MATERIAL AND UNSUITABLE MATERIALS SUCH AS CONCRETE, ASPHALT, LARGE ROCKS, REFUSE, AND OTHER DEBRIS SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF OUTSIDE THE LIMITS OF THE PROJECT. CONTRACTOR SHALL ALSO COMPLY WITH ALL APPLICABLE LAWS GOVERNING SPILLAGE OF DEBRIS WHILE TRANSPORTING TO A DISPOSAL SITE. COSTS ASSOCIATED WITH THE DISPOSAL OF EXCESS AND UNSUITABLE MATERIALS SHALL BE INCLUDED IN THE CONTRACT AMOUNT.
- RECORD DRAWINGS: THE CONTRACTOR SHALL MAINTAIN AN ACCURATE RECORD OF THE INSTALLATION OF ALL MATERIALS AND SYSTEMS COVERED BY THE PROJECT CONTRACT DOCUMENTS. THE COMPLETED SET OF "RECORD" DRAWINGS MUST BE DELIVERED TO THE OWNER AND/OR ENGINEER BEFORE REQUESTING FINAL PAYMENT.
- TRAFFIC CONTROL SHALL BE PROVIDED IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS FOR ACCESS TO AND FROM THE SITE.
- CONTRACTOR TO COORDINATE FINAL LOCATION OF ELECTRICAL, TELEPHONE, AND GAS SERVICE WITH EACH RESPECTIVE UTILITY COMPANY, AND SHALL INCLUDE ALL ASSOCIATED COSTS IN BID.
- CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL OR RELOCATION OF ON-SITE POWER POLES AS REQUIRED TO COMPLETE THE WORK.
- IN THE EVENT THAT EXISTING UTILITIES SUCH AS WATER, GAS, TELEPHONE, ELECTRIC, ETC., MUST BE TAKEN OUT OF SERVICE TO FACILITATE CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE TEMPORARY UTILITIES TO THE SATISFACTION OF THE OWNER.
- THE CONTRACTOR SHALL USE EXTREME CAUTION WHEN WORKING IN AREAS ADJACENT TO GAS LINES, UNDERGROUND ELECTRIC CABLE, FIBER OPTIC CABLE AND UNDERGROUND TELEPHONE CABLE.
- WHERE EXISTING UTILITIES OR SERVICE LINES ARE CUT, BROKEN OR DAMAGED, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER OF THE RESPECTIVE UTILITY. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING OR REPAIRING UTILITIES OR SERVICE LINES WITH THE SAME TYPE AND MATERIAL, MATERIAL AND CONSTRUCTION, OR BETTER, UNLESS OTHERWISE SHOWN OR NOTED ON THE PLANS. THE CONTRACTOR SHALL ALSO NOTIFY THE ENGINEER OF ANY CONFLICTS IN GRADES AND ALIGNMENT.

DIMENSION CONTROL NOTES

- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE AND VERIFY THE BOUNDARY MONUMENTATION AND THE PROJECT BENCHMARKS PRIOR TO COMMENCING CONSTRUCTION. THE BOUNDARY MONUMENTATION SHALL BE USED AS HORIZONTAL PROJECT CONTROL AND SHALL BE PROTECTED BY THE CONTRACTOR DURING ALL PHASES OF CONSTRUCTION.
- ALL DIMENSIONS AND COORDINATES ARE TO FACE OF CURB, EDGE OF PAVEMENT, FACE OF BUILDING, OR PROPERTY LINE UNLESS NOTED OTHERWISE. ALL CURB RADIUS SHALL BE 3.0' MINIMUM UNLESS NOTED OTHERWISE.
- CONTRACTOR SHALL REFER TO ARCHITECTURAL AND STRUCTURAL PLANS FOR EXACT LOCATION AND DIMENSIONS OF ARCHITECTURAL OR STRUCTURAL FEATURES.

DEMOLITION NOTES

- ALL WORK SHALL CONFORM TO LOCAL, STATE, AND FEDERAL STANDARDS AND SPECIFICATIONS.
- ALL DEMOLITION AND EXCAVATED MATERIALS SHALL BE PROPERLY DISPOSED OFF SITE IN ACCORDANCE WITH LOCAL STATE AND FEDERAL REGULATIONS.
- EROSION CONTROL DEVICES SHALL BE INSTALLED PRIOR TO COMMENCING DEMOLITION OPERATIONS.

PAVING NOTES

- STANDARDS AND SPECIFICATIONS: ALL MATERIALS, CONSTRUCTION METHODS, WORKMANSHIP, EQUIPMENT, SERVICES AND TESTING FOR ALL IMPROVEMENTS SHALL BE IN ACCORDANCE WITH THE PROJECT DOCUMENTS AND THE GOVERNING AUTHORITIES' REQUIREMENTS. IN THE EVENT OF A CONFLICT BETWEEN THE PROJECT DOCUMENTS AND THE GOVERNING AUTHORITIES' REQUIREMENTS, THE MORE STRINGENT SHALL APPLY.
- GEOTECHNICAL REPORT: SUBGRADE PREPARATION AND PAVEMENT STRENGTH AND THICKNESS SHALL BE IN ACCORDANCE WITH THE GEOTECHNICAL REPORT PREPARED FOR THIS PROJECT AND SUPPLEMENTS AND/OR AMENDMENTS THERETO.
- PAVEMENT WARRANTY: THE CONTRACTOR SHALL PROVIDE A TWO (2) YEAR UNCONDITIONAL MAINTENANCE FREE WARRANTY ON ALL PAVED SURFACES.
- PROOF-ROLL SUBGRADE: PRIOR TO PREPARATION OF THE SUBGRADE, THE SUBGRADE SHALL BE PROOF-ROLLED WITH HEAVY PNEUMATIC EQUIPMENT. ANY SOFT OR PUMPING AREAS SHALL BE EXCAVATED TO FIRM SUBGRADE AND BACKFILLED AND COMPACTED IN ACCORDANCE WITH THE GEOTECHNICAL REPORT.
- PAVEMENT SUBGRADE PREPARATION: PAVEMENT SUBGRADE SHALL BE PREPARED IN ACCORDANCE WITH THE GEOTECHNICAL REPORT.
- SAND CUSHION PROHIBITED: THE USE OF "LEVEL UP" SAND UNDER PAVEMENT WILL NOT BE ACCEPTED.
- CONCRETE PAVEMENT DESIGN: ALL ON SITE CONCRETE PAVEMENTS SHALL BE THE THICKNESS, COMPRESSIVE STRENGTH (28 DAYS) AND REINFORCED AS SHOWN ON THE PAVING PLANS AND DETAILS. HAND PLACED CONCRETE SHALL HAVE A WATER-CEMENT RATIO TO PRODUCE A MINIMUM OF 3 TO 1 DETAILED OF 6 INCH SLUMP AND CONTAIN PERCENT-ENTRAINED AIR RANGING FROM 3 TO 6.
- WEATHER CONDITIONS FOR CONCRETE PLACEMENT: CONCRETE SHALL NOT BE PLACED WHEN THE TEMPERATURE IS BELOW 40 DEGREES FAHRENHEIT AND FALLING, BUT MAY BE PLACED WHEN THE TEMPERATURE IS ABOVE 36 DEGREES AND RISING. THE TEMPERATURE READING SHALL BE TAKEN IN THE SHADE AWAY FROM ARTIFICIAL HEAT. DO NOT PLACE CONCRETE WHILE IT IS RAINING OR RAIN IS IMMINENT.
- CONCRETE PAVEMENT CURING: CONCRETE SHALL BE BROOM FINISHED AND CURED FOR A MINIMUM OF 72 HOURS.
- PAVEMENT JOINTING:
 - JOINT LAYOUT: CONTRACTOR SHALL PREPARE A JOINT LAYOUT AND PROVIDE IT TO THE ENGINEER FOR REVIEW. THE JOINT LAYOUT MUST BE PROVIDED A MINIMUM OF ONE (1) WEEK PRIOR TO PLACING PAVEMENT. JOINTS SHALL BE SPACED AS FOLLOWS:
 - CONCRECTION JOINT SPACING: 12" ON CENTER SPACED, 14" LONG, 3/4" DIAMETER DOWELS SHALL HAVE A MAXIMUM JOINT SPACING OF LESS THAN 30 TIMES THE THICKNESS OF THE CONCRETE PAVEMENT OR 15 FEET, WHICHEVER IS SMALLER (PER THE GEOTECH REPORT).
 - SAW CUTTING: SAW CUTTING SHALL BE DONE WITHIN 8 HOURS OF POUR OR AS SOON AS CONCRETE CAN SUPPORT WEIGHT. ALL SAWED JOINTS ARE TO BE TRUE IN ALIGNMENT AND SHALL CONTINUE THROUGH THE CURB. RADIAL JOINTS SHALL BE NO SHORTER THAN 18 INCHES.
 - JOINT SEALING: ALL CONSTRUCTION JOINTS SHALL BE SAWN, CLEANED OF DEBRIS, DIRT, DUST, SCALE, CURING COMPOUND AND CONCRETE, BLOWN BY AND IMMEDIATELY SEALED. SEALANT MATERIAL SHALL BE SONNEBORN SONOLASTIC S-2 MULTI-COMPONENT, SELF-LEVELLING, ELASTOMERIC POLYURETHANE OR EQUIVALENT. SEALANT COLOR SHALL MATCH PAVEMENT. THE CONTRACTOR SHALL SUBMIT SEALANT SPECIFICATIONS/COLOR TO THE ENGINEER FOR REVIEW PRIOR TO PLACEMENT.
- PAVEMENT REMOVAL: BREAKOUTS FOR REMOVAL OF EXISTING PAVEMENT AND CURBS SHALL BE MADE BY FULL DEPTH SAW CUT WHEN ADJACENT TO PROPOSED PAVEMENT AND/OR CURBS.
- CONNECTION TO EXISTING PAVEMENT: PROPOSED PAVEMENT AND/OR CURBS SHALL MATCH THE ELEVATION OF EXISTING PAVEMENT AND/OR CURBS.
- PAVEMENT MARKINGS:
 - PAVEMENT MARKINGS SHALL BE PROVIDED IN ACCORDANCE WITH THE FOOT "UNIFORM TRAFFIC MANUAL FOR PAVEMENT MARKINGS AND PALM BEACH COUNTY T-P-24 (PALM BEACH COUNTY TYPICALS FOR PAVEMENT MARKINGS, SIGNING & GEOMETRICS)."
 - FIRE LANES SHALL BE STRIPED IN ACCORDANCE WITH THE GOVERNING AUTHORITIES' LOCAL CODES.
 - ALL ACCESSIBLE PAVEMENT MARKINGS SHALL COMPLY WITH ADAAG STANDARDS AND STATE AND LOCAL CODES.
 - PARKING SPACE STRIPES, ACCESSIBLE SPACES, PEDESTRIAN STRIPING, DIRECTIONAL ARROWS AND LETTERING SHALL BE SOLID WHITE, UNLESS A SPECIFIC COLOR IS REQUIRED BY LOCAL CODE. TWO (2) COATS OF COG COMPLIANT, LOCAL DOT APPROVED, UNDLIUTED, SOLVENT BASED OR LATEX TRAFFIC PAINT SHALL BE APPLIED EARLIER THAN 7 DAYS PRIOR TO THE STORE OPENING. PAINT SHALL BE CRISP, STRAIGHT AND APPLIED UNIFORMLY ACROSS THE WIDTH OF THE LINE FOR A MINIMUM TOTAL DRY FILM THICKNESS OF 15 MILS.

WATER AND SANITARY SEWER NOTES

- THE CONTRACTOR SHALL INSTALL WATER AND SEWER LINES SO AS TO AVOID CONFLICTS WITH OTHER UTILITIES. WATER AND SANITARY SEWER SEPARATIONS SHALL BE MAINTAINED PER SEACOAST UTILITY AUTHORITY REGULATIONS.
- THE CONTRACTOR SHALL INSTALL ALL GRAVITY LINES (SANITARY SEWER, STORM SEWER AND FRENCH DRAINS) BEFORE INSTALLATION OF WATER LINES AND APPURTENANCES.
- IF GROUNDWATER IS ENCOUNTERED WHEN LAYING UTILITY LINES, 3/4" WASHED ROCK MUST BE PLACED 6" ABOVE THE LINE AND ABOVE THE UTILITY LINES.
- CONTRACTOR SHALL COORDINATE INSTALLATION OF UTILITIES IN SUCH A MANNER AS TO AVOID CONFLICTS AND TO ASSURE PROPER DEPTHS ARE ACHIEVED. CONTRACTOR SHALL ADHERE TO THE REQUIREMENTS OF SEACOAST UTILITY AUTHORITY.
- THE CONTRACTOR SHALL COORDINATE INSPECTION AND TESTING ON ALL WATER AND SEWER UTILITIES WITH THE ENGINEER AND SEACOAST UTILITY AUTHORITY.
- ALL FIRE PROTECTION WORK MUST BE PERMITTED AND APPROVED BY THE APPLICABLE PALM BEACH COUNTY FIRE AND RESCUE.
- CONTRACTOR IS RESPONSIBLE FOR ADJUSTING ALL VALVE BOXES, HYDRANTS, SEWER CLEAN OUTS AND MANHOLE RIMS TO FINAL GRADE.
- PRIOR TO COMMENCING CONSTRUCTION, CONTRACTOR SHALL REFERENCE MEP PLANS FOR ACTUAL BUILDING SERVICE STUB-OUT LOCATIONS.
- ALL WATER LINES SHALL COMPLY WITH THE SEACOAST UTILITY AUTHORITY REGULATIONS. WATER PIPE MATERIALS TO BE USED ON THIS PROJECT, UNLESS NOTED OTHERWISE, ARE PVC, CLASS 150, DR-18, AWWA C900.
- CORPORATION STOPS SHOULD BE TESTED FOR LEAKAGE AND FULL FLOW WHEN SYSTEM IS PRESSURE TESTED.
- WATER AND SANITARY SEWER LINES SHALL BE INSTALLED AS SHOWN ON THE PLANS. HOWEVER, FIELD ADJUSTMENTS APPROVED BY THE ENGINEER AND SEACOAST UTILITY AUTHORITY MAY BE MADE TO LESSEN DAMAGE TO THE ROAD PAVEMENT OR WHEN OTHER UTILITY LOCATIONS, TREES, OR STRUCTURES WARRANT SUCH AN ADJUSTMENT.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR DISINFECTION, CHLORINATION AND FLUSHING REQUIREMENTS. THIS SHALL INCLUDE PROVIDING TEMPORARY ISOLATION VALVES, PLUGS, INJECTION POINTS, FLUSHING VALVES, TOOLS AND EQUIPMENT NECESSARY TO COMPLETE THE TASK. THE CONTRACTOR SHALL CONTACT THE WATER UTILITY 48 HOURS PRIOR TO FLUSHING OF WATER LINES.
- ALL WATER LINE FITTINGS ARE TO BE DUCTILE IRON MECHANICAL JOINTS.
- HORIZONTAL BLOCKING HAS BEEN OMITTED FOR CLARITY. HOWEVER, BLOCKING SHALL BE CONSTRUCTED PER TOWN OF JUNO BEACH STANDARDS AND MUST BE IN ACCORDANCE WITH APPLICABLE CITY'S DETAILS. CONCRETE BLOCKING SHALL BE PLACED AT ALL VALVES, BENDS, TEES AND PLUGS. DO NOT COVER BELLS OR FLANGES WITH CONCRETE. ANY EXISTING THURST BLOCKS OR RESTRAINED SHALL BE REPAIRED BY THE UTILITY CONTRACTOR TO ALLOW HIS WORK TO PROCEED. THE REPLACEMENT, WHERE REQUIRED, SHALL BE AT THE CONTRACTOR'S EXPENSE.
- TOP OF WATER LINES (DOMESTIC AND FIRE) SHALL BE INSTALLED WITH A MINIMUM COVER OF 36 INCHES, UNLESS NOTED OTHERWISE. IN THE EVENT THAT MINIMUM COVER CANNOT BE ACHIEVED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY.
- IN THE EVENT OF A CONFLICT BETWEEN WATER LINES AND STORM DRAIN PIPING, THE CONTRACTOR SHALL ADJUST THE WATER LINE DOWNWARD IN SUCH A MANNER SO THAT THE PIPE MANUFACTURER'S RECOMMENDATIONS ON PIPE DEFLECTION AND JOINT STRESS ARE NOT EXCEEDED.
- CONTRACTOR SHALL CONDUCT A PRESSURE TEST ON ALL FIRE PROTECTION LINES TO THE SATISFACTION OF THE FIRE MARSHAL.
- ALL VALVES AT THE END OF A LINE SHALL BE PLUGGED AND BLOCKED.
- FIRE HYDRANTS SHALL BE LOCATED IN ACCORDANCE WITH SEACOAST UTILITY AUTHORITY STANDARDS.
- FIRE HYDRANT ASSEMBLY BID ITEMS WILL INCLUDE THE FIRE HYDRANT, THE PIPE EXTENSION FROM THE TEE, AND ALL NECESSARY FITTINGS INCLUDING THE 6" GATE VALVE. ALL VALVES AND FIRE HYDRANTS SHALL BE PER SEACOAST UTILITY AUTHORITY REQUIREMENTS.
- UPON COMPLETION OF SANITARY SEWER LINE CONSTRUCTION, THE CONTRACTOR SHALL HAVE THE LINES TESTED, INCLUDING MANDREL TEST, AIR TEST, AND A T.V. INSPECTION AT NO ADDITIONAL COST TO THE OWNER.
- SANITARY SEWER PIPE MATERIALS TO BE USED ON THIS PROJECT, UNLESS NOTED OTHERWISE, ARE SDR-35 PVC, USE SDR-26 WHERE DEPTHS EXCEED 12' OR WHERE SEWER PIPE IS LESS THAN 10' HORIZONTALLY FROM WATER PIPE. ALL SANITARY SEWER PIPE AND FITTINGS SHALL CONFORM TO ASTM D3034. REFER TO SEACOAST UTILITY AUTHORITY FOR UTILITY CROSSING REQUIREMENTS.
- TRENCH BACKFILL COMPACTION SHALL BE TESTED AT THE RATE OF ONE (1) TEST PER 100 LINEAR FEET PER 12 INCH LIFT (LOOSE). TESTS SHALL BE STAGGERED SO THAT TESTS OF ADJACENT LIFTS ARE NOT DIRECTLY OVER TEST LOCATION OF PREVIOUS LIFT. BACKFILL SHALL BE COMPACTED TO 98% MAX. DENSITY IN TRAFFIC AREAS AND 90% IN NON TRAFFIC AREAS.
- WHERE CONNECTING DISTANCE BETWEEN MANHOLES EXCEEDS 100 FEET, A MINIMUM OF TWO (2) TESTS PER LIFT SHALL BE REQUIRED.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PERMITS AND FEES INCURRED IN THE INSTALLATION OF UTILITIES.
- CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING COMPACTION TO 95% STANDARD PROCTOR IN AREAS EXCAVATED AT THE BUILDING FOOTINGS FOR UTILITY SERVICE ENTRIES.
- CONTRACTOR SHALL VERIFY ALL THE COORDINATES FOR ACCURACY AND CONFIRM THE LOCATIONS OF ALL UTILITIES TO BE CONSTRUCTED, BOTH HORIZONTALLY AND VERTICALLY. ANY DISCREPANCIES FOUND BY THE CONTRACTOR SHALL BE REPORTED TO THE ENGINEER FOR VERIFICATION.
- CONTRACTOR SHALL USE OSHA APPROVED CONFINED SPACE ENTRY PROCEDURES WHEN ENTERING SANITARY SEWER MANHOLES. THE SAFETY EQUIPMENT SHALL BE FURNISHED BY THE CONTRACTOR AND SHALL BE OSHA CERTIFIED. PERSONS WORKING IN THESE AREAS SHALL BE TRAINED IN THE PROPER USE OF THE SAFETY EQUIPMENT.
- STANDARDS AND SPECIFICATIONS: ALL MATERIALS, CONSTRUCTION METHODS, WORKMANSHIP, EQUIPMENT, SERVICES, AND TESTING FOR ALL IMPROVEMENTS WILL BE IN ACCORDANCE WITH SEACOAST UTILITY AUTHORITY REGULATIONS, REQUIREMENTS, STATUTES, SPECIFICATIONS AND DETAILS, AND LATEST PRINTING AND AMENDMENTS THERETO, UNLESS OTHERWISE NOTED.
- TRENCH SAFETY: IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE A TRENCH SAFETY SYSTEM PLAN PREPARED IN ACCORDANCE WITH OSHA REQUIREMENTS BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF FLORIDA FOR THE IMPLEMENTATION OF TRENCH SAFETY CONTROL MEASURE THAT WILL BE IN EFFECT DURING THE CONSTRUCTION OF THE PROJECT.
- RECORD PLANS: THE CONTRACTOR SHALL SUBMIT RECORD DRAWINGS TO THE ENGINEER FOR REVIEW AND APPROVAL. RECORD DRAWINGS MUST BE SIGNED AND SEALED BY A PROFESSIONAL SURVEYOR REGISTERED IN THE STATE OF FLORIDA AND BE REFERENCED TO THE DATUM SHOWN IN THE CONSTRUCTION PLANS. ANY UNMARKED UTILITIES ENCOUNTERED DURING CONSTRUCTION SHALL BE INCORPORATED INTO THE RECORD DRAWINGS. ALL UTILITIES MUST BE SHOWN IN THEIR AS-BUILT LOCATION.
- TRENCHES: TRENCHES SHALL BE BACKFILLED WITH MATERIAL IN ACCORDANCE WITH THE GOVERNING AUTHORITIES' STANDARD SPECIFICATIONS AND DETAILS.
- WATER CROSSINGS: ALL SANITARY SEWER MAINS SHALL HAVE ONE (1) JOINT CENTERED ON EITHER SIDE OF WATER MAINS WHERE A CROSSING OCCURS.
- DEBRIS: SANITARY SEWER LINES SHALL BE KEPT CLEAR OF BROKEN CONCRETE DIRT OF ANY OTHER DEBRIS RESULTING FROM CONSTRUCTION OPERATIONS.
- SANITARY SEWER SERVICES: THE CONTRACTOR SHALL VERIFY THE SIZE AND EXACT LOCATION OF SANITARY SEWER SERVICES WITH THE BUILDING PLANS. THE CONTRACTOR SHALL TIE A 1" WIDE PIECE OF RED PLASTIC FLAGGING TO THE END OF EACH SEWER SERVICE AND SHALL LEAVE A MINIMUM OF 36" OF FLAGGING EXPOSED AFTER BACKFILL. AFTER CURB AND PAVING IS COMPLETED, THE CONTRACTOR SHALL MARK THE LOCATION OF SEWER SERVICE ON THE CURB IN ACCORDANCE WITH THE GOVERNING AUTHORITIES' SPECIFICATIONS.
- TESTING: ALL SANITARY SEWER LINES AND APPURTENANCES SHALL BE TESTED IN ACCORDANCE WITH SEACOAST UTILITY AUTHORITY REQUIREMENTS FOR ACCEPTANCE.

GRADING NOTES

- GEOTECHNICAL REPORT: SITE PREPARATION, GRADING, FILL COMPACTION, AND BUILDING PAD PREPARATION SHALL BE PERFORMED IN ACCORDANCE WITH THE GEOTECHNICAL REPORT PREPARED FOR THIS PROJECT BY ALTERNATE ENGINEERING & CONSULTING IN THE EVENT OF A CONFLICT BETWEEN THE RECOMMENDATIONS IN THE GEOTECHNICAL REPORT AND THE NOTES ON THE GRADING PLAN, THE GEOTECHNICAL REPORT SHALL GOVERN.
- EXISTING CONDITIONS: PRIOR TO COMMENCING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE EXISTING CONDITIONS, INCLUDING GRADES AND DIMENSIONS. THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER OF ANY DISCREPANCIES.
- UNDISTURBED AREAS: PRIOR TO COMMENCING CLEARING, GRADING OR SITE CONSTRUCTION, THE CONTRACTOR SHALL MEET WITH THE DEVELOPER AND/OR ENGINEER AT THE SITE TO ASCERTAIN THE AREA(S) OF THE PROJECT SITE THAT ARE TO BE PROTECTED AND PRESERVED.
- EROSION CONTROL: EROSION CONTROL DEVICES SHALL BE INSTALLED PRIOR TO COMMENCING CLEARING,

- STRIPPING AND GRADING OPERATIONS. REFER TO THE EROSION CONTROL PLAN FOR THE SEQUENCE OF EROSION CONTROL DEVICES TO BE INSTALLED.
- PROPOSED GRADES: THE PROPOSED ELEVATIONS AND CONTOURS SHOWN ARE TO FINISHED GRADE. THE PROPOSED CONTOURS ARE APPROXIMATE. THE PROPOSED SPOT ELEVATIONS AND GRADIENTS ARE TO BE USED IN THE EVENT OF ANY DISCREPANCY WITH THE PROPOSED CONTOURS. MINOR ADJUSTMENT TO FINISH GRADE TO ACCOMPLISH SPOT DRAINAGE IS ACCEPTABLE.
- ALL PROPOSED GRADES SHALL BE INSTALLED SUCH THAT TOP OF SOD IS LEVEL OR BELOW TOP OF ADJACENT PAVING AT PROJECT COMPLETION.
- ACCESSIBLE ROUTES/PARKING: SIDEWALKS AND CROSSWALKS ALONG ACCESSIBLE ROUTES SHALL BE IN ACCORDANCE WITH FBC AND ADA STANDARDS WITH A MAXIMUM RUNNING SLOPE OF 5% AND A MAXIMUM CROSS SLOPE OF 2%. ACCESSIBLE PARKING SPACES SHALL HAVE A MAXIMUM SLOPE OF 2% IN ALL DIRECTIONS.
- GRADES BETWEEN BUILDING AND CURB: REFER TO THE ARCHITECT PLANS FOR DETAILED GRADING INFORMATION BETWEEN THE BUILDING AND CURB.
- STRIPPING AND DEBRIS REMOVAL: THE BUILDING PADS(S), AREAS TO BE PAVED, AND ALL AREAS THAT ARE TO RECEIVE FILL MATERIAL SHALL BE STRIPPED OF VEGETATION, TREES, STUMPS, DEBRIS AND OTHER ORGANIC MATERIAL. THE DEPTH OF THE STRIPPING SHALL BE BASED ON THE DEPTH OF SURFACE SOIL CONTAINING ORGANIC MATERIAL. ALL TREES, INCLUDING STUMPS AND ROOT SYSTEMS, VEGETATION, DEBRIS AND OTHER OBJECTIONABLE MATERIAL SHALL BE REMOVED AND DISPOSED OFF SITE. STRIPPED TOPSOIL SHALL BE STOCKPILED IN A LOCATION ON THE SITE APPROVED BY THE DEVELOPER.
- PROOF-ROLLING: AFTER COMPLETION OF THE NECESSARY STRIPPING, CLEARING AND EXCAVATION AND PRIOR TO PLACING ANY REQUIRED FILL, THE EXPOSED SUBGRADE SHALL BE EVALUATED BY PROOF ROLLING WITH A HEAVY PNEUMATIC TIERED ROLLER, LOADED DUMP TRUCK OR SIMILAR EQUIPMENT WEIGHING APPROXIMATELY 10 TONS TO CHECK FOR POCKETS OF SOFT OR LOOSE MATERIAL. THE PROOF-ROLLING PROCEDURES SHOULD BE RECOMMENDED. THE LOOSE LIFT DEPTH SHALL NOT EXCEED 8". EACH LAYER SHALL BE PROPERLY PLACED, MIXED, SPREAD AND COMPACTED IN ACCORDANCE WITH THE FILL COMPACTION SECTION.
- FILL COMPACTION: FILL COMPACTION SHALL BE PERFORMED IN ACCORDANCE WITH THE GEOTECHNICAL REPORT.
- BUILDING PADS: THE BUILDING PADS SHALL BE PERFORMED IN ACCORDANCE WITH THE GEOTECHNICAL REPORT.
- LANDSCAPE AREAS: REFER TO THE LANDSCAPE PLAN FOR SOIL REQUIREMENTS IN LANDSCAPE AREAS.
- TESTING: TESTING SHALL BE PERFORMED BY A QUALIFIED TESTING LABORATORY, EMPLOYED AND PAID DIRECTLY BY THE OWNER. TESTING SHALL BE PERFORMED, AT A MINIMUM, IN ACCORDANCE WITH THE RECOMMENDATIONS IN THE GEOTECHNICAL REPORT. IN THE EVENT THE RESULTS OF THE INITIAL TESTING DO NOT COMPLY WITH THE PLANS AND SPECIFICATIONS, SUBSEQUENT TESTS NECESSARY TO DETERMINE THE ACCEPTABILITY OF CONSTRUCTION SHALL BE AT THE CONTRACTOR'S EXPENSE.

EROSION & SEDIMENTATION CONTROL NOTES

- THE CONTRACTOR SHALL PREPARE A STORMWATER POLLUTION PREVENTION PLAN (SWPPP) IN ACCORDANCE WITH THE FDEP NPDES PERMIT REQUIREMENTS. EROSION CONTROL MEASURE SHALL FOLLOW THE SWPPP. ANY CHANCES TO THE SWPPP SHALL SUPERSEDE THE EROSION AND SEDIMENTATION CONTROL PLAN. THE SWPPP IS TO BE KEPT ON-SITE AT ALL TIMES WITH THESE CONSTRUCTION DOCUMENTS AS NECESSARY FOR COMPLIANCE WITH THE NATURAL POLLUTANT DISCHARGE ELIMINATION SYSTEM NPDES GENERAL PERMIT.
- PRIOR TO COMMENCING ANY CONSTRUCTION, A STABILIZED CONSTRUCTION ENTRANCE AND NECESSARY PERIMETER CONTROLS SHALL BE INSTALLED.
- THE STABILIZED CONSTRUCTION ENTRANCE HAS BEEN SHOWN ARBITRARILY. IT IS THE GENERAL CONTRACTOR'S RESPONSIBILITY (IN COMPLIANCE WITH ALL MUNICIPAL REGULATIONS) TO DETERMINE THE LOCATION(S) OF PROJECT INGRESSES/EGRESS POINTS. HOWEVER ALL ENTRANCES AT ALL TIMES SHALL BE PREPARED IN ACCORDANCE WITH THE STABILIZED CONSTRUCTION ENTRANCE DETAILS (SEE EROSION CONTROL DETAILS) AND CONTINUOUSLY MAINTAINED UNTIL FINAL PAVING IS ESTABLISHED.
- THE CONTRACTOR IS RESPONSIBLE FOR INSTALLATION, ROUTINE INSPECTION AND/OR MAINTENANCE OF EROSION CONTROL DEVICES.
- THE EROSION CONTROL DEVICES SHALL REMAIN IN PLACE UNTIL ACCEPTABLE VEGETATION COVERAGE HAS BEEN ACHIEVED.
- ANY ADDITIONAL EROSION CONTROL MEASURES REQUIRED TO COMPLY WITH THE SWPPP STORMWATER POLLUTION REGULATIONS SHALL BE IMPLEMENTED BY THE CONTRACTOR, AT THEIR EXPENSE.
- DISTURBED AREAS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE CEASED FOR AT LEAST FOURTEEN DAYS SHALL BE TEMPORARILY SEEDED AND WATERED. DISTURBED AREAS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE PERMANENTLY CEASED SHALL BE PERMANENTLY SEEDDED/SODDED WITHIN SEVEN DAYS IN ACCORDANCE WITH THE PLANS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR WATERING SEEDDED/SODDED AREAS AS NECESSARY UNTIL 70% VEGETATION IS ESTABLISHED IN ACCORDANCE WITH THE PLANS.
- THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL EROSION CONTROL MEASURES ONCE FINAL GROUND STABILIZATION IS ACHIEVED AND THE PROJECT IS COMPLETED.

STORM DRAINAGE NOTES

- LOCATION OF EXISTING UTILITIES: THE CONTRACTOR SHALL FIELD VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UTILITIES PRIOR TO START OF CONSTRUCTION AND SHALL NOTIFY THE CONSTRUCTION MANAGER AND ENGINEER OF ANY CONFLICTS DISCOVERED. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING EXISTING UTILITIES (SHOWN OR NOT SHOWN) WITHIN THE AREA OF CONSTRUCTION.
- LOCATION OF PROPOSED DRAINAGE IMPROVEMENTS: THE CONTRACTOR SHALL VERIFY AND COORDINATE ALL DIMENSIONS SHOWN, INCLUDING THE HORIZONTAL AND VERTICAL LOCATION OF CURB INLETS AND GRATE INLETS AND ALL UTILITIES CROSSING THE STORM SEWER.
- STORM DRAIN PIPE: UNLESS OTHERWISE NOTED IN THE PLANS, ALL PIPE FOR PUBLIC STORM DRAIN IMPROVEMENTS SHALL BE PVC SCHEDULE 40, SDR-35 OR HIGH DENSITY POLYETHYLENE PIPE (HDPE), N-12.
- EMBEDMENT: EMBEDMENT FOR STORM DRAINAGE PIPE, PUBLIC AND PRIVATE, SHALL BE IN ACCORDANCE WITH THE GOVERNING AUTHORITIES' STANDARD DETAILS.
- ROUTING: ALL PIPE ENTERING PUBLIC STORM DRAIN STRUCTURES SHALL BE GROUTED TO ASSURE WATER TIGHT CONNECTIONS.
- CONCRETE COLLARS: CONCRETE COLLARS SHALL BE INSTALLED AT ALL CHANGES IN CONDUIT SIZE AND AT ALL JOINTS THAT ARE PULLED IN EXCESS OF THAT RECOMMENDED BY THE CONDUIT MANUFACTURER.
- ROOF DRAINS: THE CONTRACTOR SHALL COORDINATE THE EXACT LOCATION OF ROOF DRAIN LATERALS WITH THE BUILDING PLANS FOR DOWNSPOUT CONNECTIONS.
- STORM DRAINAGE STRUCTURES: STORM DRAINAGE STRUCTURES (INLETS, JUNCTION BOXES, ETC.) ON PUBLIC LINES ARE TO BE CONSTRUCTED IN ACCORDANCE WITH GOVERNING AUTHORITIES' STANDARD DETAILS. UNLESS OTHERWISE NOTED, STRUCTURES ON PRIVATE LINES ARE TO BE PRECAST STRUCTURES MANUFACTURED BY APPROVED PROVIDER, OR APPROVED EQUIVALENT.
- ADJUSTMENT OF STRUCTURES: ALL STORM DRAIN STRUCTURES INCLUDING MANHOLES, INLETS AND CLEANOUTS MUST BE ADJUSTED TO PROPER LINE AND GRADE BY THE CONTRACTOR TO MATCH THE FINISHED GRADE.
- CURB INLETS: CURB INLETS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE GOVERNING AUTHORITIES' STANDARD DETAILS.
- GRATE INLETS: GRATE INLETS SHALL BE PER APPROVED PROVIDER OR APPROVED EQUIVALENT.

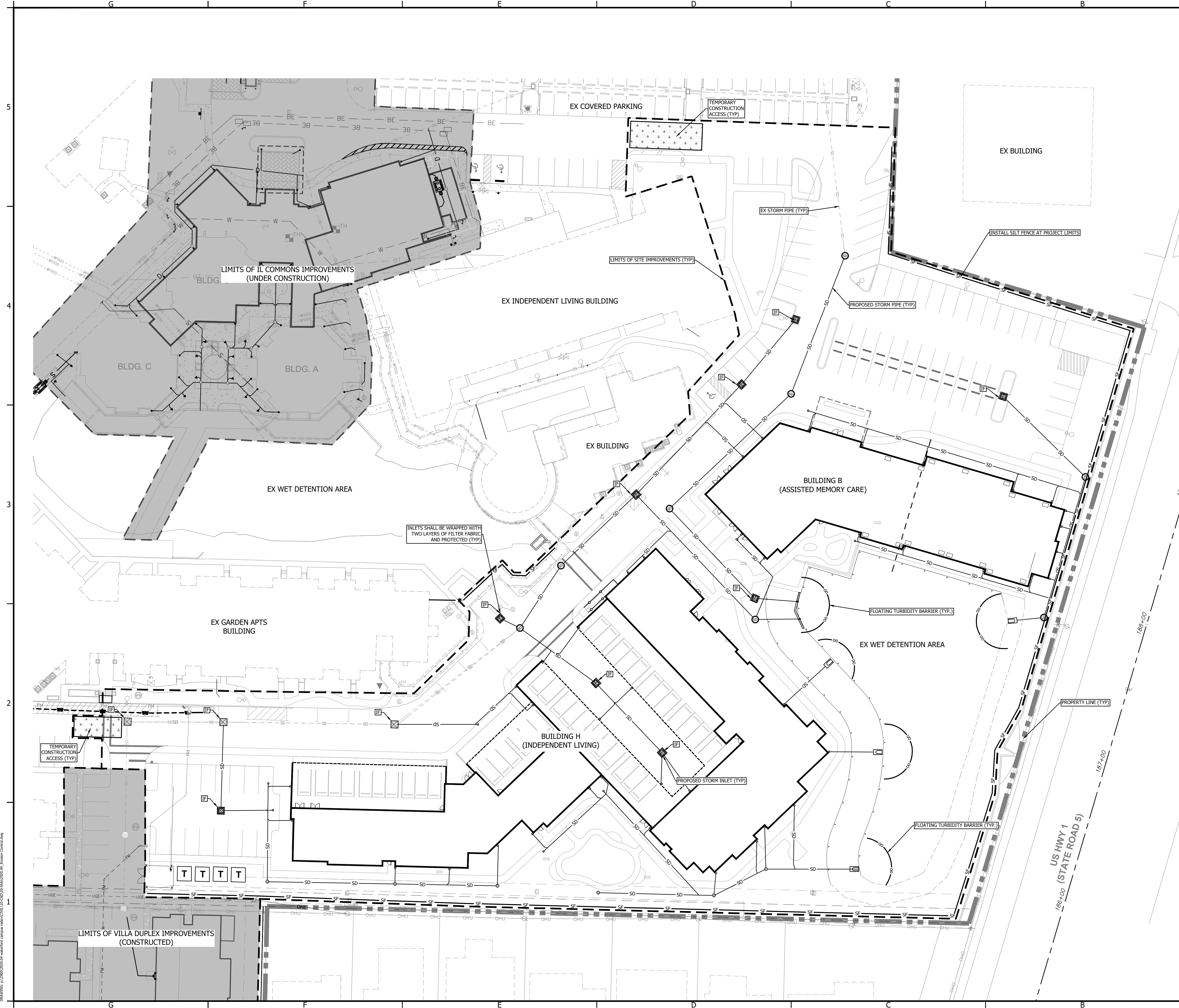
ABBREVIATIONS

BFP	BACKFLOW PREVENTER
BLDG	BUILDING
BOT	BOTTOM OF PIPE
BV	BUTTERFLY VALVE
CAP	CORRUGATED ALUMINUM PIPE
CO	CLEANOUT
CR	CURB RAMP
CS	CONTROL STRUCTURE
DBO	DESIGNED BY OTHERS
DCDA	DOUBLE CHECK DETECTOR ASSEMBLY
DIP	DUCTILE IRON PIPE
ELEV	ELEVATION
EX	EXISTING
FDC	FIRE DEPARTMENT CONNECTION
FL	FINISHED FLOOR
FH	FIRE HYDRANT
FL	FLANGE
FM	FORCE MAIN
GR	GRATE ELEVATION
GV	GATE VALVE
HC	HANDICAP ACCESSIBLE RAMP
HDPE	HIGH DENSITY POLYETHYLENE PIPE
HP	HIGH POINT
I	INLET
INV	INVERT
LME	LAKE MAINTENANCE EASEMENT
MH	MANHOLE
NAD	NORTH AMERICAN DATUM
NGVD	NATIONAL GEODETIC VERTICAL DATUM
NATD	NORTH AMERICAN VERTICAL DATUM
PBC	PALM BEACH COUNTY
PBCHD	PBCHD HEALTH DEPARTMENT
PBCWUD	PBC WATER UTILITIES DEPARTMENT
PVC	POLYVINYL CHLORIDE
P/L	PROPERTY LINE
RCP	REINFORCED CONCRETE PIPE
RED	REDUCER
R/W	RIGHT OF WAY
RPZ	REDUCED PRESSURE ZONE
SW	SIDEWALK
SAN	SANITARY SEWER
SP	SAMPLE POINT
STM	STORM SEWER
SW	SIDEWALK
TOB	TOP OF BANK
TOP	TOP OF PIPE
UE	UTILITY EASEMENT
YD	YARD DRAIN
WM	WATER MAIN

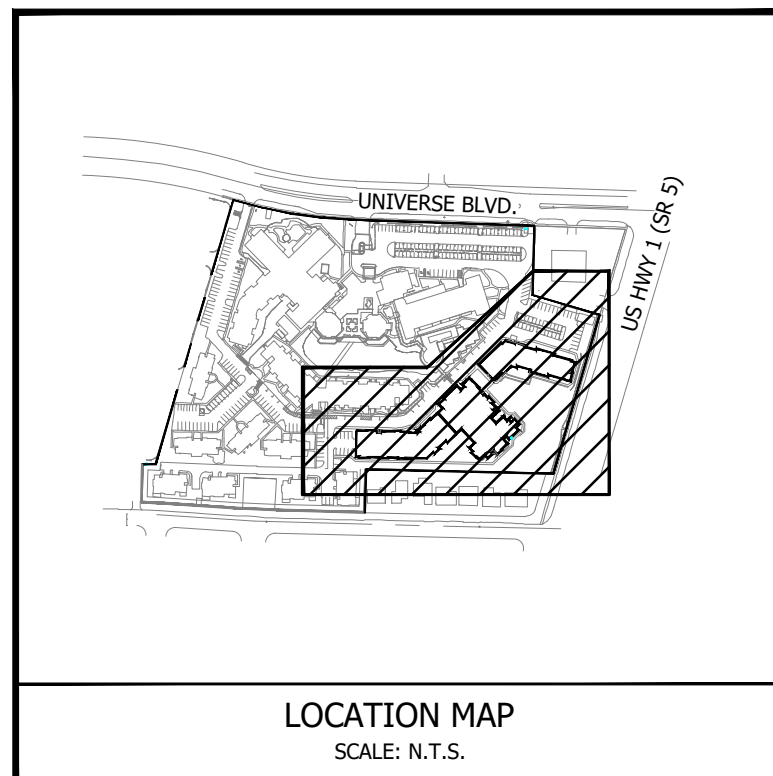
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GENERAL NOTES

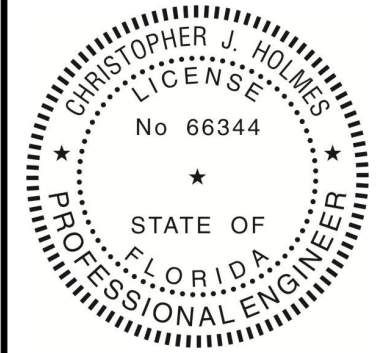
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LEGEND	
	LIMITS OF IMPROVEMENTS
	SILT FENCE
	TURBIDITY BARRIER
	INLET FILTER
	TEMPORARY CONSTRUCTION ACCESS (TYP)
	EX STORM PIPE
	PROPOSED STORM PIPE
	PROPOSED STORM MANHOLE
	PROPOSED STORM INLET
	EXISTING STORM INLET



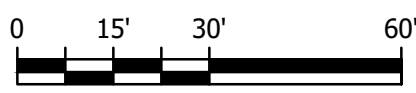
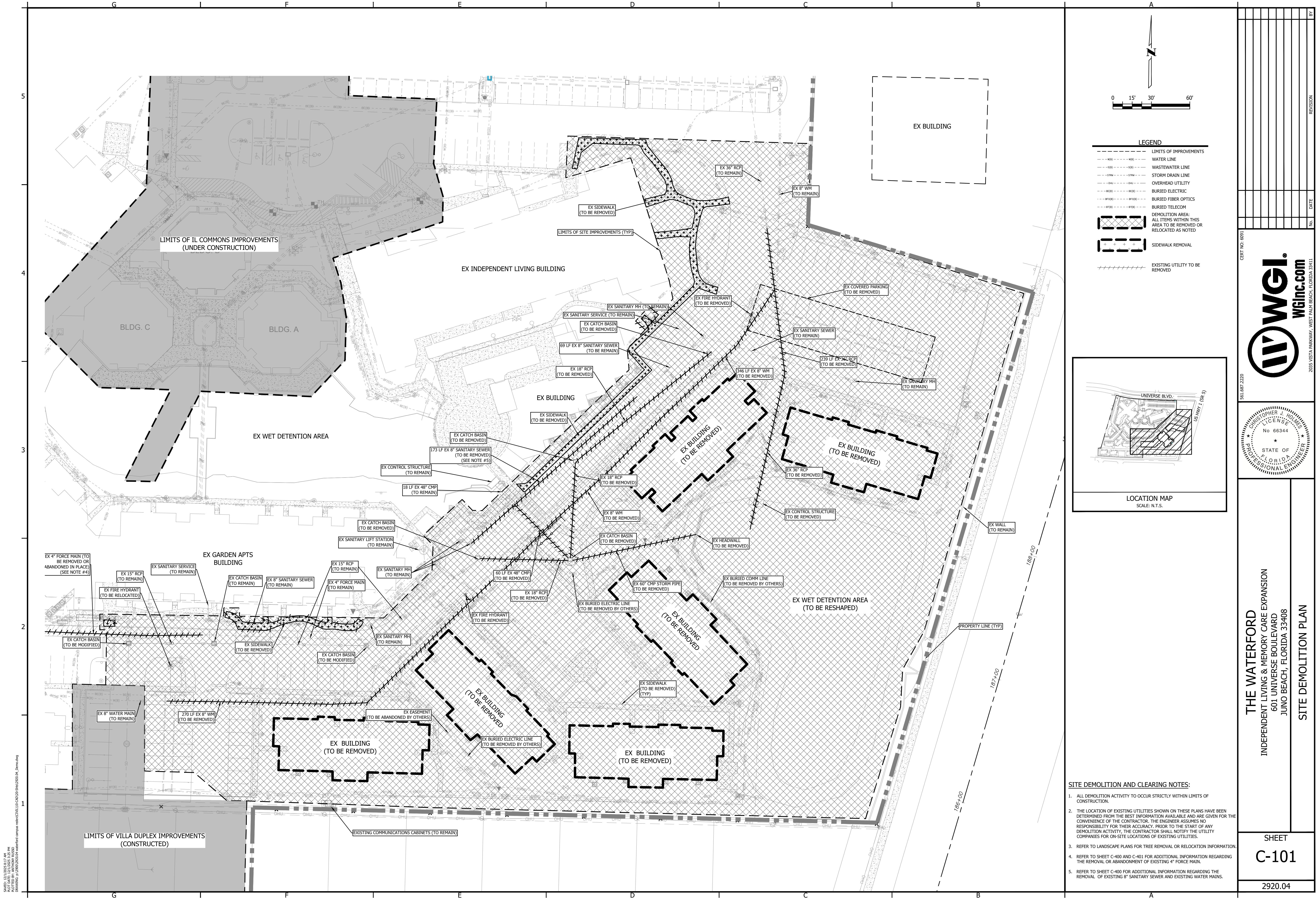
- EROSION CONTROL NOTES:**
- SWPPP CONTROLS ARE SHOWN IN CONCEPTUAL LOCATIONS AND MAY BE SYMBOLIC IN SIZE DUE TO THE SCALE OF THE DRAWING. ACTUAL CONDITIONS AND LOCATIONS OF CONSTRUCTION ACCESS POINTS, CONTROLS SHALL BE INSTALLED ACCORDING TO THE DETAILS AND AS DIRECTED BY THE WATERFORD.
 - PORTABLE TOILETS, FUEL STATIONS, AND OTHER SOURCES OF POTENTIAL POLLUTION SHALL HAVE BERMS CONSTRUCTED AROUND THEM TO PREVENT DIRECT SURFACE FLOW INTO STORM SEWERS AND RETENTION AREAS.
 - DO NOT CONSTRUCT SILT FENCES ACROSS PERMANENT FLOWING WATER COURSES. SILT FENCE TO BE AT UPLAND LOCATION AND TURBIDITY BARRIERS USED AT PERMANENT BODIES.
 - REFERENCE SHEET C-002 FOR ADDITIONAL EROSION & SEDIMENTATION CONTROL NOTES.



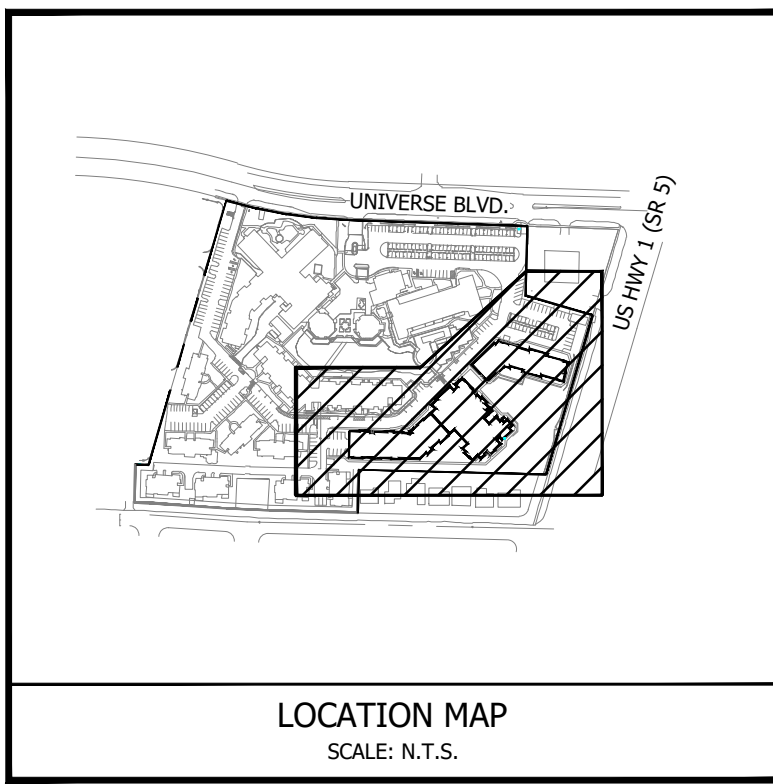
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EROSION AND SEDIMENTATION CONTROL PLAN

SHEET
C-100
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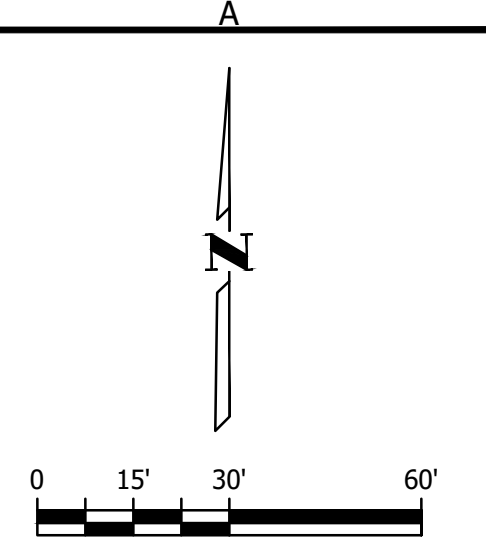
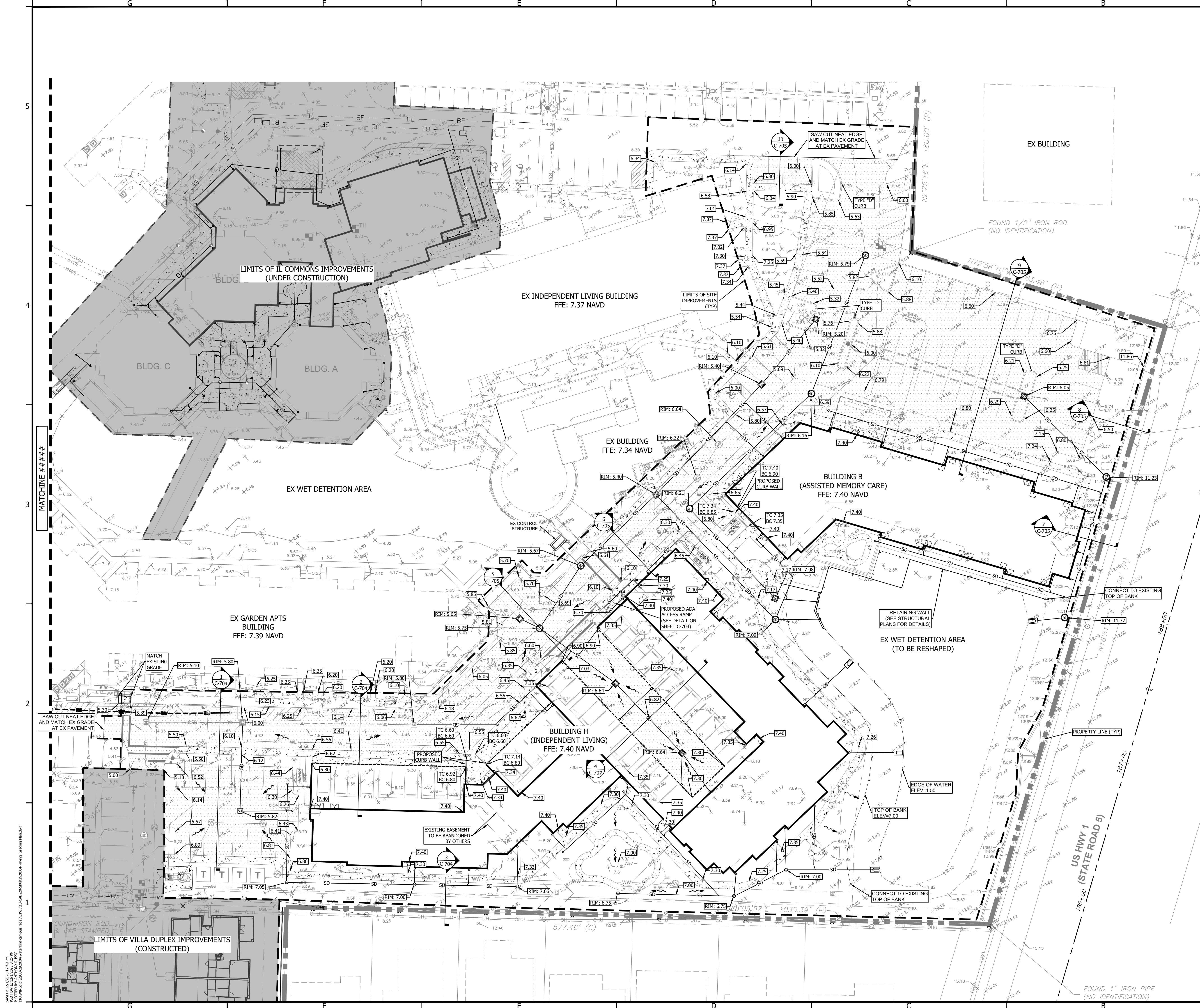


LEGEND	
	LIMITS OF IMPROVEMENTS
	WATER LINE
	WASTEWATER LINE
	STORM DRAIN LINE
	OVERHEAD UTILITY
	BURIED ELECTRIC
	BURIED FIBER OPTICS
	BURIED TELECOM
	DEMOLITION AREA: THIS AREA TO BE REMOVED OR RELOCATED AS NOTED
	SIDEWALK REMOVAL
	EXISTING UTILITY TO BE REMOVED

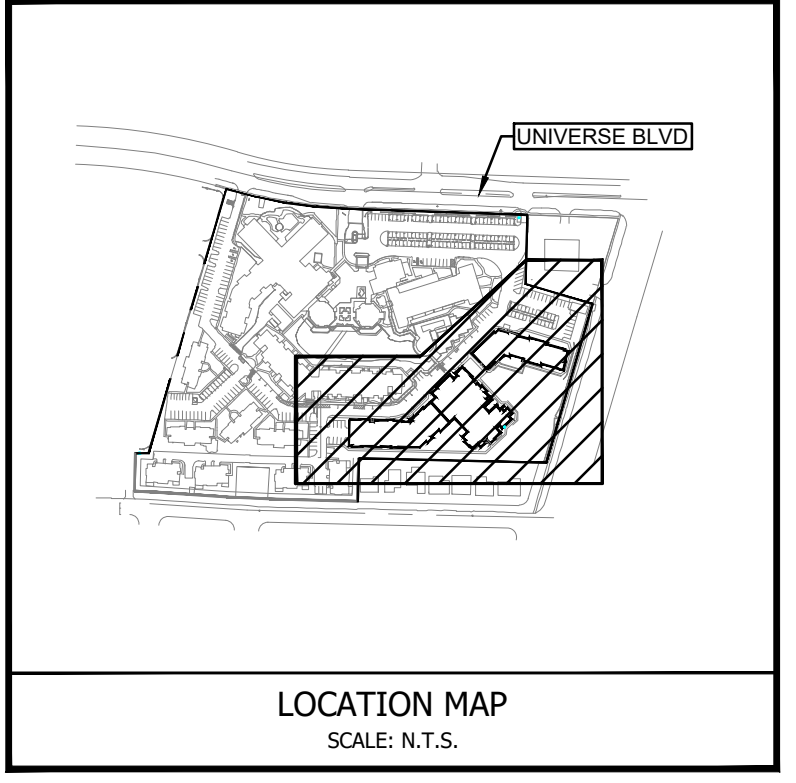


- SITE DEMOLITION AND CLEARING NOTES:**
- ALL DEMOLITION ACTIVITY TO OCCUR STRICTLY WITHIN LIMITS OF CONSTRUCTION.
 - THE LOCATION OF EXISTING UTILITIES SHOWN ON THESE PLANS HAVE BEEN DETERMINED FROM THE BEST INFORMATION AVAILABLE AND ARE GIVEN FOR THE CONVENIENCE OF THE CONTRACTOR. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THEIR ACCURACY. PRIOR TO THE START OF ANY DEMOLITION ACTIVITY, THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES FOR ON-SITE LOCATIONS OF EXISTING UTILITIES.
 - REFER TO LANDSCAPE PLANS FOR TREE REMOVAL OR RELOCATION INFORMATION.
 - REFER TO SHEET C-400 AND C-401 FOR ADDITIONAL INFORMATION REGARDING THE REMOVAL OR ABANDONMENT OF EXISTING 4" FORCE MAIN.
 - REFER TO SHEET C-400 FOR ADDITIONAL INFORMATION REGARDING THE REMOVAL OF EXISTING 8" SANITARY SEWER AND EXISTING WATER MAINS.

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INDEPENDENT LIVING & MEMORY CARE EXPANSION									
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JUNO BEACH, FLORIDA 33408									
SITE DEMOLITION PLAN									
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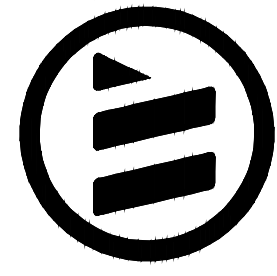
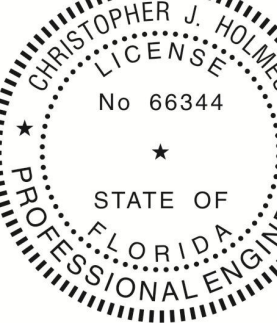
LEGEND	
---X---	LIMITS OF IMPROVEMENTS
---	EXISTING GRADE ELEVATION
---	PROPOSED GRADE ELEVATION
---	ASPHALT PAVEMENT
---	CONCRETE
---	STORM DRAIN LINE
---	WATER LINE
---	WASTEWATER LINE
---	EX WATER LINE
---	EX WASTEWATER LINE
---	EX FORCE MAIN
---	EX DRAINAGE LINE
---	EX OVERHEAD ELECTRIC
---	EX BURIED ELECTRIC
---	EX BURIED FIBER OPTICS
---	EX GAS LINE
---	STORM DRAIN INLET
---	STORM DRAIN MANHOLE
---	YARD DRAIN
---	FLOW ARROW



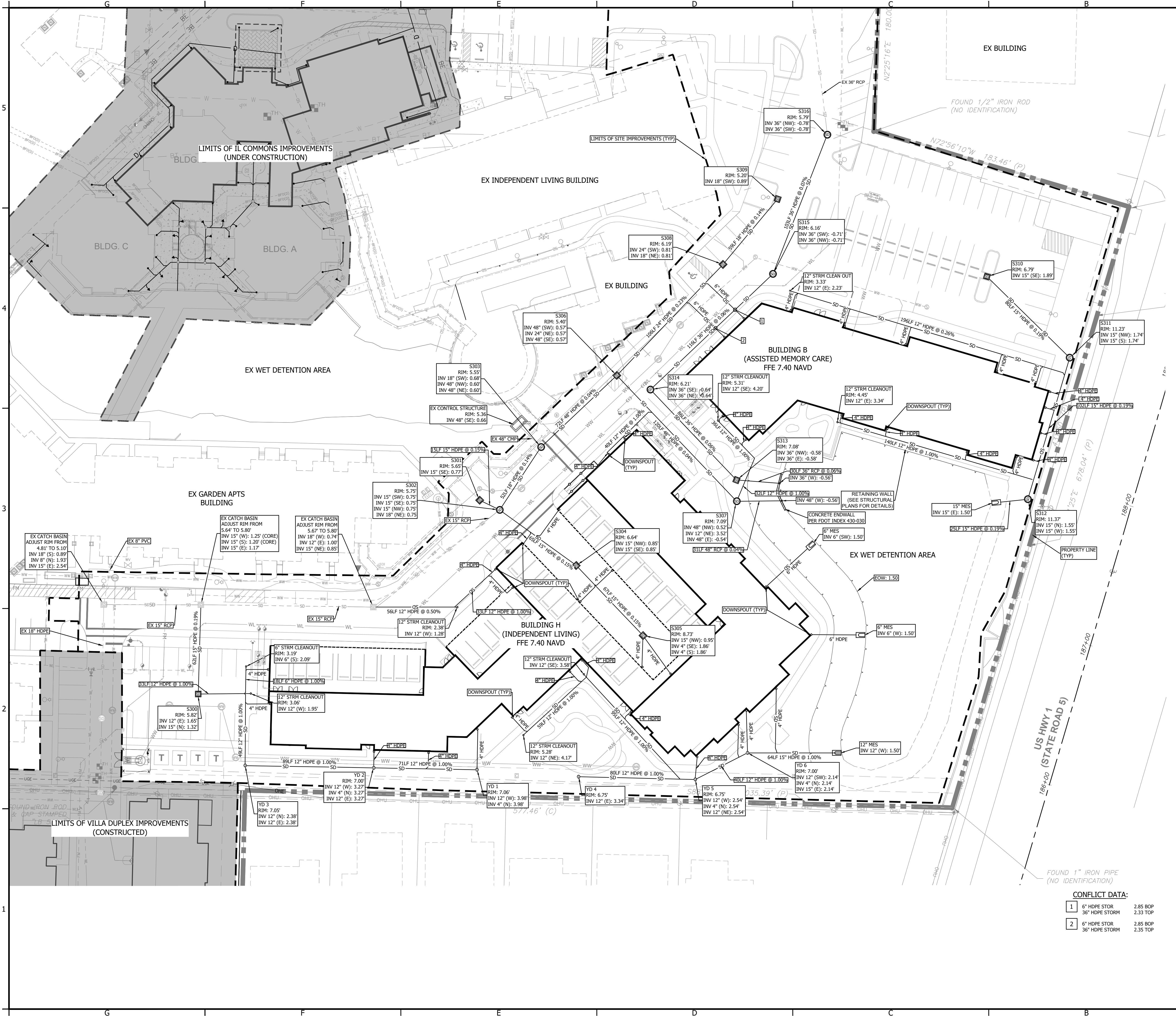
GRADING NOTES:

1. ALL ELEVATIONS ARE BASED ON NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88). NAVD 88 = NGVD 29 - 1.51

2. CONTRACTOR SHALL FORM SIDEWALKS AND VERIFY SLOPES PRIOR TO POURING CONCRETE. CONTRACTOR SHALL ENSURE THAT CROSS SLOPES ARE NO GREATER THAN 2% ALONG THE ACCESSIBLE ROUTE AND RUNNING SLOPE IS NO GREATER THAN 5%, UNLESS THE RUNNING SLOPE MATCHES THE EXISTING STREET SLOPE. IF ANY DISCREPANCY ARISES, CONTRACTOR SHALL CONTACT ENGINEER FOR SOLUTION.

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THE WATERFORD	
INDEPENDENT LIVING & MEMORY CARE EXPANSION	
601 UNIVERSE BOULEVARD	
JUNO BEACH, FLORIDA 33408	
PAVING AND GRADING PLAN	
SHEET	
C-200	
2920.04	

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PLOTTER: 11/05/2024 11:05 AM
DRAWING: 2920.04 3.32 PM
DRAWING: 2920.04 3.32 PM



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LEGEND

LIMITS OF IMPROVEMENTS

EASEMENT / SETBACK

PROPOSED CONTOUR

EXISTING CONTOUR

FENCE

SPOT ELEVATION CALLOUT

FINISHED FLOOR

MATCH EXISTING

RIM

ASPHALT

MILL AND RESURFACE

CONCRETE

SD

STORM DRAIN LINE

WL

WATER LINE

WW

WASTEWATER LINE

EX WL

EX WASTEWATER LINE

FM

EX FORCE MAIN

SD

EX DRAINAGE LINE

OHE

EX OVERHEAD ELECTRIC

BEF(0)

EX BURIED ELECTRIC

BF(0)

EX FIBER OPTICS

EX GAS LINE

SD

STORM DRAIN INLET

SD

STORM DRAIN MANHOLE

DOWNPOUT (TYP)

UNIVERSE BLVD.

US HWY 1 (STATE ROAD 5)

SCALE: N.T.S.

STRUCTURE TABLE

STRUCTURE NAME	STRUCTURE DETAILS
S300	DBI TYPE (TYPE C) USF 4155-6210 FDOT INDEX 425-052
S301	DBI TYPE (TYPE C) USF 4155-6210 FDOT INDEX 425-052
S302	MANHOLE 48"
S303	STORM MANHOLE USF 170-E FDOT INDEX 425-001
S304	DBI TYPE (TYPE C) USF 4155-6210 FDOT INDEX 425-052
S305	DBI TYPE (TYPE C) USF 4155-6210 FDOT INDEX 425-052
S306	DBI TYPE (TYPE C) USF 4155-6210 FDOT INDEX 425-052
S307	STORM MANHOLE USF 170-E FDOT INDEX 425-001
S308	DBI TYPE (TYPE C) USF 4155-6210 FDOT INDEX 425-052
S309	DBI TYPE (TYPE C) USF 4155-6210 FDOT INDEX 425-052
S310	DBI TYPE (TYPE C) USF 4155-6210 FDOT INDEX 425-052
S311	STORM MANHOLE USF 170-E FDOT INDEX 425-001
S312	STORM MANHOLE USF 170-E FDOT INDEX 425-001
S313	CONTROL STRUCTURE (SEE SHEET C-701 FOR DETAIL)
S314	STORM MANHOLE USF 170-E FDOT INDEX 425-001
S315	STORM MANHOLE USF 170-E FDOT INDEX 425-001
S316	STORM MANHOLE USF 170-E FDOT INDEX 425-001

- NOTES:
- ALL ELEVATIONS ARE BASED ON NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88). NAVD 88 = NGVD 29 - 1.51
 - RIM ELEVATIONS ARE BASED ON PROPOSED FINISH GRADES. ADJUSTMENTS MAY BE NECESSARY DUE TO FIELD CONDITIONS. ADJUSTMENTS ARE TO BE MADE BY THE CONTRACTOR WHEN THE BASE COURSE IS IN PLACE OR THE GRADING IS COMPLETE. COST OF ADJUSTING RIMS IS TO BE INCLUDED IN THE BASE BID.
 - ALL ITEMS ARE TO BE FURNISHED & INSTALLED BY THE CONTRACTOR. REFERENCE CONSTRUCTION DETAILS SHEETS FOR ADDITIONAL INFORMATION.
 - ON ALL GRAVITY LINES, CONTRACTOR MUST START AT DOWNSTREAM END AND PROCEED UPSTREAM TAKING CARE TO EXPOSE ALL EXISTING UTILITIES AND STRUCTURES WHICH MAY CONFLICT WITH THE PROPOSED LINE. ANY OTHER SEQUENCE OF CONSTRUCTION WILL BE AT THE CONTRACTORS RISK.
 - CONTRACTOR SHALL EXPOSE ALL EXISTING UTILITIES CROSSING PROPOSED GRAVITY LINES AND ENSURE THERE WILL BE NO CONFLICTS PRIOR TO BEGINNING CONSTRUCTION. ADDITIONALLY, CONTRACTOR TO PLAN UTILITY LINE INSTALLATIONS IN A MANNER TO AVOID CONFLICTS WITH PROPOSED GRAVITY LINES.
 - REFER TO SHEET C-400 FOR CONFLICT INFORMATION WHERE STORM PIPES CROSS WATER AND SEWER LINES.

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2035 VISTA PARKWAY, WEST PALM BEACH, FLORIDA 33411

CHRISTOPHER J. HOLMES

FLORIDA

PROFESSIONAL ENGINEER

No 66344

THE WATERFORD

INDEPENDENT LIVING & MEMORY CARE EXPANSION

601 UNIVERSE BOULEVARD

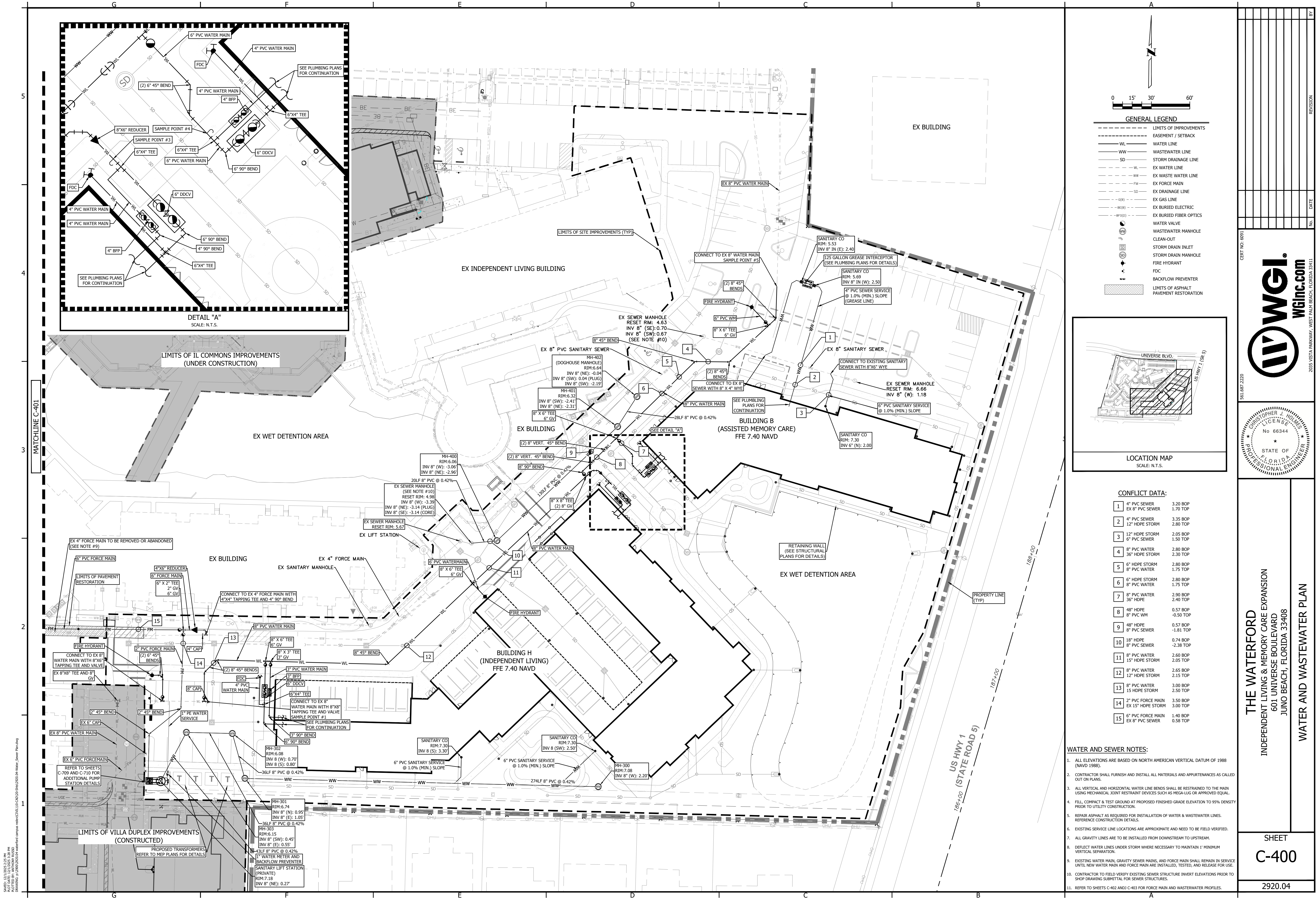
JUNO BEACH, FLORIDA 33408

DRAINAGE PLAN

SHEET

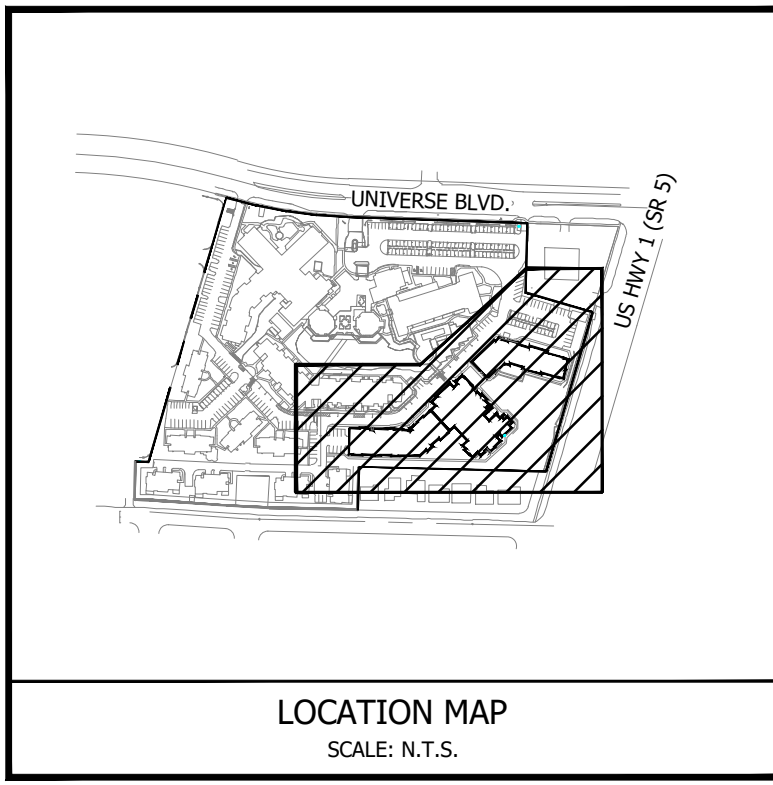
C-300

2920.04



GENERAL LEGEND

---	LIMITS OF IMPROVEMENTS
---	EASEMENT / SETBACK
WL	WATER LINE
WW	WASTEWATER LINE
SD	STORM DRAINAGE LINE
WL	EX WATER LINE
WW	EX WASTE WATER LINE
FM	EX FORCE MAIN
SD	EX DRAINAGE LINE
GL(B)	EX GAS LINE
BE(B)	EX BURIED ELECTRIC
BFOD	EX BURIED FIBER OPTICS
WV	WATER VALVE
WM	WASTEWATER MANHOLE
CO	CLEAN-OUT
SDI	STORM DRAIN INLET
SDM	STORM DRAIN MANHOLE
FH	FIRE HYDRANT
FDC	BACKFLOW PREVENTER
---	LIMITS OF ASPHALT PAVEMENT RESTORATION



CONFLICT DATA:

1	4" PVC SEWER	3.20 BOP
	EX 8" PVC SEWER	1.70 TOP
2	4" PVC SEWER	3.35 BOP
	12" HDPE STORM	2.80 TOP
3	12" HDPE STORM	2.05 BOP
	6" PVC SEWER	1.50 TOP
4	8" PVC WATER	2.80 BOP
	36" HDPE STORM	2.30 TOP
5	6" HDPE STORM	2.80 BOP
	8" PVC WATER	1.75 TOP
6	6" HDPE STORM	2.80 BOP
	8" PVC WATER	1.75 TOP
7	8" PVC WATER	2.80 BOP
	36" HDPE	2.40 TOP
8	48" HDPE	0.57 BOP
	8" PVC WM	-0.50 TOP
9	48" HDPE	0.57 BOP
	8" PVC SEWER	-1.81 TOP
10	18" HDPE	0.74 BOP
	8" PVC SEWER	-2.38 TOP
11	8" PVC WATER	2.60 BOP
	15" HDPE STORM	2.05 TOP
12	8" PVC WATER	2.65 BOP
	12" HDPE STORM	2.15 TOP
13	8" PVC WATER	3.00 BOP
	15" HDPE STORM	2.50 TOP
14	2" PVC FORCE MAIN	3.50 BOP
	EX 15" HDPE STORM	3.00 TOP
15	6" PVC FORCE MAIN	1.40 BOP
	EX 8" PVC SEWER	0.58 TOP

- WATER AND SEWER NOTES:**
- ALL ELEVATIONS ARE BASED ON NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 1988).
 - CONTRACTOR SHALL FURNISH AND INSTALL ALL MATERIALS AND APPURTENANCES AS CALLED OUT ON PLANS.
 - ALL VERTICAL AND HORIZONTAL WATER LINE BENDS SHALL BE RESTRAINED TO THE MAIN USING MECHANICAL JOINT RESTRAINT DEVICES SUCH AS MEGA-LUG OR APPROVED EQUAL.
 - FILL, COMPACT & TEST GROUND AT PROPOSED FINISHED GRADE ELEVATION TO 95% DENSITY PRIOR TO UTILITY CONSTRUCTION.
 - REPAIR ASPHALT AS REQUIRED FOR INSTALLATION OF WATER & WASTEWATER LINES. REFERENCE CONSTRUCTION DETAILS.
 - EXISTING SERVICE LINE LOCATIONS ARE APPROXIMATE AND NEED TO BE FIELD VERIFIED.
 - ALL GRAVITY LINES ARE TO BE INSTALLED FROM DOWNSTREAM TO UPSTREAM.
 - DEFLECT WATER LINES UNDER STORM WHERE NECESSARY TO MAINTAIN 1' MINIMUM VERTICAL SEPARATION.
 - EXISTING WATER MAIN, GRAVITY SEWER MAINS, AND FORCE MAIN SHALL REMAIN IN SERVICE UNTIL NEW WATER MAIN AND FORCE MAIN ARE INSTALLED, TESTED, AND RELEASE FOR USE.
 - CONTRACTOR TO FIELD VERIFY EXISTING SEWER STRUCTURE INVERT ELEVATIONS PRIOR TO SHOP DRAWING SUBMITTAL FOR SEWER STRUCTURES.
 - REFER TO SHEETS C-402 AND C-403 FOR FORCE MAIN AND WASTEWATER PROFILES.

CERT NO. 6091

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151.687.2220

CHRISTOPHER J. HOLMAN
LICENSE
No. 66344
STATE OF FLORIDA
PROFESSIONAL ENGINEER

THE WATERFORD
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601 UNIVERSE BOULEVARD
JUNO BEACH, FLORIDA 33408

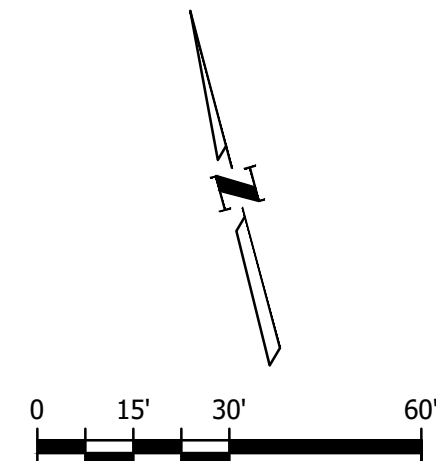
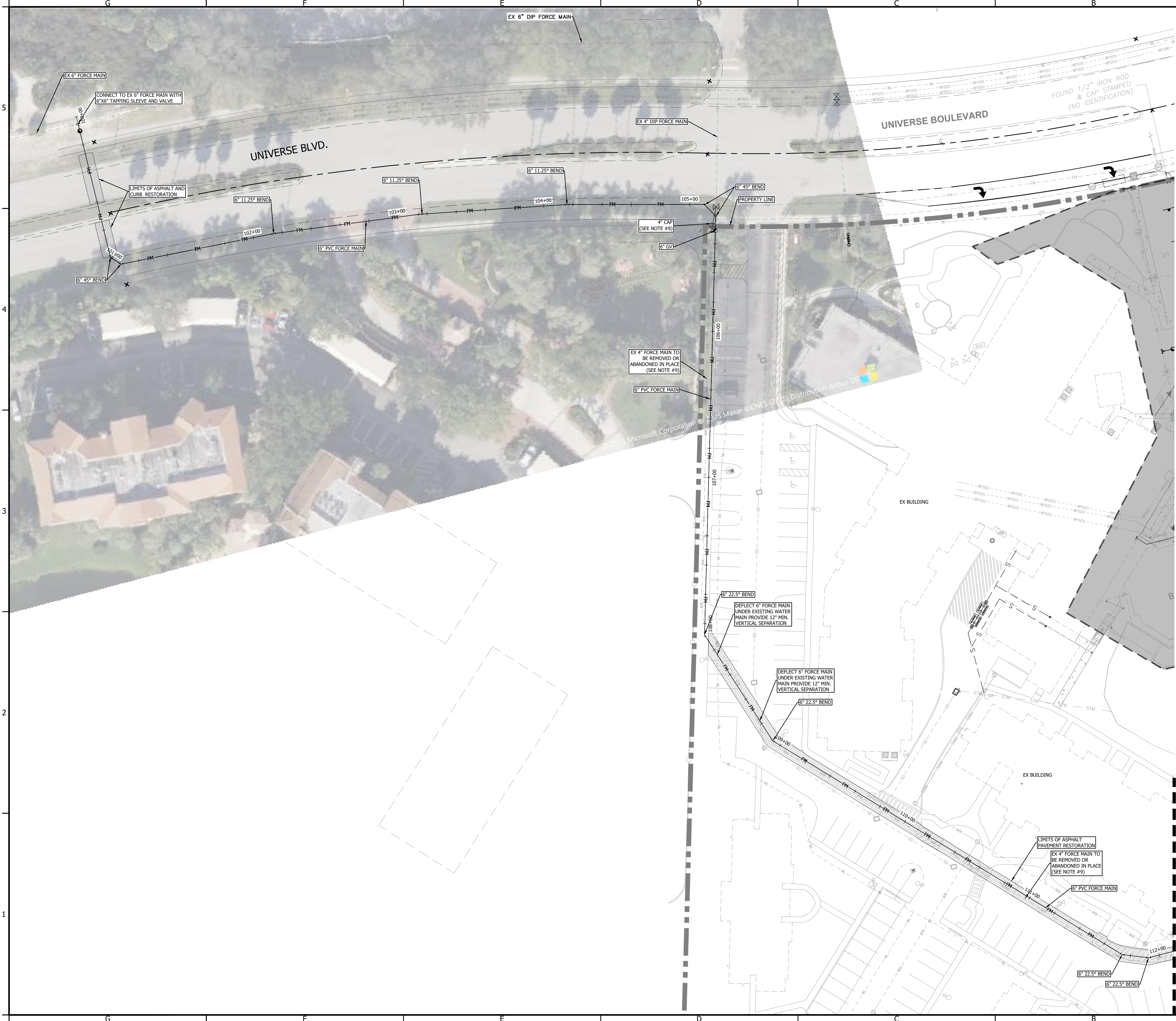
WATER AND WASTEWATER PLAN

SHEET
C-400

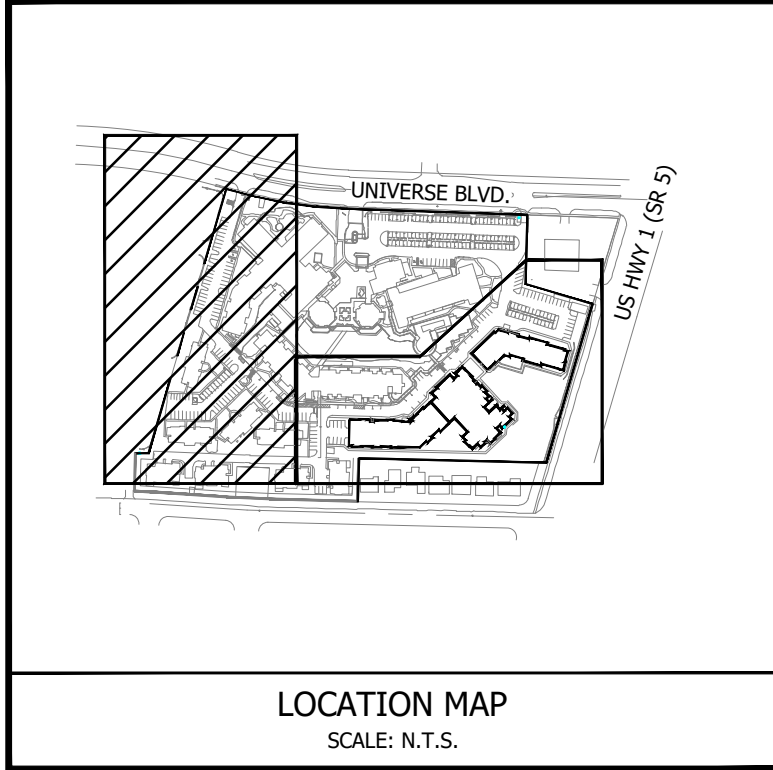
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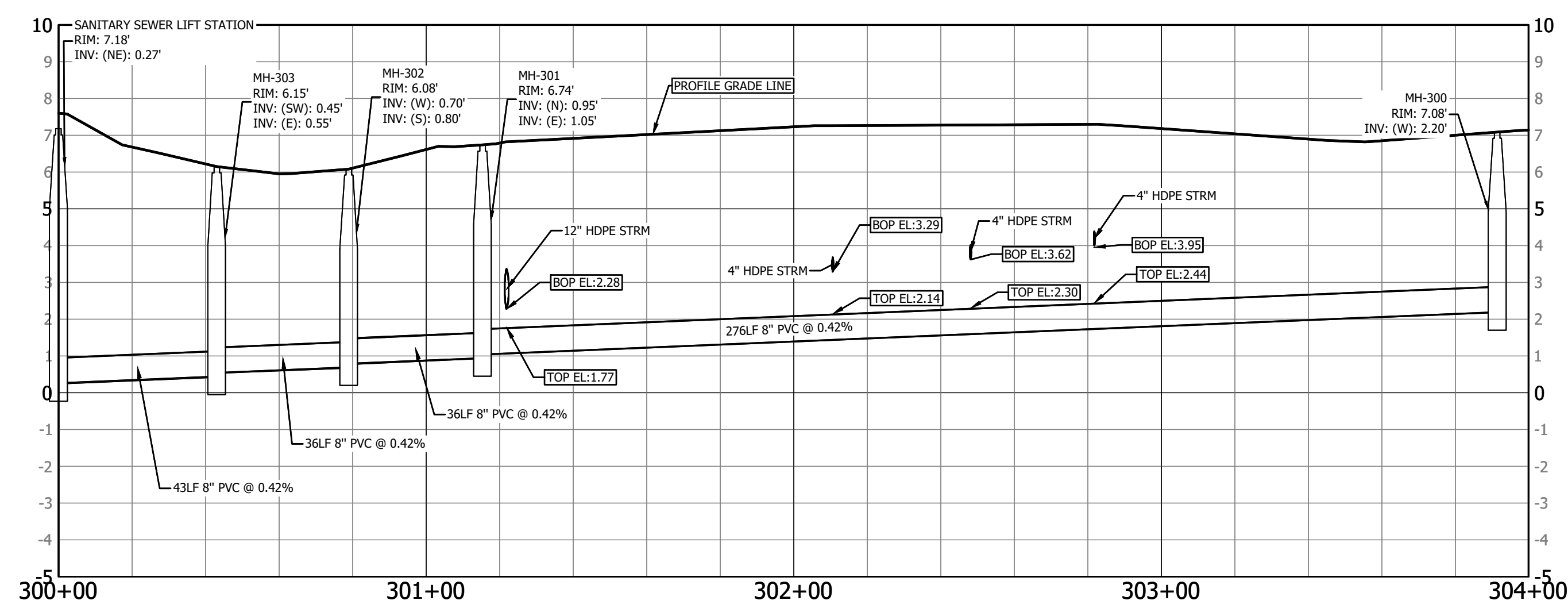
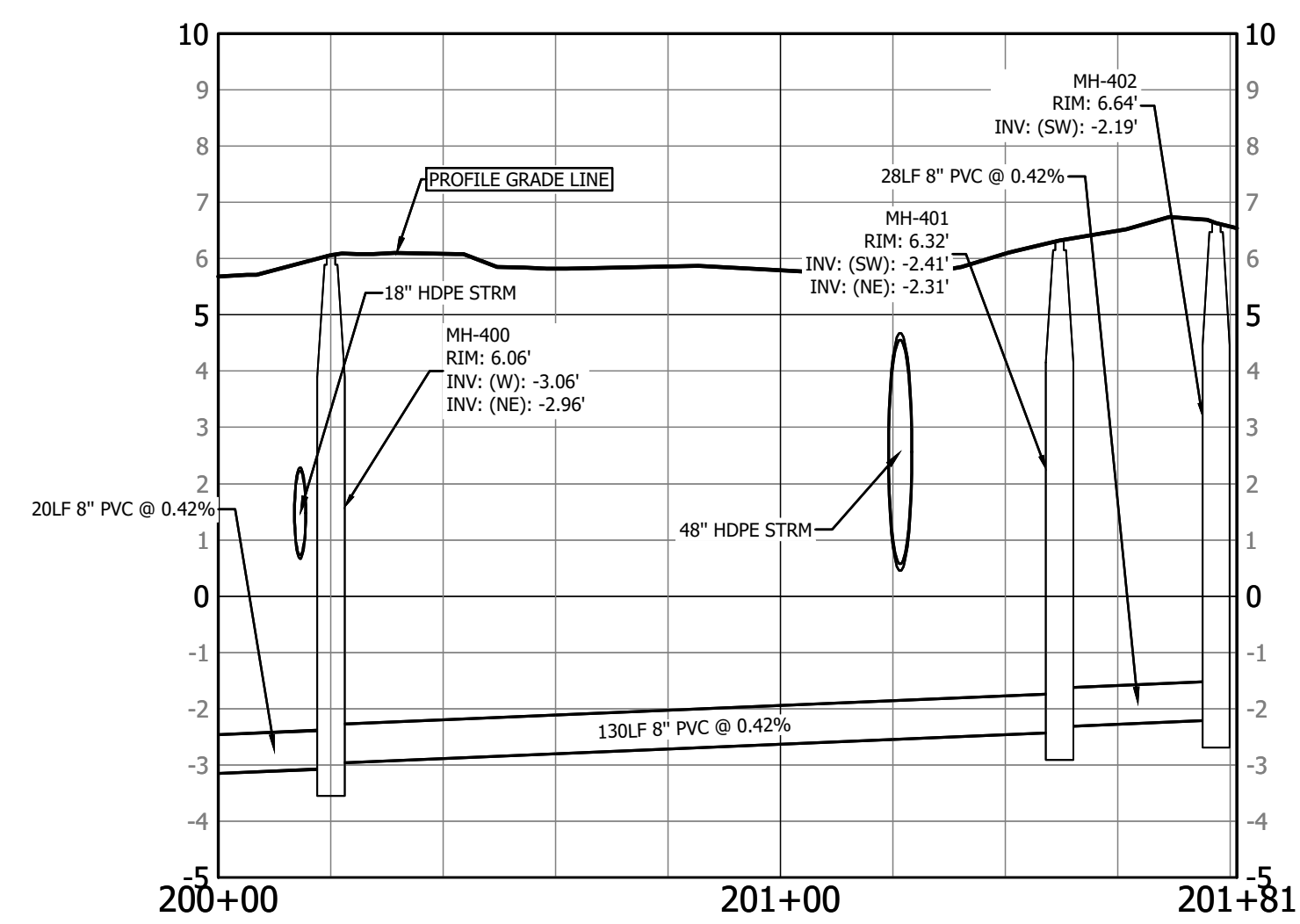


GENERAL LEGEND	
---	LIMITS OF IMPROVEMENTS
---	EASEMENT / SETBACK
WL	WATER LINE
WW	WASTEWATER LINE
SD	STORM DRAINAGE LINE
---	EX WATER LINE
---	EX WASTE WATER LINE
---	EX FORCE MAIN
---	EX DRAINAGE LINE
---	EX GAS LINE
---	EX BURIED ELECTRIC
---	EX BURIED FIBER OPTICS
WV	WATER VALVE
WWM	WASTEWATER MANHOLE
CO	CLEAN-OUT
SDI	STORM DRAIN INLET
SDM	STORM DRAIN MANHOLE
FH	FIRE HYDRANT
FDC	FDC
BP	BACKFLOW PREVENTER
---	LIMITS OF ASPHALT PAVEMENT RESTORATION

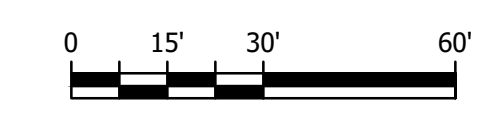
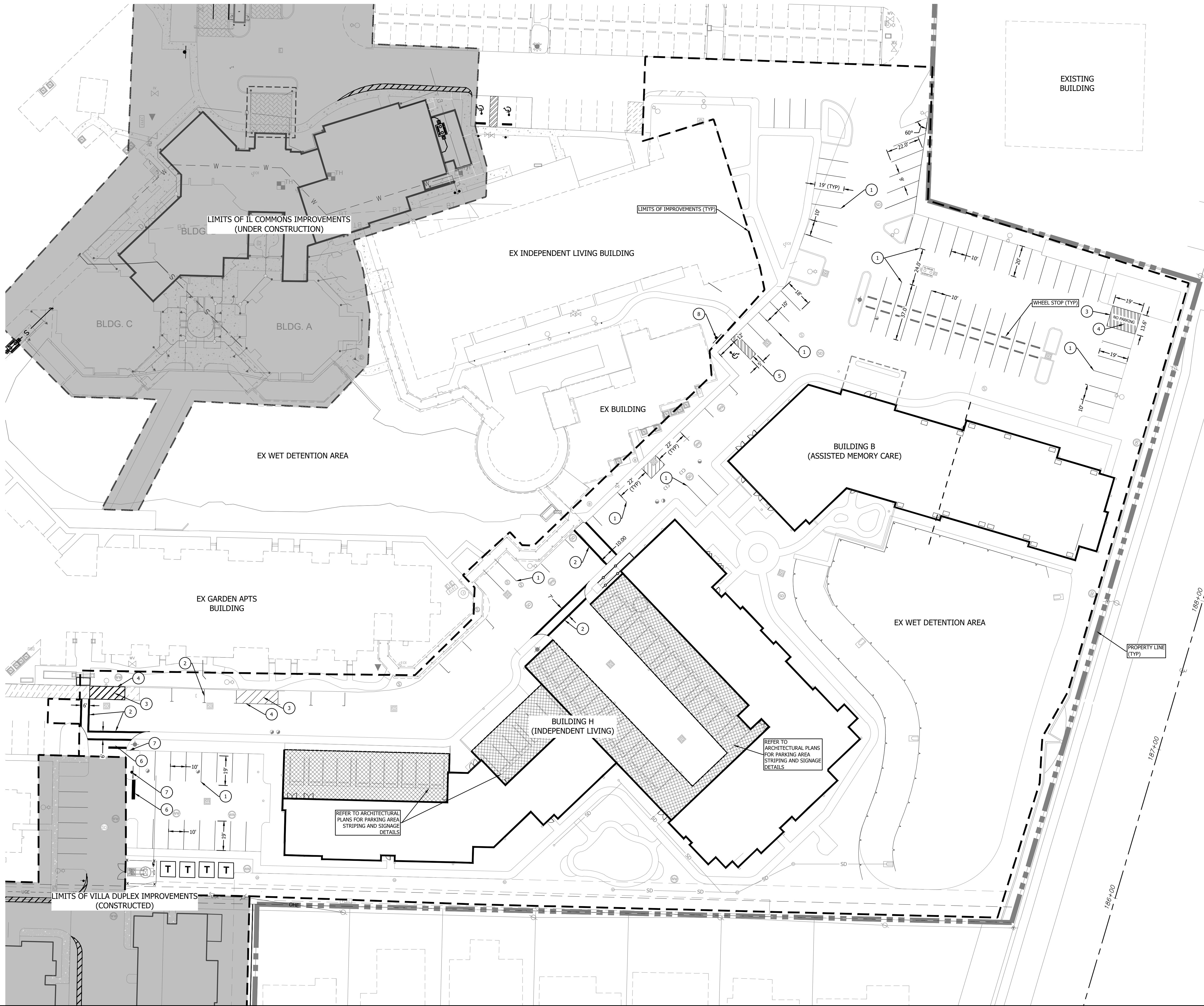


- WATER AND SEWER NOTES:**
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 - CONTRACTOR SHALL FURNISH AND INSTALL ALL MATERIALS AND APPURTENANCES AS CALLED OUT ON PLANS.
 - ALL VERTICAL AND HORIZONTAL WATER LINE BENDS SHALL BE RESTRAINED TO THE MAIN USING MECHANICAL JOINT RESTRAINT DEVICES SUCH AS MEGA-LUG OR APPROVED EQUAL.
 - FILL, COMPACT & TEST GROUND AT PROPOSED FINISHED GRADE ELEVATION TO 95% DENSITY PRIOR TO UTILITY CONSTRUCTION.
 - REPAIR ASPHALT AS REQUIRED FOR INSTALLATION OF WATER & WASTEWATER LINES. REFERENCE CONSTRUCTION DETAILS.
 - EXISTING SERVICE LINE LOCATIONS ARE APPROXIMATE AND NEED TO BE FIELD VERIFIED.
 - ALL GRAVITY LINES ARE TO BE INSTALLED FROM DOWNSTREAM TO UPSTREAM.
 - DEFLECT WATER LINES UNDER STORM WHERE NECESSARY TO MAINTAIN 1' MINIMUM VERTICAL SEPARATION.
 - EXISTING WATER MAIN, GRAVITY SEWER MAINS, AND FORCE MAIN SHALL REMAIN IN SERVICE UNTIL NEW WATER MAIN AND FORCE MAIN ARE INSTALLED, TESTED, AND RELEASE FOR USE.
 - CONTRACTOR TO FIELD VERIFY EXISTING SEWER STRUCTURE INVERT ELEVATIONS PRIOR TO SHOP DRAWING SUBMITTAL FOR SEWER STRUCTURES.
 - REFER TO SHEETS C-402 AND C-403 FOR FORCE MAIN AND WASTEWATER PROFILES.

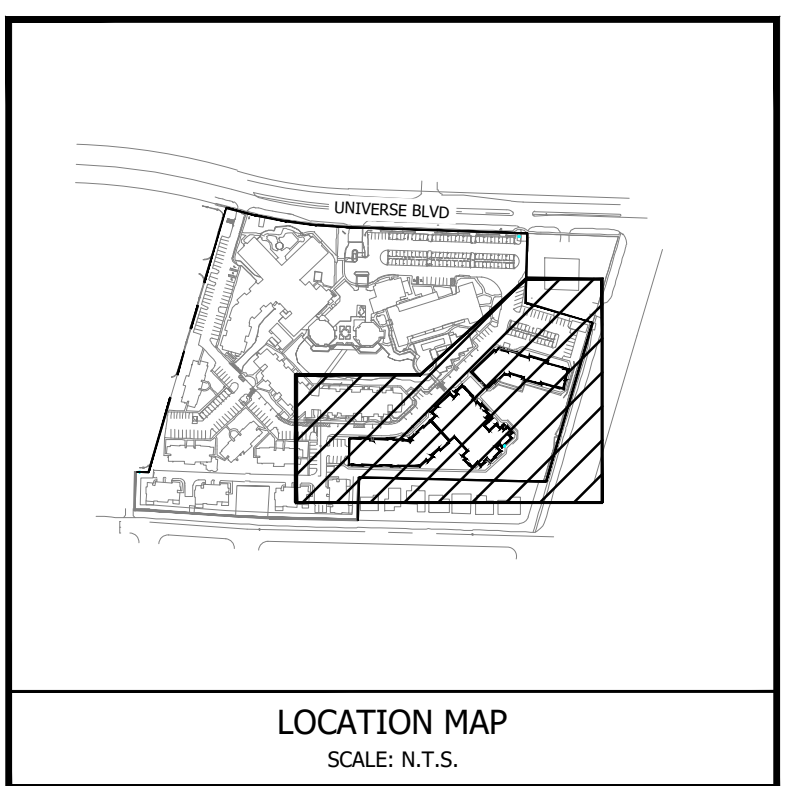
THE WATERFORD INDEPENDENT LIVING & MEMORY CARE EXPANSION 601 UNIVERSE BOULEVARD JUNO BEACH, FLORIDA 33408		WATER AND WASTEWATER PLAN	
SHEET C-401		2920.04	
CHRISTOPHER J. HOLMES LICENSE No 66344 STATE OF FLORIDA PROFESSIONAL ENGINEER		WGI. WGInc.com 2035 VISTA PARKWAY, WEST PALM BEACH, FLORIDA 33411	
CERT NO. 6001		DATE	
BY		REVISION	

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SHEET: 12/1/2025 10:11 AM
DRAWN BY: ANTHONY RUSSO
CHECKED BY: ANTHONY RUSSO
DATE: 12/1/2025 10:11 AM



SIGN LEGEND	
	R1-1 STOP SIGN 30"X30"
	FTP-25 ADA SIGNAGE
	PENALTY FINES \$250.00 TOW-AWAY ZONE



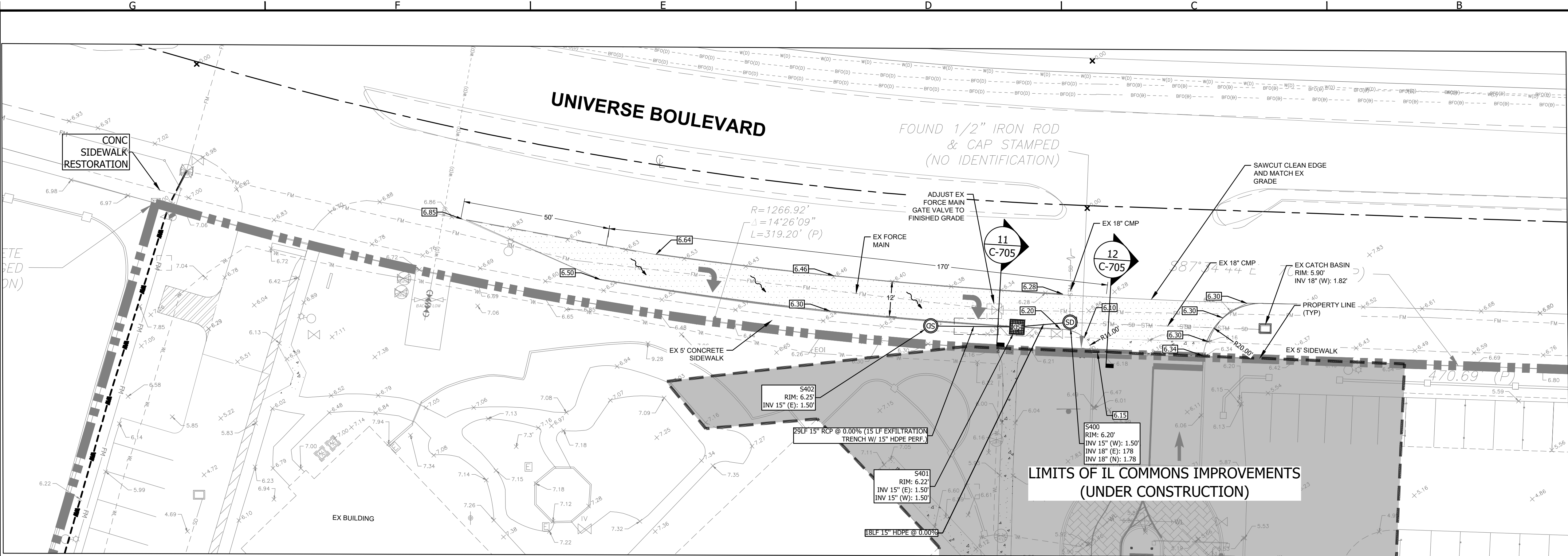
PAVEMENT PLAN KEY NOTES	
1	4" WHITE PARKING STRIPING
2	12" WHITE CROSS WALK
3	6" YELLOW AT 45° ANGLE AT 3" O.C.
4	12" YELLOW
5	ADA PARKING SPACE STRIPING
6	24" WHITE STOP BAR
7	STOP SIGN
8	ADA PARKING SIGN

PAVEMENT MARKING AND SIGNAGE NOTES

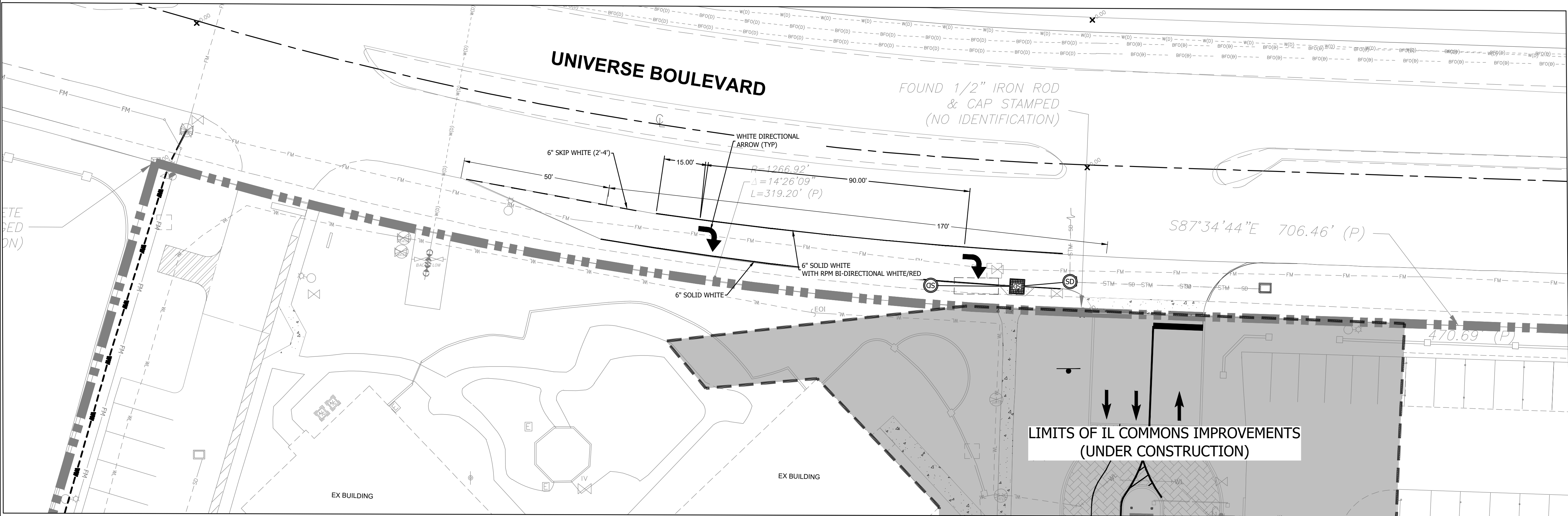
1. ALL PAVEMENT MARKINGS SHALL BE IN THERMOPLASTIC AND IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS AND FDOT STANDARD INDEX 711-001, WHERE APPLICABLE.

2. PAINT OR TAPE MAY BE USED FOR TEMPORARY STRIPING. THERMOPLASTIC MATERIAL SHALL BE USED TO MARK FINAL PAVEMENT, WITH EXCEPTION OF PARKING STALLS, WHICH SHALL BE PAINT. MATERIAL SUBMITTAL REQUIRED.

THE WATERFORD INDEPENDENT LIVING & MEMORY CARE EXPANSION 601 UNIVERSE BOULEVARD JUNO BEACH, FLORIDA 33408		SIGNING AND PAVEMENT MARKING PLAN	
SHEET C-500		2920.04	
WGI. WGInc.com		CERT. NO. 6091 151.687.2220	
STATE OF FLORIDA PROFESSIONAL ENGINEER		CRISTOPHER J. HOLMES LICENSE No 66344	
2035 VISTA PARKWAY, WEST PALM BEACH, FLORIDA 33411		BY DATE REVISION	



PAVING, GRADING, AND DRAINAGE PLAN



PAVEMENT AND MARKING PLAN

LEGEND

---	LIMITS OF IMPROVEMENTS
---	EXISTING GRADE ELEVATION
---	PROPOSED GRADE ELEVATION
XXXXXX	ASPHALT PAVEMENT
CONCRETE	CONCRETE
SD	STORM DRAIN LINE
WL	WATER LINE
WW	WASTEWATER LINE
WL	EX WATER LINE
WW	EX WASTEWATER LINE
FM	EX FORCE MAIN
SD	EX DRAINAGE LINE
OHE	EX OVERHEAD ELECTRIC
BE(B)	EX BURIED ELECTRIC
BF(O)	EX BURIED FIBER OPTICS
GB	EX GAS LINE
SD	STORM DRAIN INLET
SD	STORM DRAIN MANHOLE
SD	YARD DRAIN
---	FLOW ARROW

LOCATION MAP
SCALE: N.T.S.

STRUCTURE TABLE	
STRUCTURE NAME	STRUCTURE DETAILS
S400	STORM MANHOLE USF 170-E FDOT INDEX 425-001
S401	DBI TYPE (TYPE C) USD 4155-6210 FDOT INDEX 425-052
S402	STORM MANHOLE USF 170-E FDOT INDEX 425-001

- DRAINAGE STRUCTURE NOTE:**
- STRUCTURE S402 SHALL BE MODIFIED FROM EXISTING CATCH BASIN TO STORM MANHOLE
- PAVEMENT MARKING NOTES:**
- ALL PAVEMENT MARKINGS SHALL BE IN THERMOPLASTIC AND IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, PALM BEACH COUNTY TYPICAL #T-P-24, AND FDOT STANDARD INDEX 711-001.
- DRAINAGE NOTES:**
- RIM ELEVATIONS ARE BASED ON PROPOSED FINISH GRADES. ADJUSTMENTS MAY BE NECESSARY DUE TO FIELD CONDITIONS. ADJUSTMENTS ARE TO BE MADE BY THE CONTRACTOR WHEN THE BASE COURSE IS IN PLACE OR THE GRADING IS COMPLETE. COST OF ADJUSTING RIMS IS TO BE INCLUDED IN THE BASE BID.
 - ALL ITEMS ARE TO BE FURNISHED & INSTALLED BY THE CONTRACTOR. REFERENCE CONSTRUCTION DETAILS SHEETS FOR ADDITIONAL INFORMATION.
 - ON ALL GRAVITY LINES, CONTRACTOR MUST START AT DOWNSTREAM END AND PROCEED UPSTREAM TAKING CARE TO EXPOSE ALL EXISTING UTILITIES AND STRUCTURES WHICH MAY CONFLICT WITH THE PROPOSED LINE. ANY OTHER SEQUENCE OF CONSTRUCTION WILL BE AT THE CONTRACTORS RISK.
 - CONTRACTOR SHALL EXPOSE ALL EXISTING UTILITIES CROSSING PROPOSED GRAVITY LINES AND ENSURE THERE WILL BE NO CONFLICTS PRIOR TO BEGINNING CONSTRUCTION. ADDITIONALLY, CONTRACTOR TO PLAN UTILITY LINE INSTALLATIONS IN A MANNER TO AVOID CONFLICTS WITH PROPOSED GRAVITY LINES.
- GRADING NOTES:**
- ALL ELEVATIONS ARE BASED ON NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88). NAVD 88 = NGVD 29 - 1.51
 - CONTRACTOR SHALL FORM SIDEWALKS AND VERIFY SLOPES PRIOR TO POURING CONCRETE. CONTRACTOR SHALL ENSURE THAT CROSS SLOPES ARE NO GREATER THAN 2% ALONG THE ACCESSIBLE ROUTE AND RUNNING SLOPE IS NO GREATER THAN 5%, UNLESS THE RUNNING SLOPE MATCHES THE EXISTING STREET SLOPE. IF ANY DISCREPANCY ARISES, CONTRACTOR SHALL CONTACT ENGINEER FOR SOLUTION.

BY	
REVISION	
DATE	
No.	

CERT NO. 6901

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351.687.2220

2035 VISTA PARKWAY, WEST PALM BEACH, FLORIDA 33411

CHRISTOPHER J. HONNIG

LICENSE No 66344

STATE OF FLORIDA

PROFESSIONAL ENGINEER

THE WATERFORD

INDEPENDENT LIVING & MEMORY CARE EXPANSION

601 UNIVERSE BOULEVARD

JUNO BEACH, FLORIDA 33408

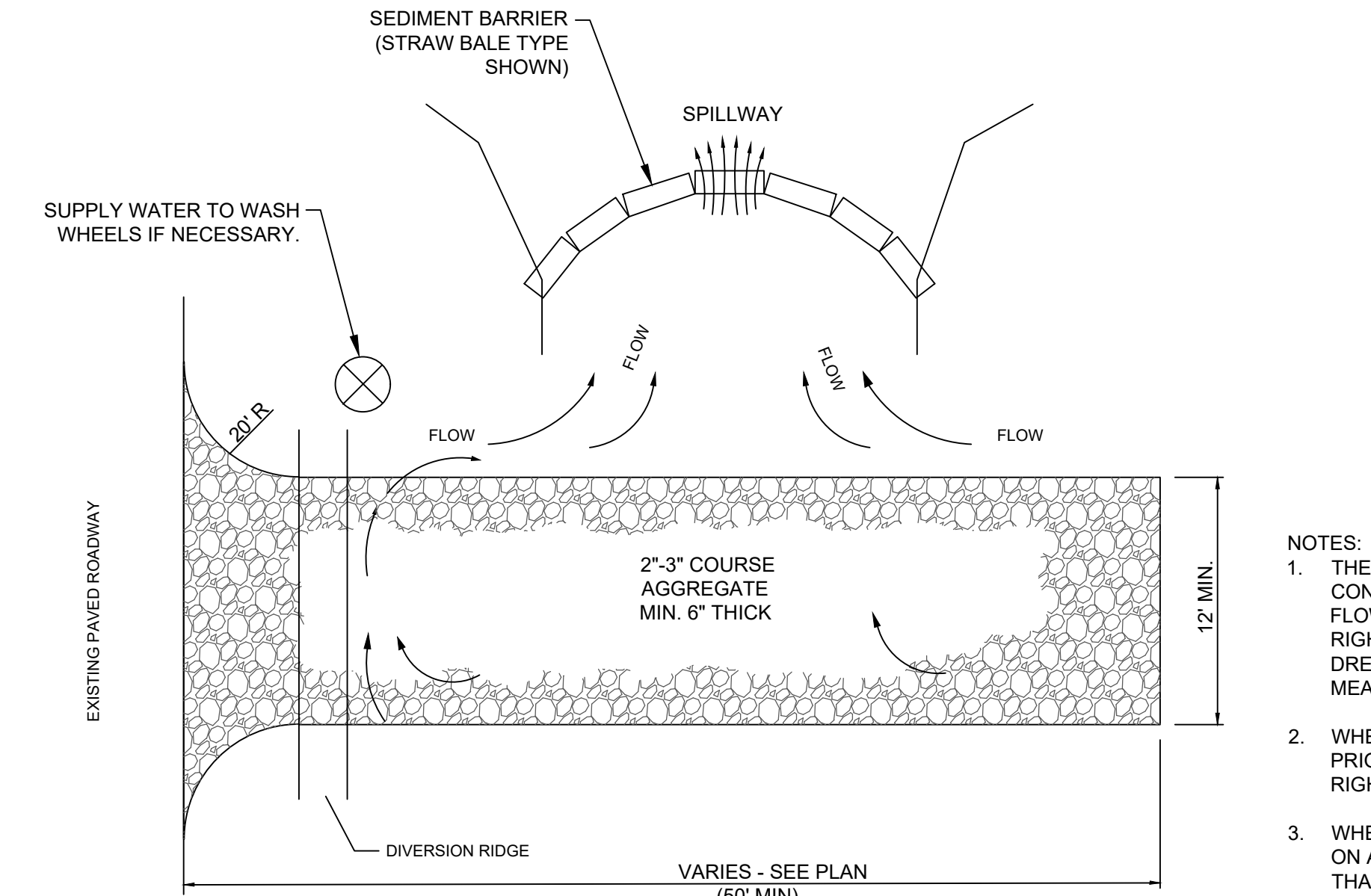
TURN LANE CONSTRUCTION PLAN

SHEET

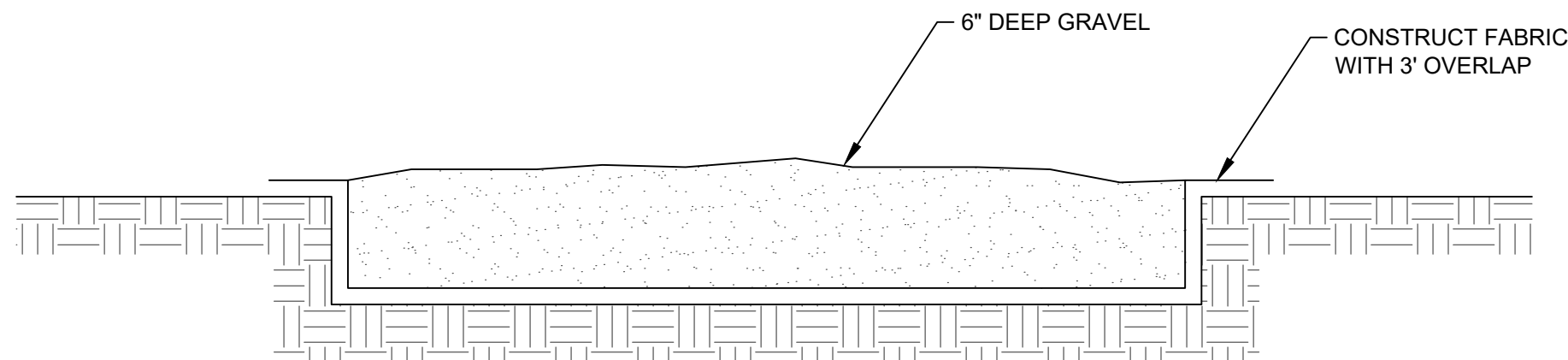
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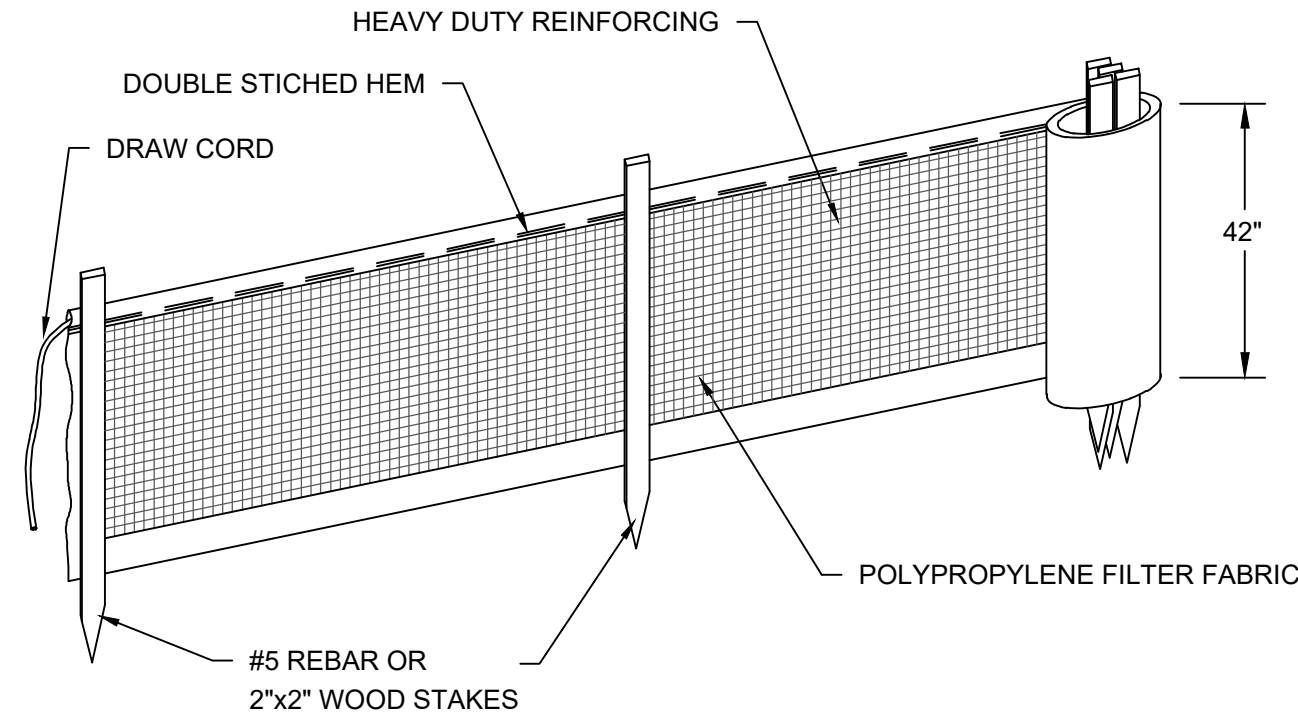
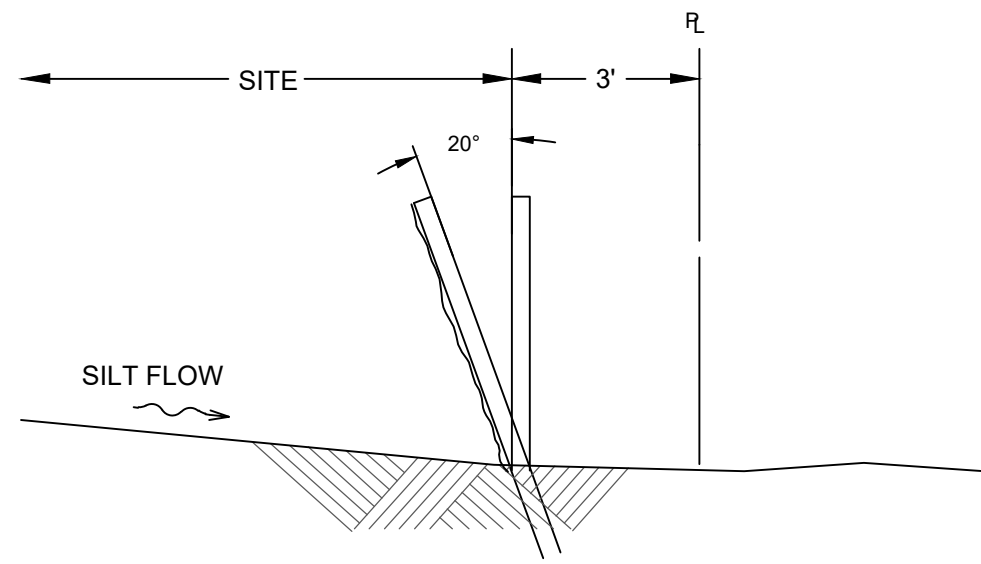


- NOTES:
1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
 2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
 3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.



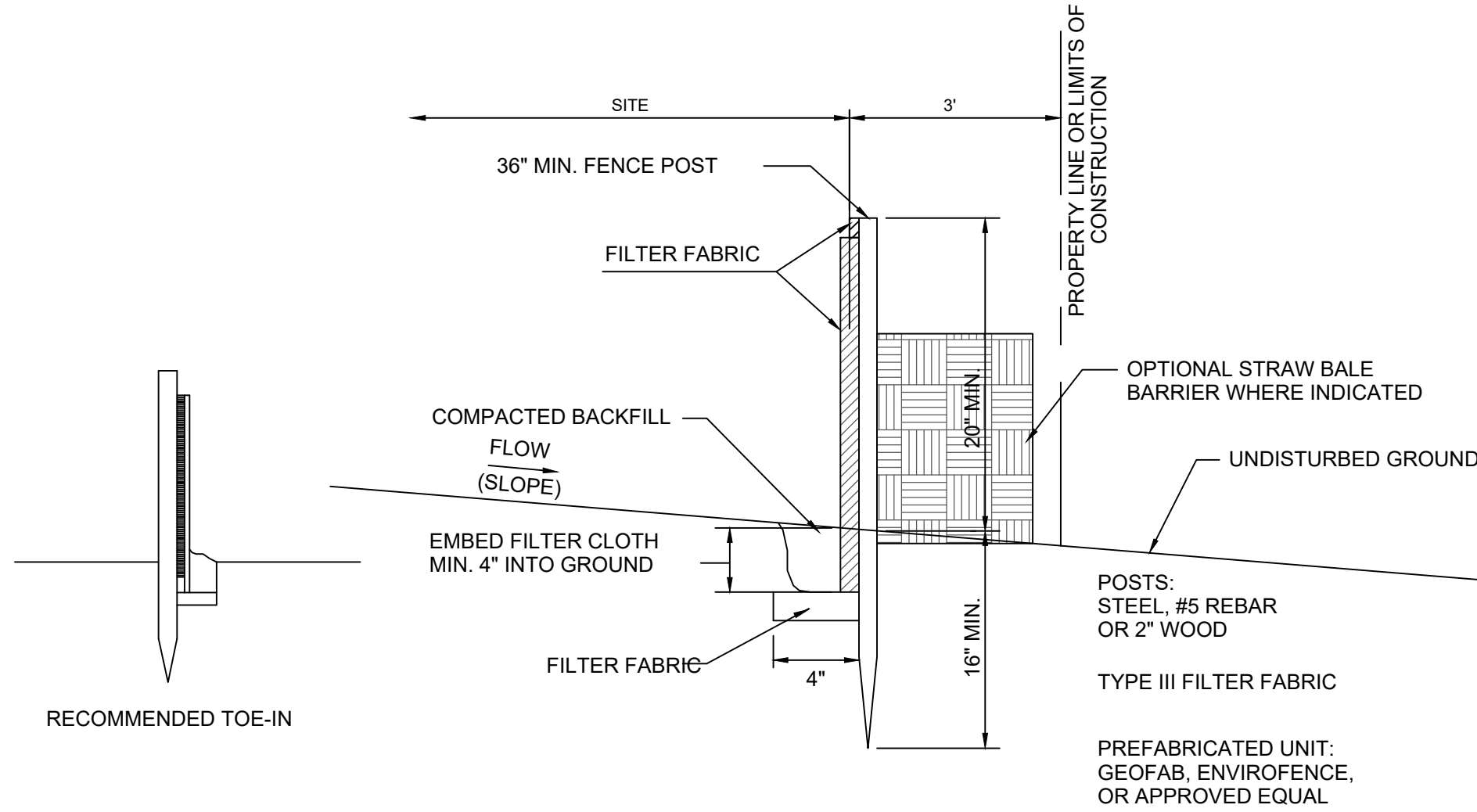
TEMPORARY CONSTRUCTION ENTRANCE

SCALE: NONE



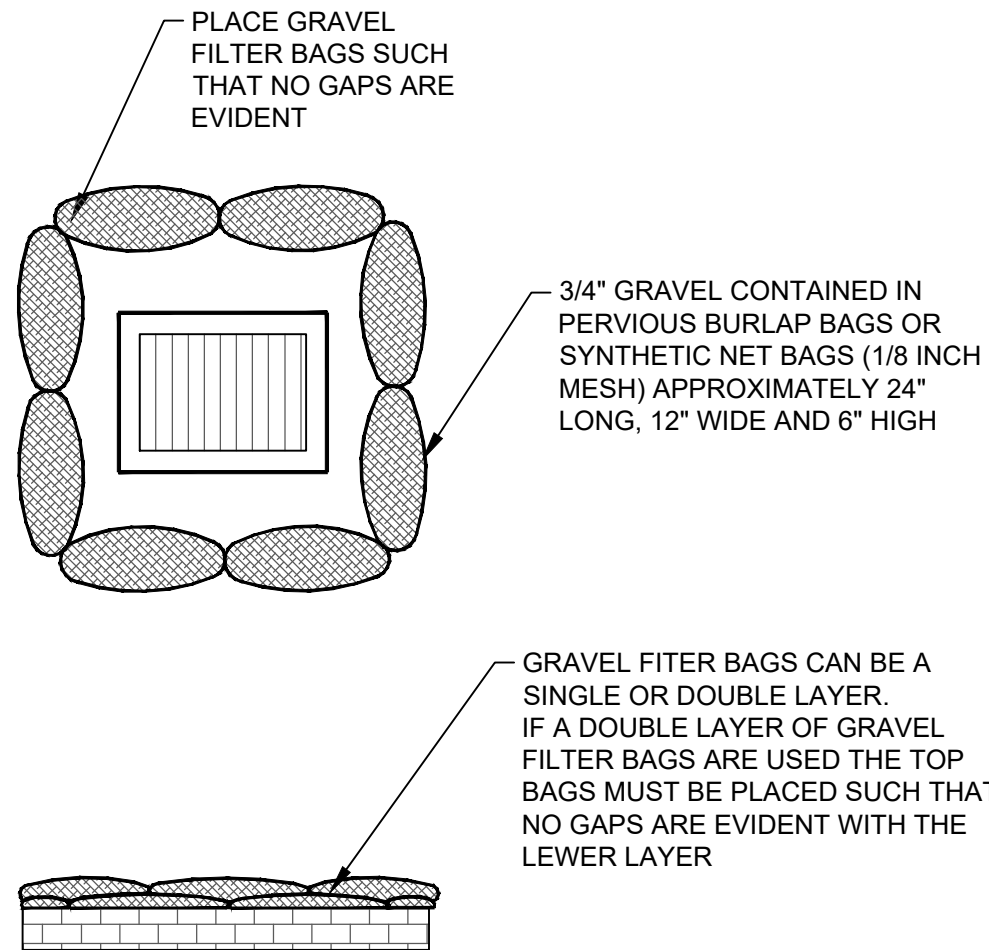
NOTES:

1. FILTER FABRIC FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES SPACED EVERY 24" AT TOP AND BOTTOM.
2. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED.
3. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE OR DEPTH OF ACCUMULATED SEDIMENT REACHES 6 INCHES.
4. SILT FENCE SHALL BE INSTALLED PER MANUFACTURERS SPECIFICATIONS PRIOR TO THE START OF CONSTRUCTION AND SHALL NOT BE REMOVED UNTIL CONSTRUCTION IS COMPLETE.
5. THE CONTRACTOR SHALL INSPECT AND REPAIR THE SILT FENCE AFTER EACH RAIN EVENT AND REMOVE SEDIMENT WHEN NECESSARY.
6. REMOVED SEDIMENT SHALL BE DEPOSITED IN AN AREA THAT WILL NOT CONTRIBUTE SEDIMENT OFFSITE AND CAN BE PERMANENTLY STABILIZED.
7. THE SILT FENCE SHALL BE PLACED ON SLOPE CONTOUR TO MAXIMIZE ITS PONDING EFFICIENCY.
8. IF DITCH LEVEL IS DEEPER THAN 30", THEN A FLOATING SILT SCREEN SHALL BE USED.



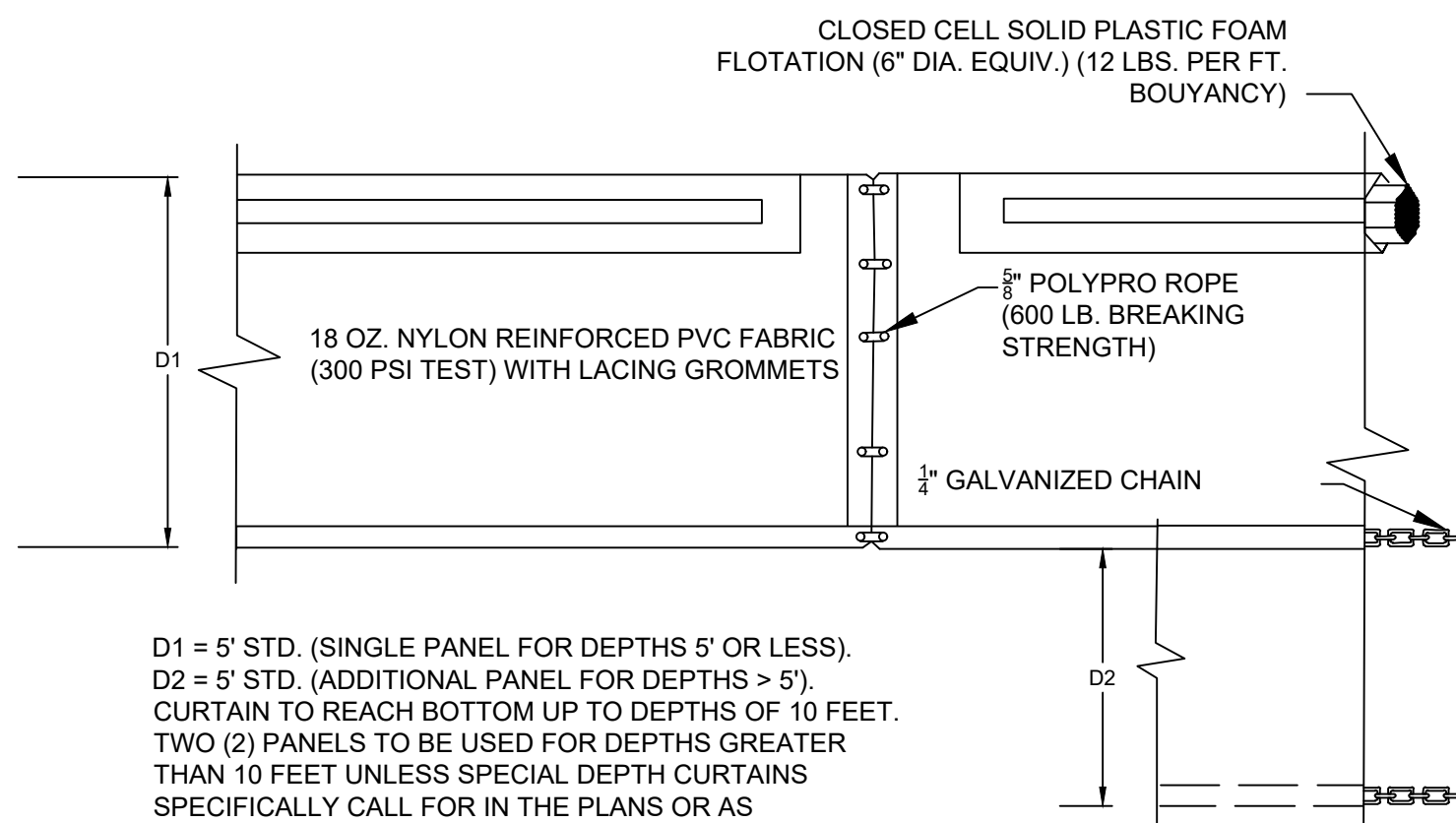
SILT FENCE INSTALLATION

SCALE: NONE



DITCH/PAVEMENT INLET PROTECTION

SCALE: NONE



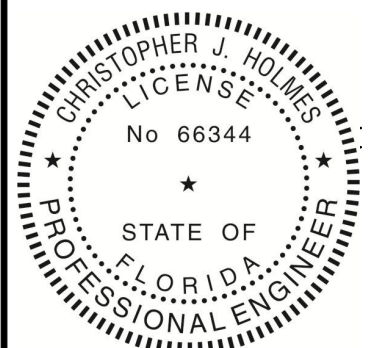
D1 = 5' STD. (SINGLE PANEL FOR DEPTHS 5' OR LESS)
D2 = 5' STD. (ADDITIONAL PANEL FOR DEPTHS > 5')
CURTAIN TO REACH BOTTOM UP TO DEPTHS OF 10 FEET.
TWO (2) PANELS TO BE USED FOR DEPTHS GREATER THAN 10 FEET UNLESS SPECIAL DEPTH CURTAINS SPECIFICALLY CALL FOR IN THE PLANS OR AS DETERMINED BY THE ENGINEER.

NOTES:

1. TURBIDITY BARRIERS ARE TO BE USED IN ALL PERMANENT BODIES OF WATER REGARDLESS OF WATER DEPTH.
2. NUMBER AND SPACING OF ANCHORS DEPENDANT ON CURRENT VELOCITIES.
3. DEPLOYMENT OF BARRIER AROUND PILE LOCATIONS MAY VARY TO ACCOMMODATE CONSTRUCTION OPERATIONS.
4. NAVIGATION MAY REQUIRE SEGMENTING BARRIER DURING CONSTRUCTION OPERATIONS.

FLOATING TURBIDITY BARRIER

N.T.S.



THE WATERFORD

INDEPENDENT LIVING & MEMORY CARE EXPANSION

601 UNIVERSE BOULEVARD

JUNO BEACH, FLORIDA 33408

EROSION AND SEDIMENTATION CONTROL DETAILS

SHEET

C-700

OF

2920.04

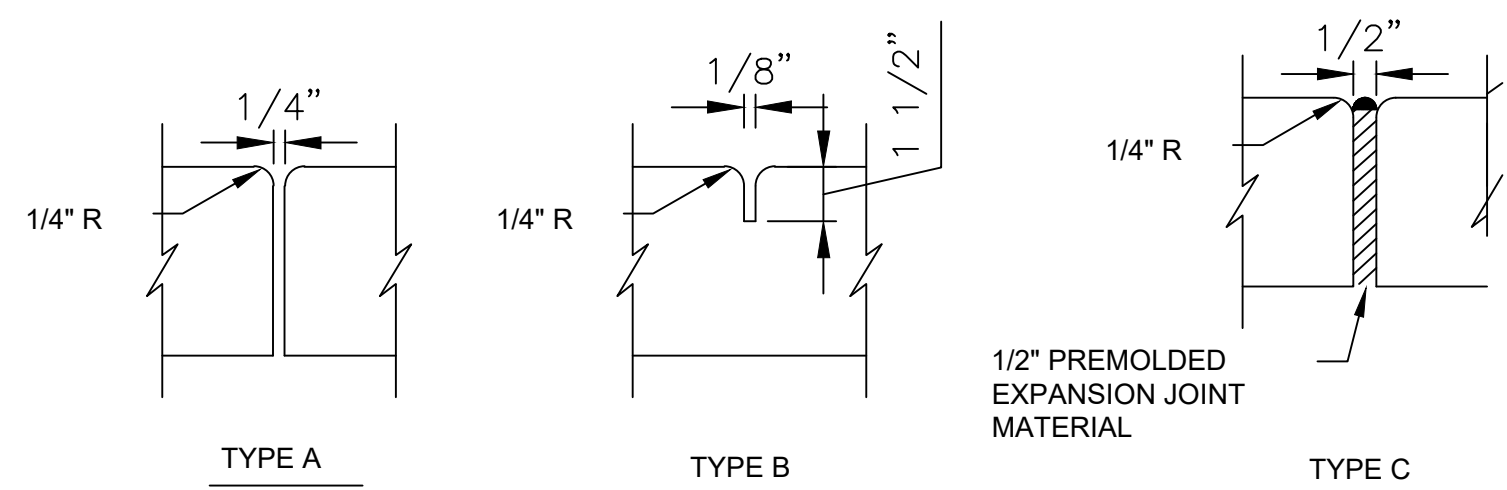
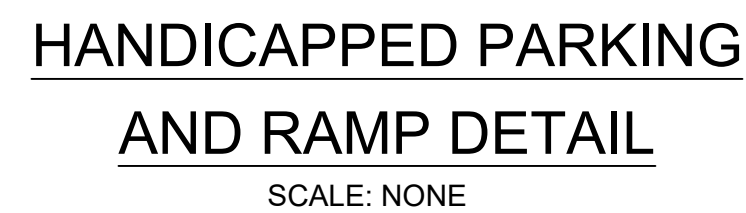
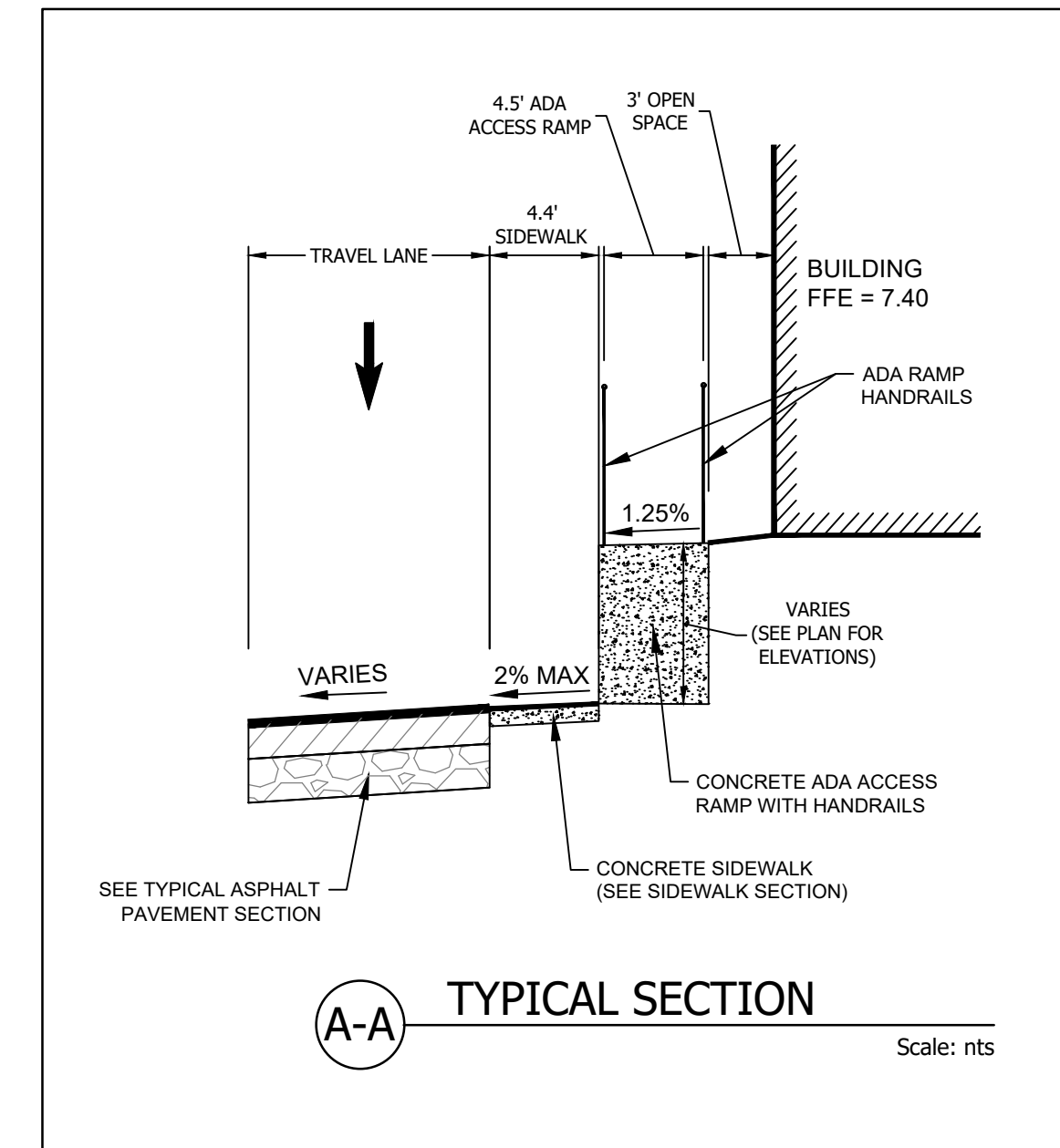
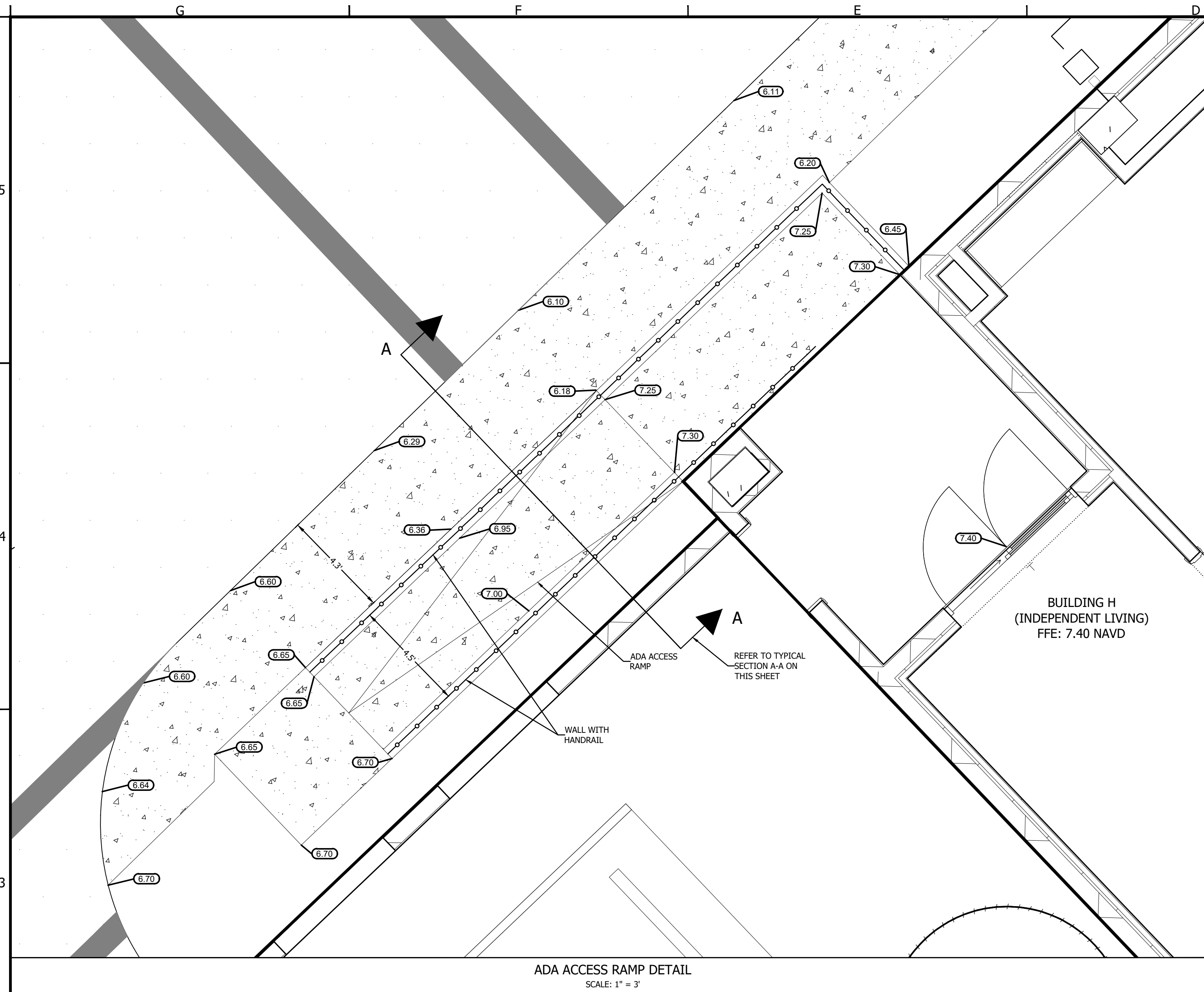


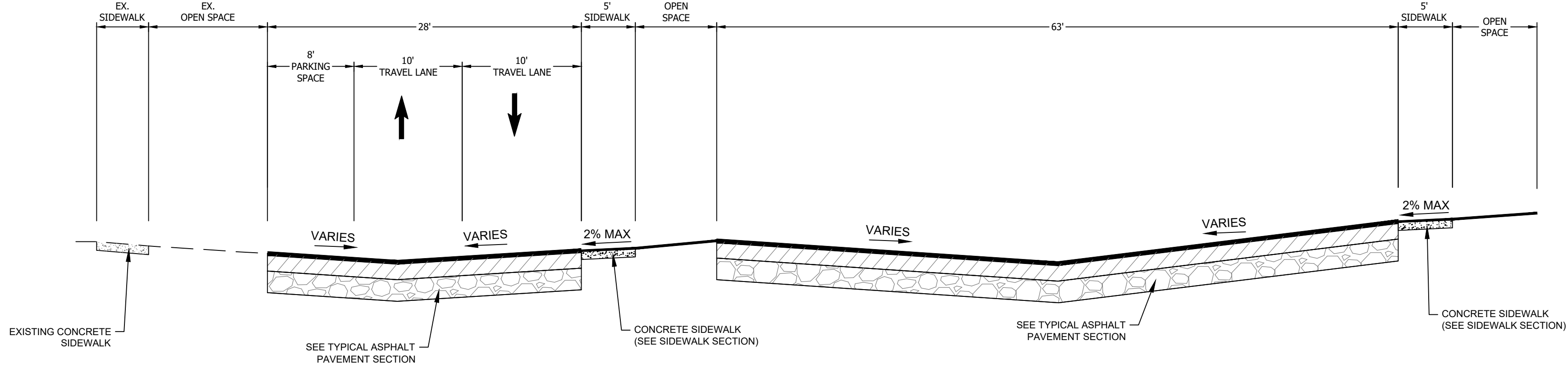
Diagram illustrating the maximum thickness variation for Section B-B. The variation is indicated as 2.0% MAX. across the length of the section, which is labeled VARIES.

- ## SIDEWALK CONSTRUCTION DETAIL

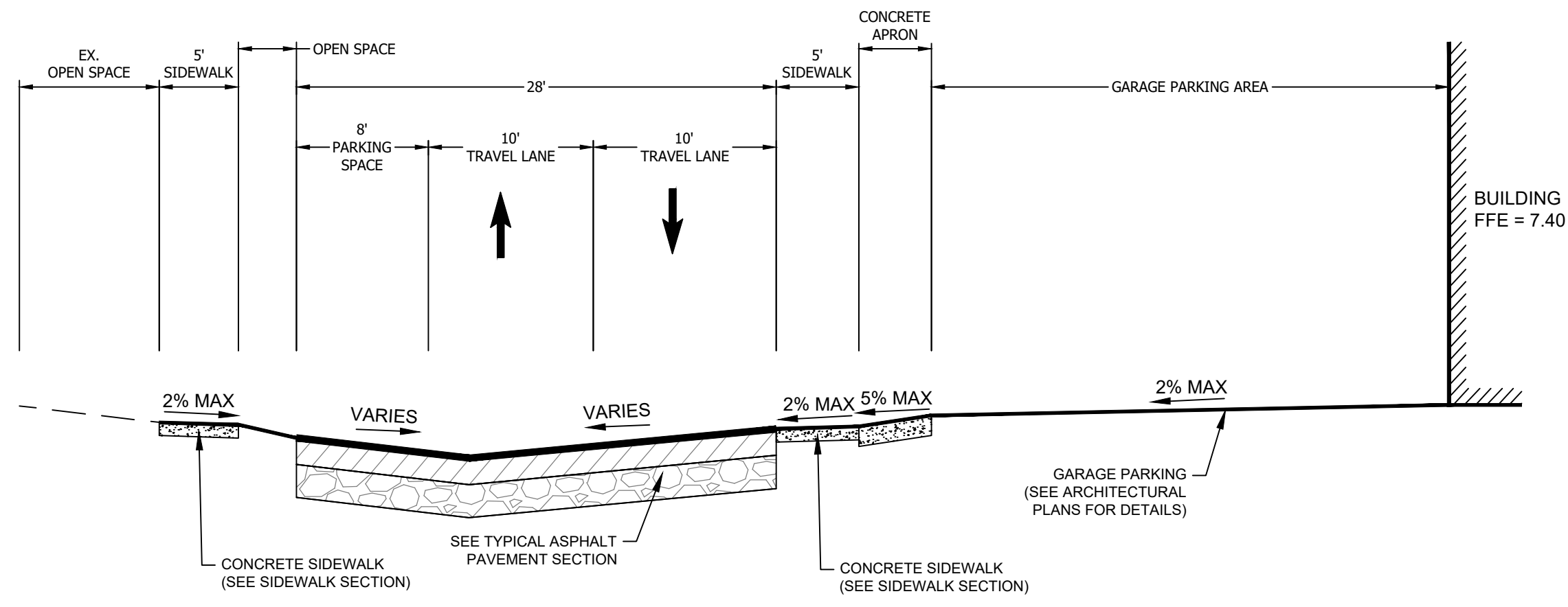




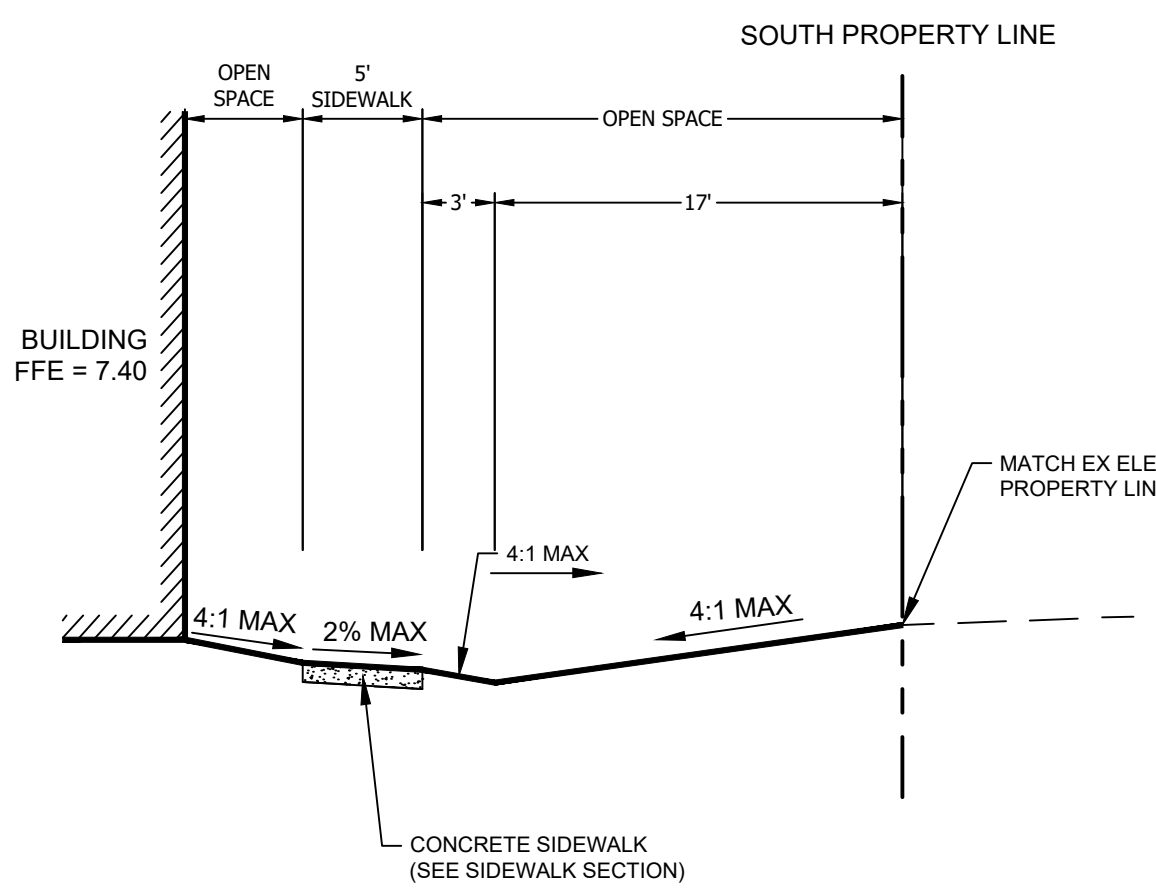
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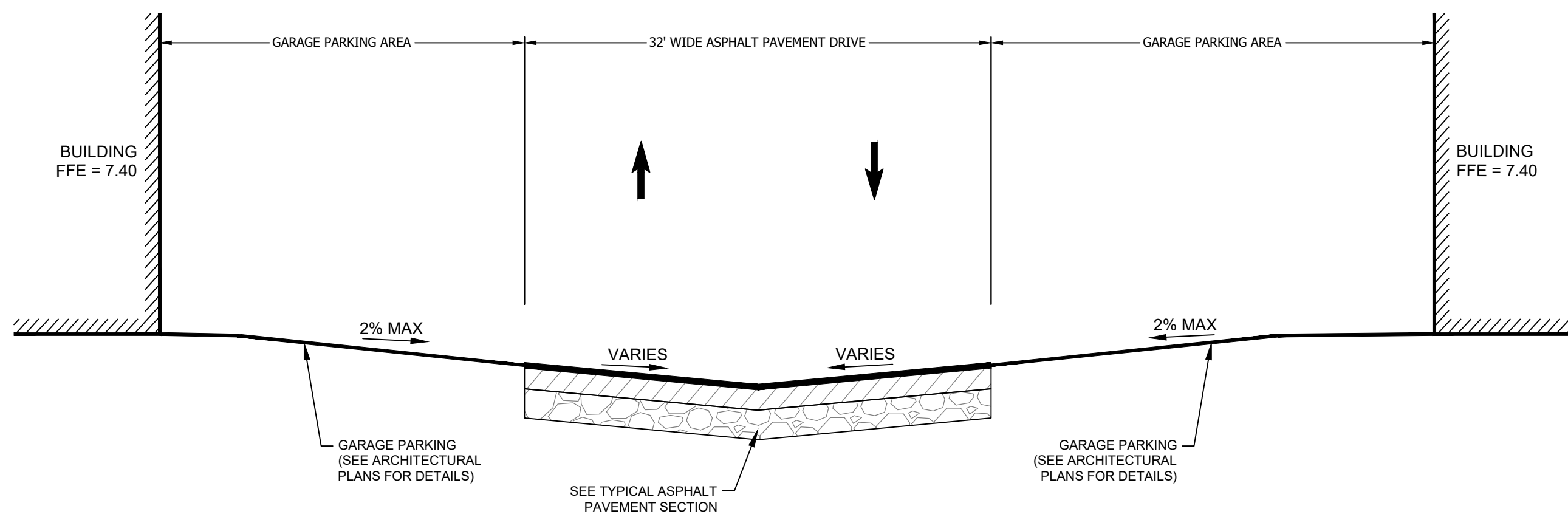
1 TYPICAL ROAD SECTION
Scale: nts



2 TYPICAL ROAD SECTION
Scale: NTS



3 TYPICAL SECTION - SOUTH PROPERTY LINE
Scale: nts



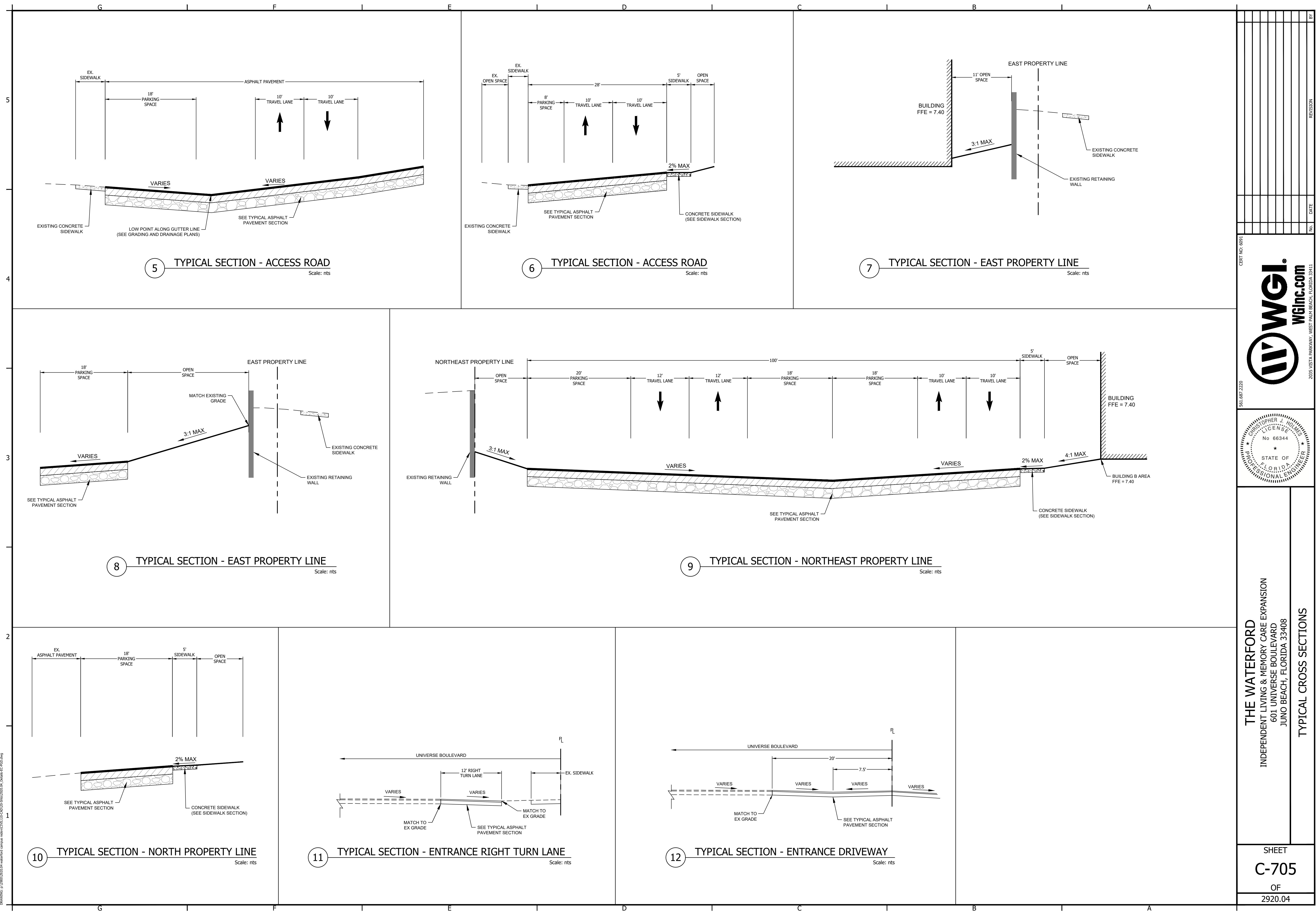
4 TYPICAL SECTION - DRIVE AISLE BETWEEN BUILDING H
Scale: NTS



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TYPICAL CROSS SECTIONS

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BY: J. RUSSELL

LENGTH OF PIPE RESTRAINT REQUIREMENTS AT ALL PIPE JOINTS

PIPE SIZE	90° BEND	45° BEND	22½° BEND	11½° BEND	REDUCER	VALVE	DEAD END	TEE
4"	54'	54'	36'	36'	54'	72'	72'	72'
6"	54'	54'	36'	36'	54'	72'	72'	72'
8"	54'	54'	36'	36'	54'	72'	72'	72'
10"	54'	54'	36'	36'	54'	108'	108'	108'
12"	72'	72'	54'	54'	72'	108'	108'	108'
14"	72'	72'	54'	54'	72'	108'	108'	108'
16"	72'	72'	54'	54'	72'	154'	154'	154'
18"	72'	72'	54'	54'	72'	154'	154'	154'
20"	90'	90'	54'	54'	90'	154'	154'	154'
24"	90'	90'	54'	54'	90'	172'	172'	172'
30"	90'	90'	54'	54'	90'	180'	180'	180'
36"	90'	90'	54'	54'	90'	270'	270'	270'
42"	108'	108'	54'	54'	108'	270'	270'	270'
48"	108'	108'	54'	54'	108'	270'	270'	270'
54"	108'	108'	54'	54'	108'	270'	270'	270'

MINIMUM LENGTH OF PUSH ON JOINT PIPE WITH SPECIAL RESTRAINING GASKETS

NOTES: (PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS)

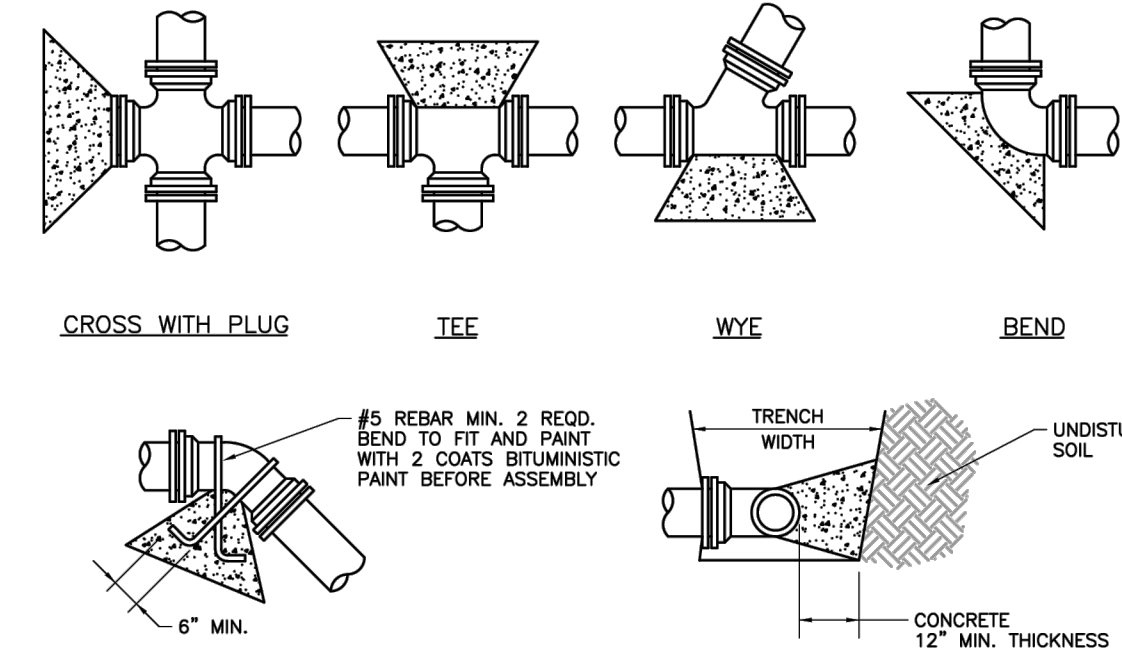
- ALL BURIED PRESSURE MAINS SHALL INCLUDE A RESTRAINED JOINT SYSTEM. THE CONTRACTOR SHALL USE A DUCTILE IRON RESTRAINING SYSTEM AS MANUFACTURED BY EBAM IRON, INC. (MEGALUG) OR APPROVED EQUAL FOR ALL MECHANICAL JOINT FITTINGS AND LOCKING GASKETS FOR PUSH-ON JOINT PIPE.
- RESTRAINING LENGTHS SHOWN ARE THE MINIMUM LENGTH REQUIRED BASED ON A TEST PRESSURE OF 150 P.S.I.G.
- THRUST BLOCKS, IN ADDITION TO THE ABOVE OUTLINED RESTRAINTS, SHALL ALSO BE REQUIRED AT ALL TIE-INS TO EXISTING LINES, ALL TAPPING TEES ON EXISTING LINES, ALL NEW HYDRANTS, ALL ABOVE-GROUND ASSEMBLIES 3" AND LARGER AND MAINS GREATER THAN 12" IN DIAMETER.
- FOR ALL C900 PVC PIPE, ADD A SAFETY FACTOR OF 1.1 TO THE ABOVE LENGTHS

Pipe Restraint Table

SEACOAST UTILITY AUTHORITY
CONSTRUCTION STANDARDS AND DETAILS

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ALL THRUST BLOCKS SHALL BE FORMED, LAID FORMS SHALL BE INSPECTED BY SUA PRIOR TO THE POURING OF CONCRETE AND SHALL ALSO BE INSPECTED BY SUA PRIOR TO COVERING. TYPICAL LOCATIONS WHICH REQUIRE CONCRETE THRUST BLOCKS, FOR PRESSURE MAINS FOUR INCHES (4") AND GREATER CONCRETE SHALL HAVE 2500 P.S.I. MINIMUM STRENGTH AT TWENTY EIGHT (28) DAYS AND BEAR AGAINST UNDISTURBED STABLE SOILS. AREA OF CONTACT SHALL BE GOVERNED BY PIPE SIZE, MAXIMUM PRESSURE IN PIPE, AND BEARING CAPACITY OF SOIL. PROTECT FITTINGS, BOLTS, ETC. BY COVERING WITH VOSQUINE OR OTHER ACCEPTABLE MATERIAL. CONCRETE SHALL BE A MINIMUM OF TWELVE INCHES (12") THICK. THRUST BLOCKS SHALL NOT BE AN ALTERNATIVE TO RESTRAINING GUARDS OR RESTRAINING GASKETS. THRUST BLOCKS MAY BE USED WHERE A SECOND FORM OF RESTRAINT IS REQUIRED AND WHEN TYING INTO EXISTING WHERE NO OTHER ALTERNATIVE EXISTS.

(PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS)

PIPE	THRUST BLOCK SOIL BEARING AREA REQUIRED	PIPE	THRUST BLOCK SOIL BEARING AREA REQUIRED	REMARKS
4"	2.0 SQ. FT.	18"	30.0 SQ. FT.	
6"	4.0 SQ. FT.	20"	37.0 SQ. FT.	
8"	6.8 SQ. FT.	24"	53.0 SQ. FT.	
10"	10.0 SQ. FT.	27"	80.0 SQ. FT.	
12"	14.0 SQ. FT.	30"	98.0 SQ. FT.	
14"	18.0 SQ. FT.	36"	127.0 SQ. FT.	
16"	24.0 SQ. FT.			

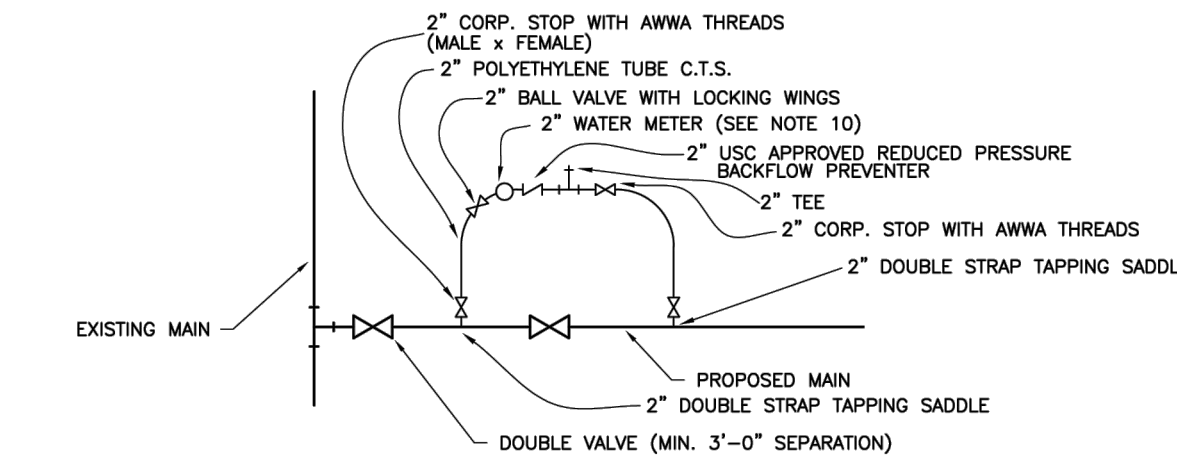
* THE ENGINEER OF RECORD SHALL CALCULATE THE SIZE OF THE DEADMAN REQUIRED AS WELL AS ANY INSTALLATION WHICH IS NOT COVERED BY THE ABOVE.

Thrust Blocks

SEACOAST UTILITY AUTHORITY
CONSTRUCTION STANDARDS AND DETAILS

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Revision B-23



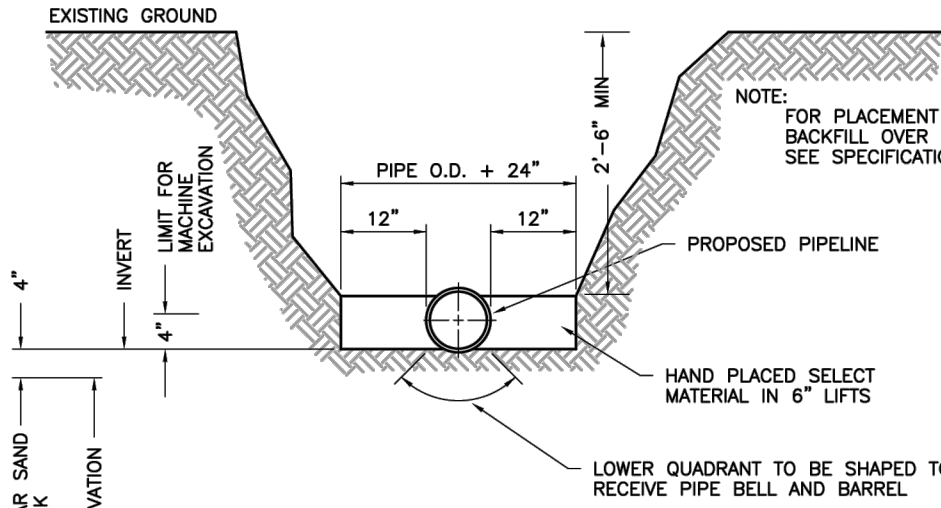
Tapping and Main Clearing Procedure

SEACOAST UTILITY AUTHORITY
CONSTRUCTION STANDARDS AND DETAILS

DATE APPROVED:
FEB 26, 2025
DRAWING No. 3

Revision C-24

(PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS)



Standard Trenching Procedure

SEACOAST UTILITY AUTHORITY
CONSTRUCTION STANDARDS AND DETAILS

DATE APPROVED:
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DRAWING No. 4

Revision C-20

NOTES: (PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS)

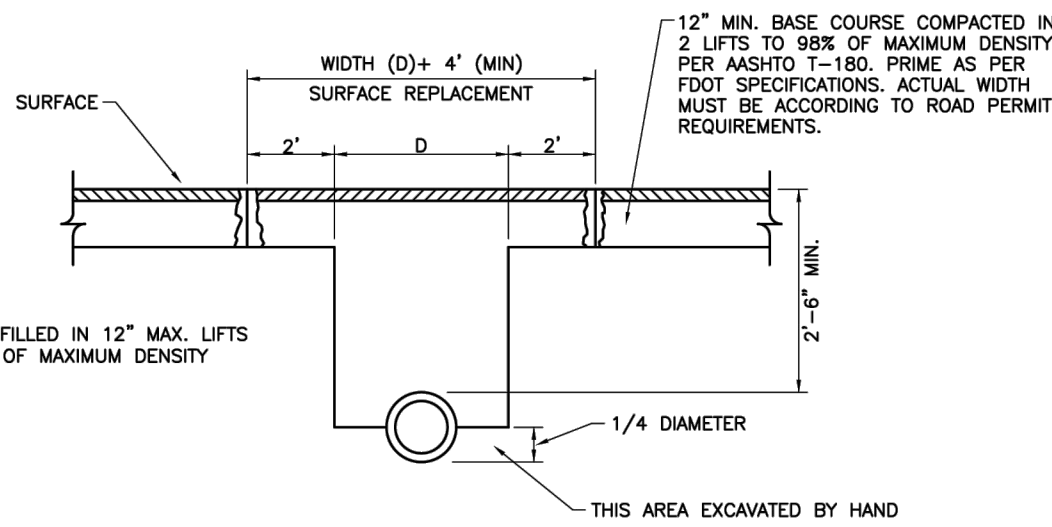
- CONCRETE COLLAR MAY NOT BE REQUIRED IN PAVED AREAS IF PAVEMENT SURFACE IS FINISHED PRIOR TO FINAL INSPECTION AND VALVE BOX LID IS AT FINISHED GRADE.
- WHEN VALVE IS DEEPER THAN 48" AN EXTENSION WILL BE REQUIRED TO BRING OPERATING NUT TO 24" OF FINISHED GRADE.
- TWO OF THE FOLLOWING FORMS OF RESTRAINT SHALL BE USED WHEN PIPE IS GREATER THAN 12".
A.) APPROVED MECHANICAL JOINT RESTRAINT (I.E. MEGALUG)
B.) THE BOLTS AND NUTS EQUAL IN DIA. TO TEE BOLTS AND NUTS, COATED WITH KOP-COAT 300-M OR APPROVED EQUAL.
- 6" LDL VALVE PLUG BY USSJ USA TO BE INSTALLED IN VALVE BOX. COLOR TO MATCH SERVICE TYPE. (BLUE - WATER, GREEN - SEWER, PURPLE - RECLAIMED)

Typical Underground Valve Installation

SEACOAST UTILITY AUTHORITY
CONSTRUCTION STANDARDS AND DETAILS

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Revision C-24



Pavement Replacement

SEACOAST UTILITY AUTHORITY
CONSTRUCTION STANDARDS AND DETAILS

DATE APPROVED:
FEB 26, 2025
DRAWING No. 5

Revision A-15

NOTES: (PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS)

- REPLACED BASE MATERIAL OVER DITCH SHALL BE A MINIMUM OF TWICE THE THICKNESS OF THE ORIGINAL BASE.
- BASE MATERIAL SHALL BE PLACED IN A MINIMUM OF 2 LIFTS AND THOROUGHLY ROLLED OR TAMPED TO 98% OF MAXIMUM DENSITY PER AASHTO T-180.
- ASPHALT CONCRETE PAVEMENT JOINTS SHALL BE MECHANICALLY SAWED.
- SURFACE MATERIAL SHALL BE CONSISTENT WITH EXISTING SURFACE, WITH ASPHALT A MINIMUM OF 2" THICK.
- A MINIMUM OF TWO DENSITY TESTS SHALL BE TAKEN FOR EACH SIX (6") INCH LIFT OF SUBGRADE AND EACH OPEN CUT CROSSING. ROAD CROSSINGS GREATER THAN 24 FEET IN WIDTH SHALL REQUIRE ONE ADDITIONAL TEST SITE FOR EACH ADDITIONAL 12 FEET OF PAVEMENT. WHEN THE SPECIFIED COMPACTED BASE IS GREATER THAN SIX AND ONE-HALF (6 1/2") INCHES, THE BASE SHALL BE CONSTRUCTED IN TWO OR MORE COURSES. PROCTORS FOR MATERIALS USED IN BACKFILLING SHALL BE OBTAINED BY A CERTIFIED LABORATORY. DENSITY TESTS SHALL BE CONDUCTED BY A CERTIFIED LABORATORY. THE PERCENTAGE OF MAXIMUM DENSITY REQUIRED SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF "THE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" AT THE TIME THE PERMIT WAS ISSUED. ALL DENSITY TESTS SHALL BE COMPLETED AND ACCEPTED ON EACH LAYER PRIOR TO ADDITIONAL BACKFILLING. A COPY OF ALL COMPLETED AND ACCEPTED DENSITY TESTS SHALL BE FURNISHED TO SUA UPON REQUEST. BACKFILL COMPACTION SHALL BE 98% OF MAXIMUM DENSITY PER AASHTO T-180.
- ANY DAMAGE TO TRAFFIC SIGNALIZATION EQUIPMENT SHALL BE REPAIRED BY THE PALM BEACH TRAFFIC DIVISION AT THE CONTRACTOR'S EXPENSE.
- THESE SPECIFICATIONS MAY BE SUPERSEDED BY THE PERMITTING AGENCY.
- TEMPORARY ASPHALT OR CONCRETE PATCH MUST BE APPLIED THE SAME DAY AS THE BACKFILL.
- TRAFFIC AREAS OR WHERE SAFETY TO THE PUBLIC IS AT ISSUE A TEMPORARY ASPHALT OR CONCRETE PATCH MUST BE IMMEDIATELY PLACED.

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WATER AND SEWER DETAILS

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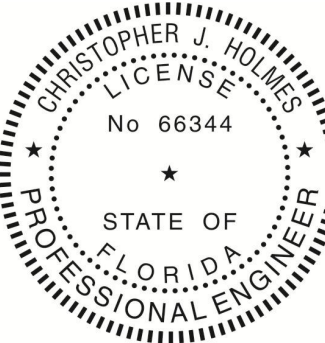
C-706

OF

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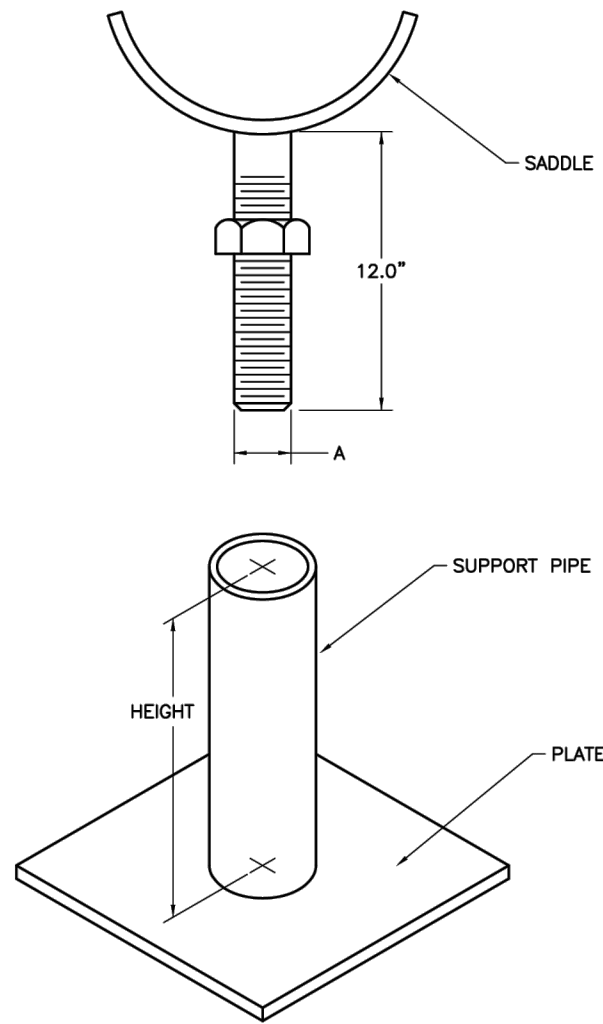
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2035 VISTA PARKWAY, WEST PALM BEACH, FLORIDA 33411

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PLOTTED BY: ANTHONY RUSSO
DRAWING: D:\3000\2025\01\waterford\carpenter\stds\CS-708.dwg
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PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS

PIPE SIZE	A	SUPPORT PIPE	SADDLE	PLATE	HEIGHT
3"	3/4"	1"	1/4" x 2"	4" x 4"	1' - 0"
4"	3/4"	1"	1/4" x 2"	4" x 4"	1' - 0"
6"	3/4"	1"	1/4" x 2"	4" x 4"	1' - 0"
8"	3/4"	1"	1/4" x 2"	4" x 4"	1' - 0"
10"	1"	1 1/4"	3/8" x 3"	6" x 6"	1' - 0"
12"	1"	1 1/4"	3/8" x 3"	6" x 6"	1' - 0"
14"	1"	1 1/4"	3/8" x 3"	6" x 6"	1' - 0"
16"	1 1/4"	1 1/2"	1/2" x 3"	6" x 6"	1' - 0"
18"	1 1/4"	1 1/2"	1/2" x 3"	6" x 6"	1' - 0"

NOTE: ALL MATERIAL SHALL BE 316 STAINLESS STEEL

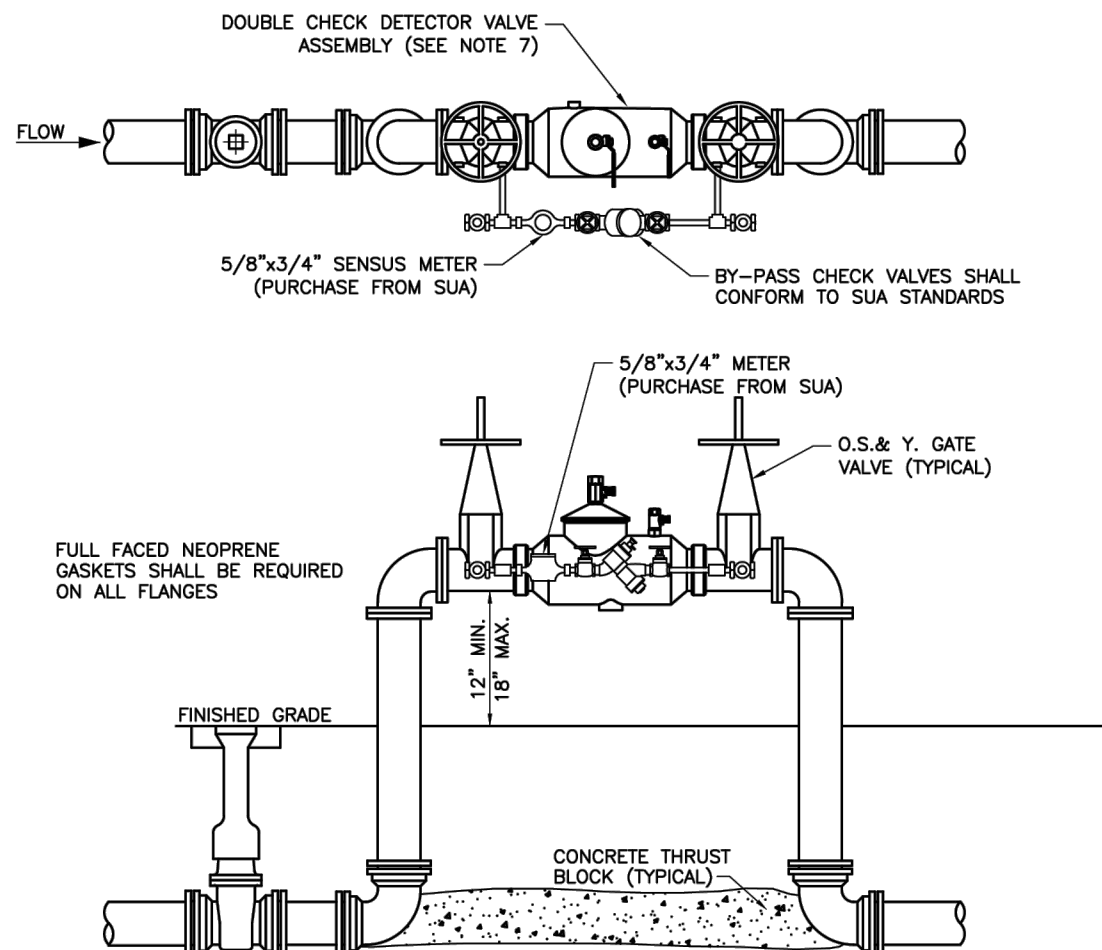
Pipe Support

SEACOAST UTILITY AUTHORITY
CONSTRUCTION STANDARDS AND DETAILS

DATE APPROVED:
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Revision B-16



NOTES: (PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS)

- MECHANICAL JOINT FITTINGS SHALL BE REQUIRED UNDERGROUND AND FLANGED FITTINGS FOR ABOVE GROUND USE, NO UNFLANGES PERMITTED.
- PAIN THE ABOVE GROUND ASSEMBLY, INCLUDING ENTIRE LENGTH OF THE RODS, IN ACCORDANCE WITH SUA CONSTRUCTION STANDARD SECTION II, ITEM 7, AFTER MANUFACTURERS RECOMMENDED SURFACE PREP IS COMPLETED. DO NOT PAINT OVER NAME/SERIAL PLATE, STAINLESS STEEL BODY OR BRASS FITTINGS.
- WHEN PROTECTIVE PIPE STANCHIONS OR A SCREEN WALL IS REQUIRED, SEE "PROTECTIVE ENCLOSURES FOR ABOVE GROUND DEVICES" DETAIL.
- SPECIAL FIRE PROTECTION SYSTEMS USING INTERNAL PUMPS, TANKS, ETC. SHALL BE REQUIRED TO USE APOLLO RPDALF4A OR ZURN 375ASTDA.
- ALL TEST PORTS SHALL BE PLUGGED WITH BRASS PLUGS.
- TWO OF THE FOLLOWING FORMS OF RESTRAINT SHALL BE USED WHEN PIPE IS GREATER THAN 12".
 - APPROVED MECHANICAL JOINT RESTRAINT (i.e. MEGALUG)
 - TIE RODS AND NUTS EQUAL IN DIA. TO TEE BOLTS AND NUTS, COATED WITH KOP-COAT 300-M OR APPROVED EQUAL.
- APPROVED DOUBLE CHECK DETECTOR VALVE ASSEMBLIES WITH CHLORAMINE RESISTANT ELASTOMERS; 4" TO 8"
 - AMES DERINGER 300
 - APOLLO DCDALF 4A
 - ZURN 350ASTDA

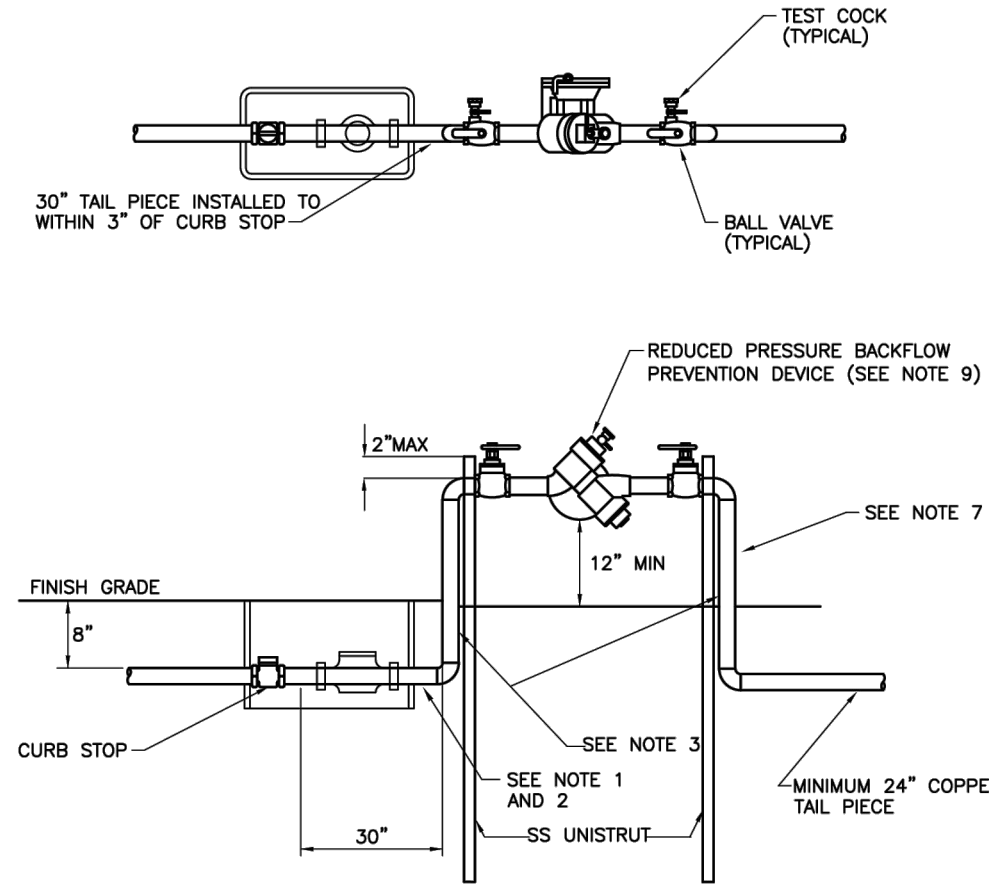
Above Ground Fireline

SEACOAST UTILITY AUTHORITY
CONSTRUCTION STANDARDS AND DETAILS

DATE APPROVED:
FEB 26, 2025

DRAWING No. 34

Revision E-23



NOTES: (PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS)

- TYPE "K" COPPER TUBING (SOFT DRAWN) OR POLYETHYLENE TUBING SDR 9 COPPER TUBE SIZE.
- IF THIS DISTANCE IS LESS THAN 6 FEET ONLY COPPER TUBING SHALL BE PERMITTED.
- BOTH RISERS SHALL BE TYPE "K" COPPER TUBING (HARD DRAWN) WITH COPPER/BRASS SOLDER FITTINGS AND ADAPTERS. ONLY LEAD FREE PIPE, FITTINGS, VALVES, SOLDER AND FLUX SHALL BE PERMITTED.
- 1 1/2" AND 2" METER STOPS SHALL BE EQUIPPED WITH LOCKING CAPS AND METER FLANGES.
- WHEN THE DEVICE IS INSTALLED PARALLEL TO A BUILDING WALL THERE SHALL BE A MINIMUM OF 2' BETWEEN THE EDGE OF THE DEVICE AND THE BUILDING WALL.
- BACKFLOW PREVENTION DEVICE SHALL BE EQUIPPED WITH BALL VALVES.
- BACKFLOW PREVENTION DEVICE SHALL BE SUPPORTED AT BOTH RISERS WITH A MINIMUM OF 2 - 1 5/8" STAINLESS STEEL UNISTRUTS. RISERS TO BE SECURED TO UNISTRUT WITH 304 STAINLESS STEEL MOUNTING HARDWARE AND 1/4" NEOPRENE INSULATORS.
- BACKFLOW DEVICES SHALL BE A MINIMUM OF 3' FROM BACK OF CURB.
 - AMES LF4000B
 - APOLLO RPLF 4A
 - WATTS LF919
 - ZURN 975XL2

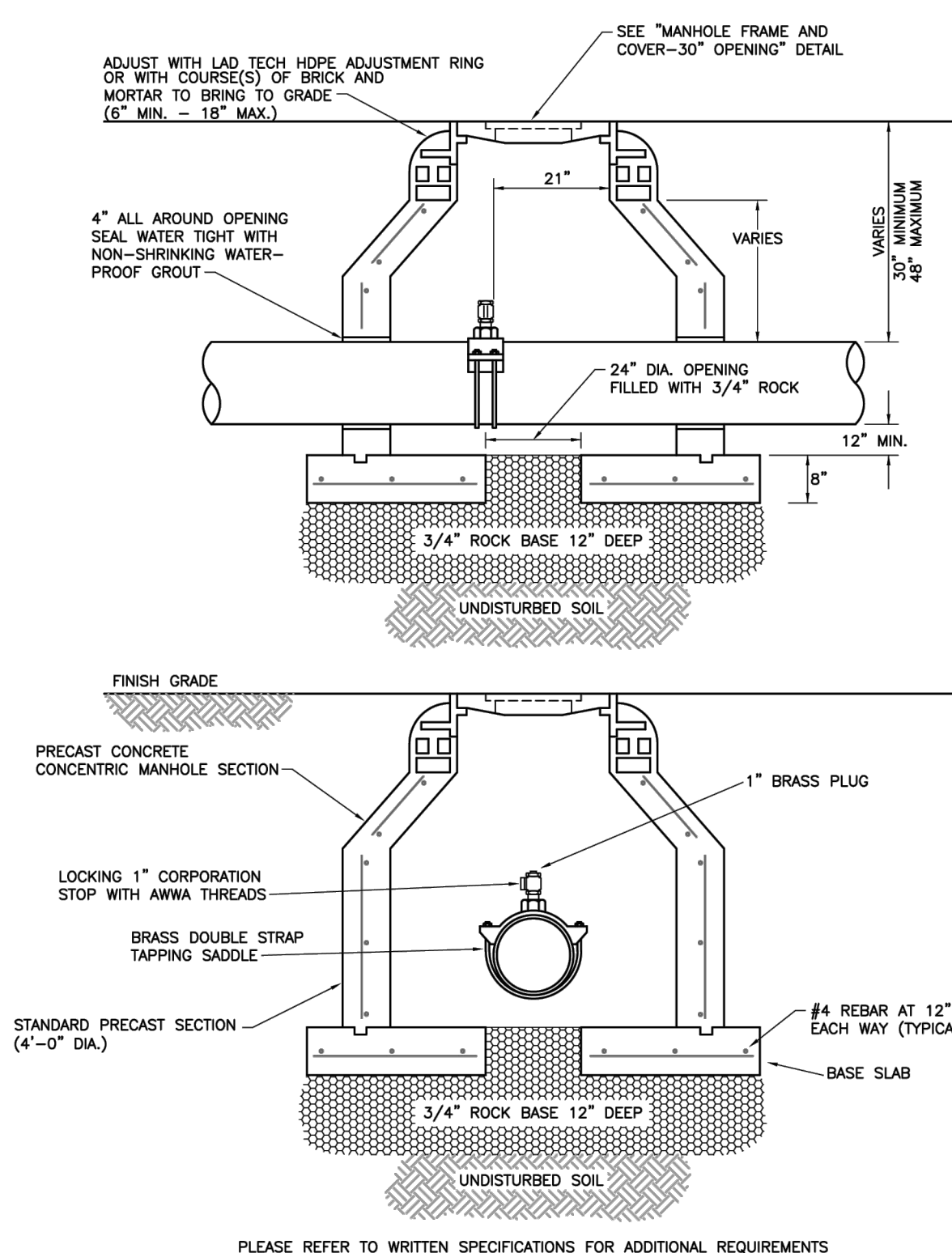
Private Auxiliary Water Supply Backflow Device

SEACOAST UTILITY AUTHORITY
CONSTRUCTION STANDARDS AND DETAILS

DATE APPROVED:
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DRAWING No. 39

Revision B-23



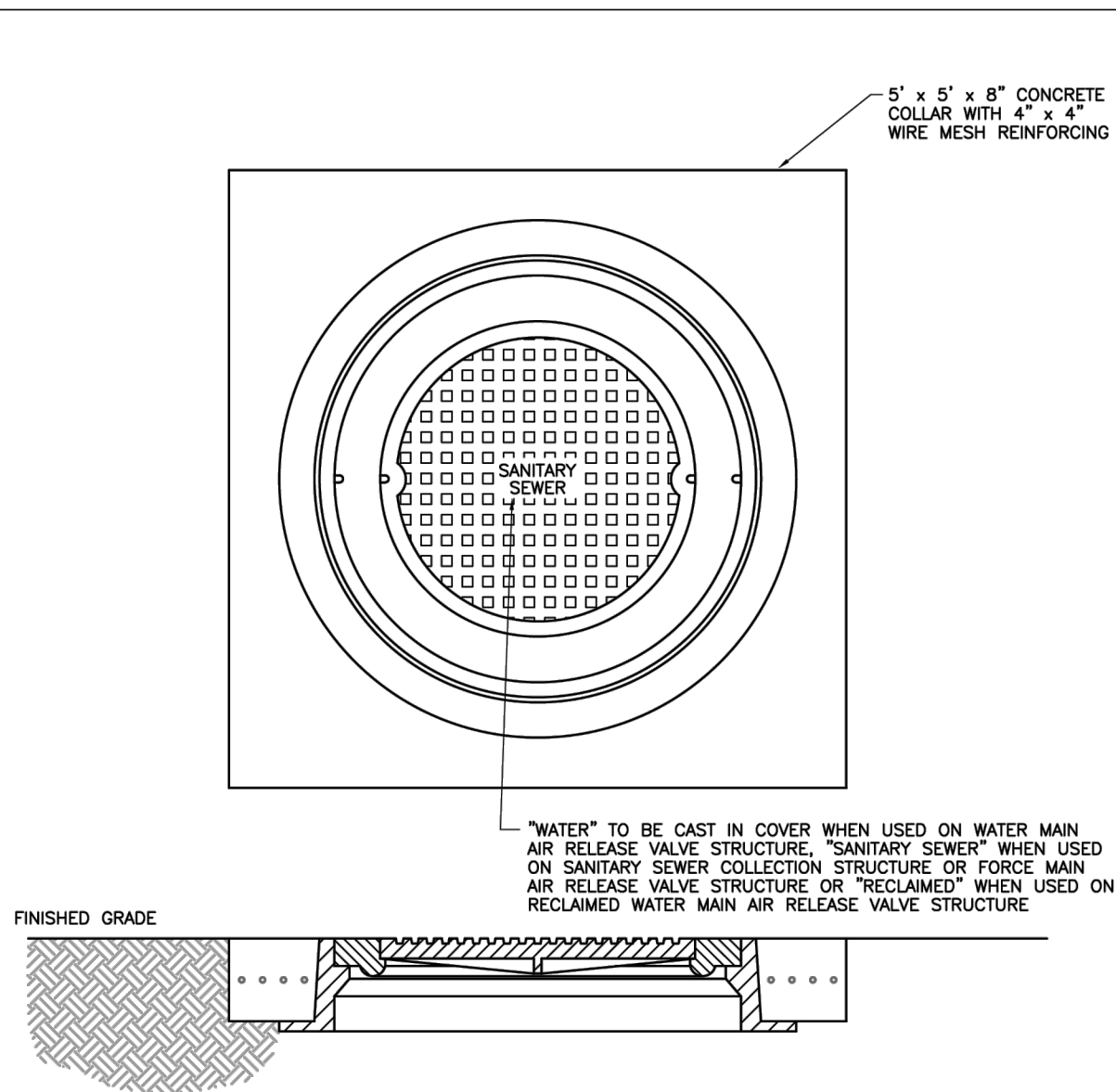
Manual Air Release Valve (Underground Water Main)

SEACOAST UTILITY AUTHORITY
CONSTRUCTION STANDARDS AND DETAILS

DATE APPROVED:
FEB 26, 2025

DRAWING No. 42

Revision C-24



NOTES: (PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS)

- IN GREEN AREAS OR ANY AREA DEEMED TO HAVE QUESTIONABLE DRAINAGE, A WATER TIGHT MANHOLE INSERT SUCH AS "SEWER GUARD" OR APPROVED EQUAL WILL BE REQUIRED.
- APPROVED MANHOLES (DOUBLE COVER TYPE):
 - U.S. FOUNDRY MODEL No. 230-40-M
 - VULCAN FOUNDRY MODEL No. VM-101
- CONCRETE COLLAR IS REQUIRED ONLY WHEN MANHOLE IS OUT OF PAVEMENT.

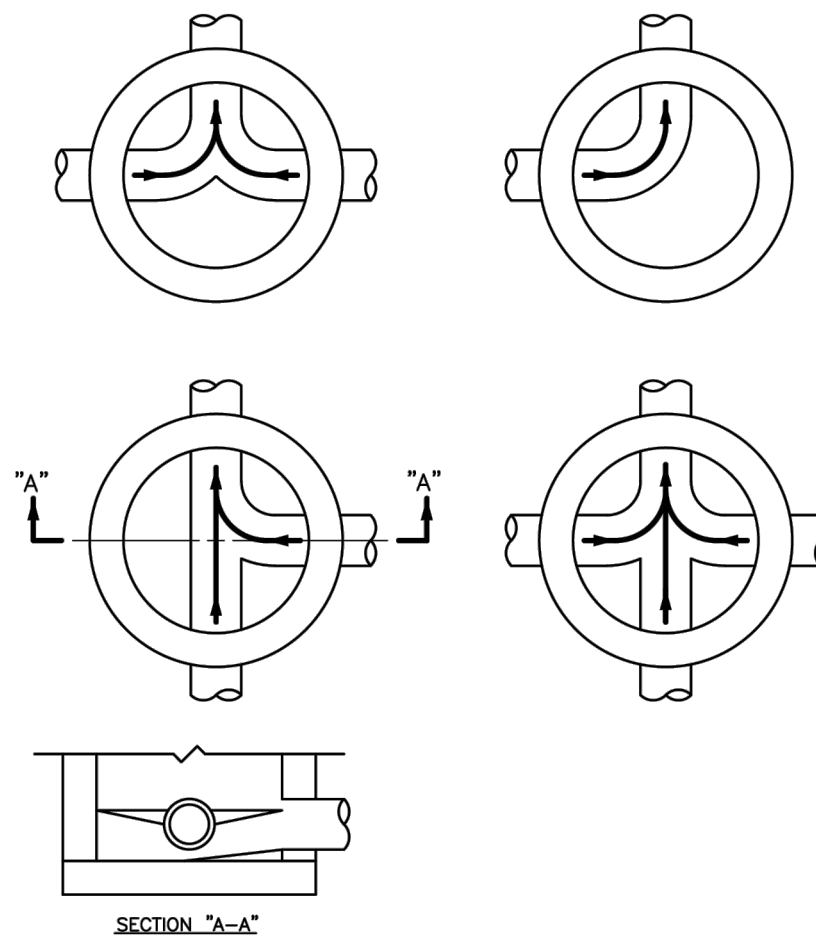
Manhole Frame and Cover (30" Opening)

SEACOAST UTILITY AUTHORITY
CONSTRUCTION STANDARDS AND DETAILS

DATE APPROVED:
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DRAWING No. 50

Revision A-15



NOTES: (PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS)

- INVERT CHANNELS TO BE CONSTRUCTED FOR SMOOTH FLOW WITH NO OBSTRUCTIONS.
- SPILLWAYS SHALL BE CONSTRUCTED BETWEEN PIPES WITH DIFFERENT INVERT ELEVATIONS PROVIDING FOR SMOOTH FLOWS.
- CHANNELS FOR FUTURE CONSTRUCTIONS (STUBS) SHALL BE CONSTRUCTED, FILLED WITH SAND, AND COVERED WITH 1" OF MORTAR.
- SLOPE MANHOLE ITSELF WITH A 1:2 SLOPE FROM MANHOLE WALL TO CHANNEL.
- INVERT SHALL BE A MINIMUM OF 1/2 THE DIAMETER OF THE LARGEST PIPE OR 4" DEEP, WHICHEVER IS GREATER.

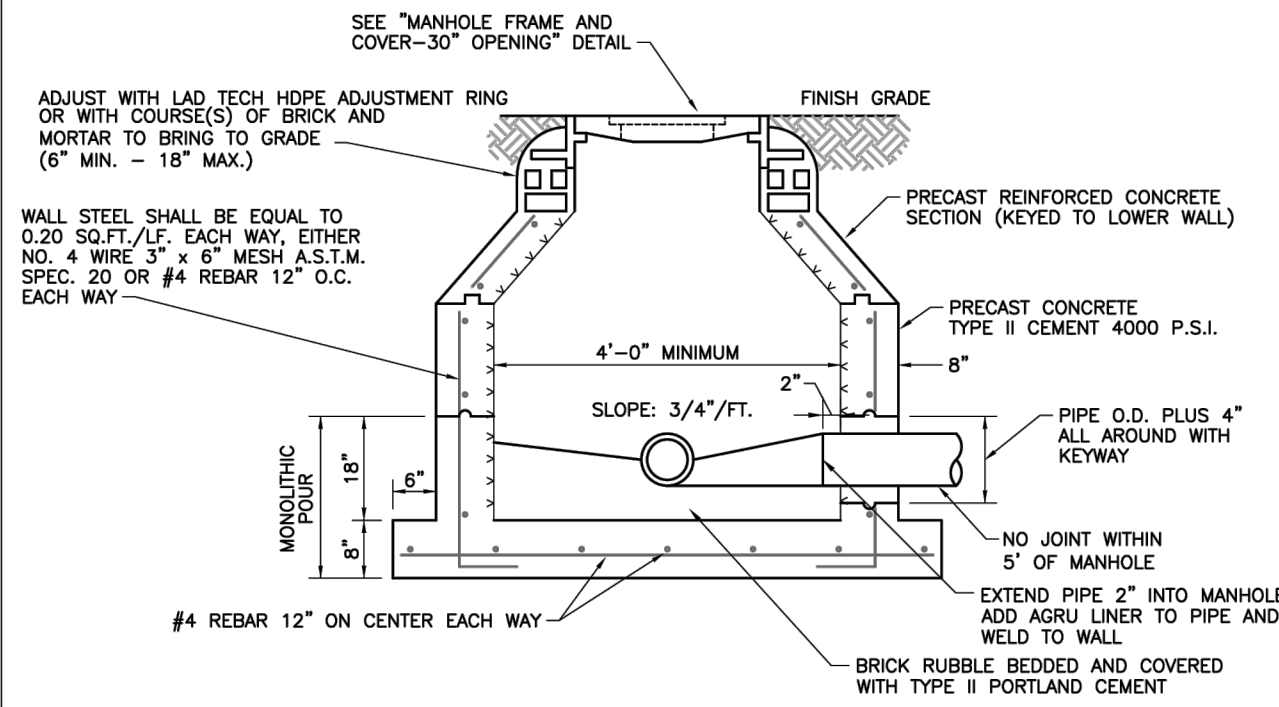
Flow Patterns for Invert Channels

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CONSTRUCTION STANDARDS AND DETAILS

DATE APPROVED:
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Revision B-23



NOTES: (PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS)

- MANHOLES SHALL CONFORM TO A.S.T.M. C478(MIN.)
- WALL REINFORCEMENTS A.S.T.M. DESIGNATION A165-64.(LATEST REVISION)(MIN.)
- IF TWO CAGES OF WIRE MESH ARE USED, ONE SHALL BE POSITIONED 3" FROM THE INSIDE SURFACE AND ONE 3" FROM THE OUTSIDE SURFACE. IF A SINGLE CAGE OR REBAR IS USED, IT SHALL BE CENTERED WITHIN WALL THICKNESS. NO EXPOSED STEEL SHALL BE PERMITTED.
- LIFT HOLES THROUGH PRECAST STRUCTURE ARE PERMITTED.
- A MINIMUM OF SEVEN DAYS CURE TIME IS REQUIRED PRIOR TO DELIVERY.
- ALL PIPE HOLES SHALL BE PRECAST OR CORE DRILLED. OVERSIZED HOLES WILL BE REJECTED.
- ANY VISIBLE REINFORCING WIRE, STEEL OR HONEYCOMBS SHALL BE CAUSE FOR REJECTION.
- SEE TECHNICAL SPECIFICATIONS FOR BEDDING REQUIREMENTS.
- "RAM-NEK" OR APPROVED EQUAL AT ALL RISER JOINTS (1/2" THICK WITH WIDTH AT LEAST 1/2 THE WALL THICKNESS) WITH GROUT ON INSIDE AND OUTSIDE.
- ALL OPENINGS SHALL BE SEALED USING ONLY TYPE II PORTLAND CEMENT/SAND MORTAR AND POTABLE WATER FOR MUD WORK ON JOINTS, LIFTING HOLES, INVERTS, ETC. WHEN AN ACCELERATOR IS NECESSARY, "ANTI HYDRO" IS THE ONLY PRODUCT APPROVED.
- BRICK MASONRY CONSTRUCTION TO BE STUCCOED WITH 3/4" TYPE II CEMENT INSIDE AND OUTSIDE, AND INSIDE TO BE COATED WITH TWO COATS OF KOPPERS 300 OR APPROVED EQUAL.
- A FLOW CHANNEL SHALL BE CONSTRUCTED INSIDE MANHOLE TO DIRECT INFLUENT INTO FLOW STREAM, AND COATED WITH TWO COATS OF KOPPERS 300 OR APPROVED EQUAL.
- INTERIOR OF ALL SANITARY MANHOLES SHALL HAVE AGRU SURE GRIP CONCRETE PROTECTIVE LINER INSTALLED AT THE TIME OF MANUFACTURING. SEE "AGRU SURE GRIP LINER DETAILS" DRAWING FOR ADDITIONAL AGRU SURE GRIP REQUIREMENTS.

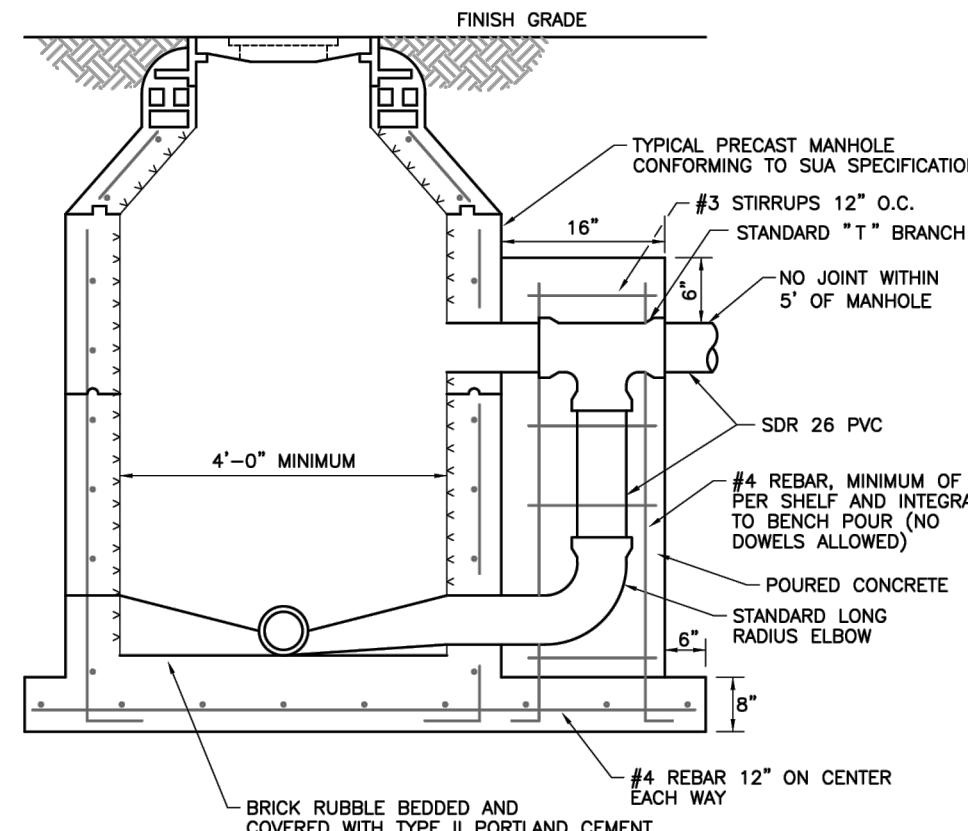
Standard Precast Manhole

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CONSTRUCTION STANDARDS AND DETAILS

DATE APPROVED:
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DRAWING No. 52

Revision C-24



NOTES: (PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS)

- CONCRETE ENCASEMENT FOR DROP CONNECTION TO BE FIELD POURED.
- DROP CONNECTIONS SHALL BE REQUIRED WHENEVER AN INFLUENT SEWER IS LOCATED TWO (2) FEET OR MORE ABOVE THE MAIN INVERT CHANNEL.
- A FLOW CHANNEL SHALL BE CONSTRUCTED INSIDE MANHOLE TO DIRECT INFLUENT INTO FLOW STREAM.
- WHEN PVC IS USED IN SANITARY SEWER LINES, SOLVENT TYPE JOINT PVC FITTINGS MAY BE UTILIZED IN THE DROP ASSEMBLY ONLY.
- MINIMUM PIPE SIZE FOR DROP IS 8".
- SEE "STANDARD PRECAST MANHOLE" DETAIL FOR ADDITIONAL REQUIREMENTS.

Precast Manhole - Drop Connection Type A

SEACOAST UTILITY AUTHORITY
CONSTRUCTION STANDARDS AND DETAILS

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WATER AND SEWER DETAILS

SHEET

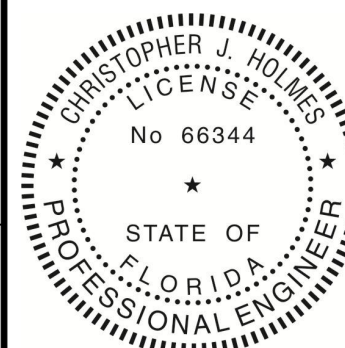
C-708

OF

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CERT NO. 6091

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REVISION

DATE

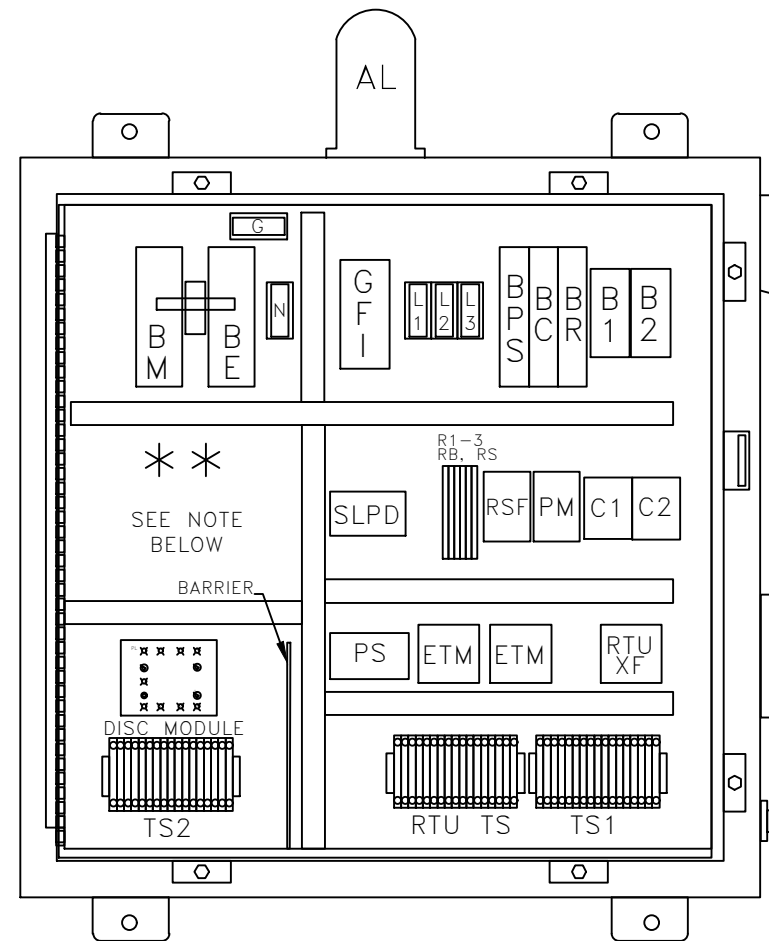
BY



CONTROL CENTER DESIGNED
& MANUFACTURED TO MEET
ALL D.E.P. REQUIREMENTS

MOPS CONTROL CENTER

SEE SCHEDULE FOR
ELECTRICAL SERVICE REQUIREMENTS



INTERIOR LAYOUT
(DOOR NOT SHOWN FOR CLARITY)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
NEU	120V	RTU	PUMP	MOTOR	MT	1	2	3	4	5	6	7	8	9	10	11	12	13	14
RTU	120V	RTU	PUMP	MOTOR	MT	1	2	3	4	5	6	7	8	9	10	11	12	13	14
RTU	120V	RTU	PUMP	MOTOR	MT	1	2	3	4	5	6	7	8	9	10	11	12	13	14

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
NEU	120V	RTU	PUMP	MOTOR	MT	1	2	3	4	5	6	7	8	9	10	11	12	13	14
RTU	120V	RTU	PUMP	MOTOR	MT	1	2	3	4	5	6	7	8	9	10	11	12	13	14
RTU	120V	RTU	PUMP	MOTOR	MT	1	2	3	4	5	6	7	8	9	10	11	12	13	14

PANEL COMPONENTS

AL	ALARM LIGHT
AL1	ALTERNATOR (ON DISC)
AS	ALARM SILENCE SWITCH
B1-2	MOTOR BREAKERS
BC	CONTROL BREAKER
BE	EMERGENCY BREAKER
BM	MAIN BREAKER
BPS	POWER SUPPLY BREAKER
BR	RECEPTACLE BREAKER
C1-2	CONTRACTOR, MOTOR START
CONV	CONVENIENCE RECEPTACLE
DISC	DUPLEX INTRINSICALLY
ETM	ELAPSED TIME METER
G	GROUND BLOCK
GR	GENERATOR RECEPTACLE
H	HORN
HDA	HAND-OFF-AUTO SWITCH
L1,2,3	POWER DISTRIBUTION BLOCK
N	NEUTRAL BLOCK
PL	PILOT LIGHT (ON DISC)
PM	PHASE MONITOR
PS	POWER SUPPLY
R1-3	RELAYS
RB	BATTERY RELAY
RS	SILENCE RELAY
RSF	SEAL FAIL RELAY
RTUXF	RTU TRANSFORMER
SLPD	SURGE/LIGHTNING
TS1	PROTECTION DEV.
TS2	TERMINAL STRIP FOR PUMPS
TS2	TERMINAL STRIP FOR FLOATS

ENCLOSURE

NEMA 4X Stainless Steel
Single Door w/ Padlock Hasp
30" H x 30" W x 8" D

NOTES:

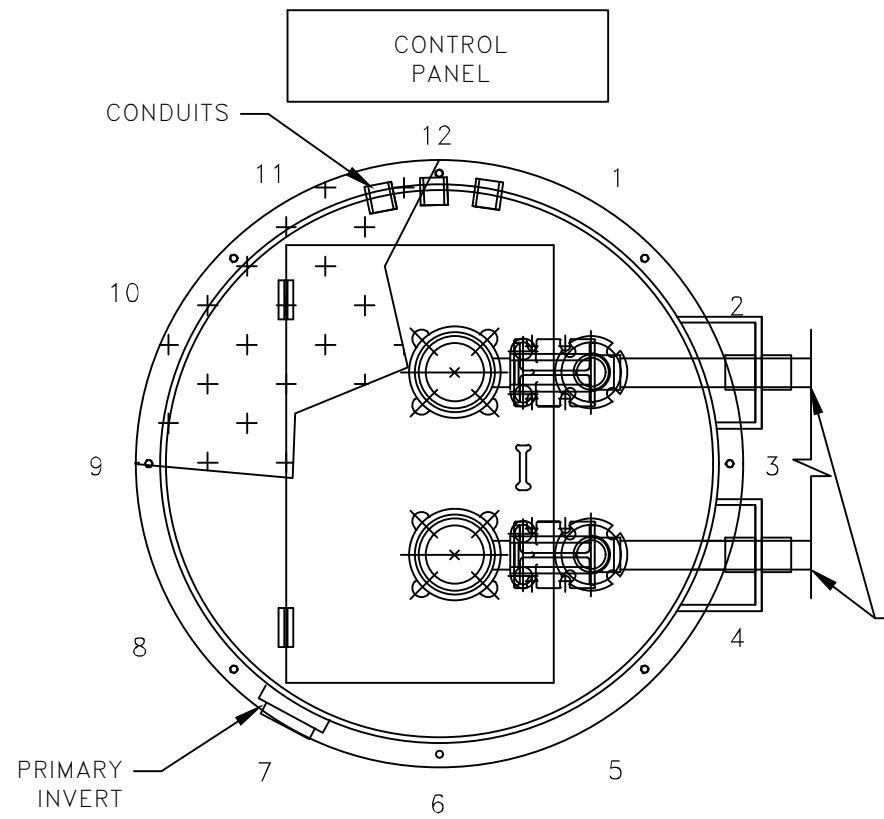
- PANEL LABELED FOR U.L. 508A "MOTOR CONTROL CENTERS" AND U.L. 698A "HAZARDOUS LOCATION PANELS" (INTRINSICALLY SAFE)
- COMPLETE BACK-UP, SELF-CHARGING BATTERY, WITH VISUAL/AUDIO ALARM SYSTEM PER RSF=45.
- SEE CONTROL CENTER DETAIL SHEET FOR ANY ADDITIONAL NOTES.

** THIS SPACE AVAILABLE FOR CAPACITORS FOR SINGLE PHASE OR TRANSFORMER FOR 460V.

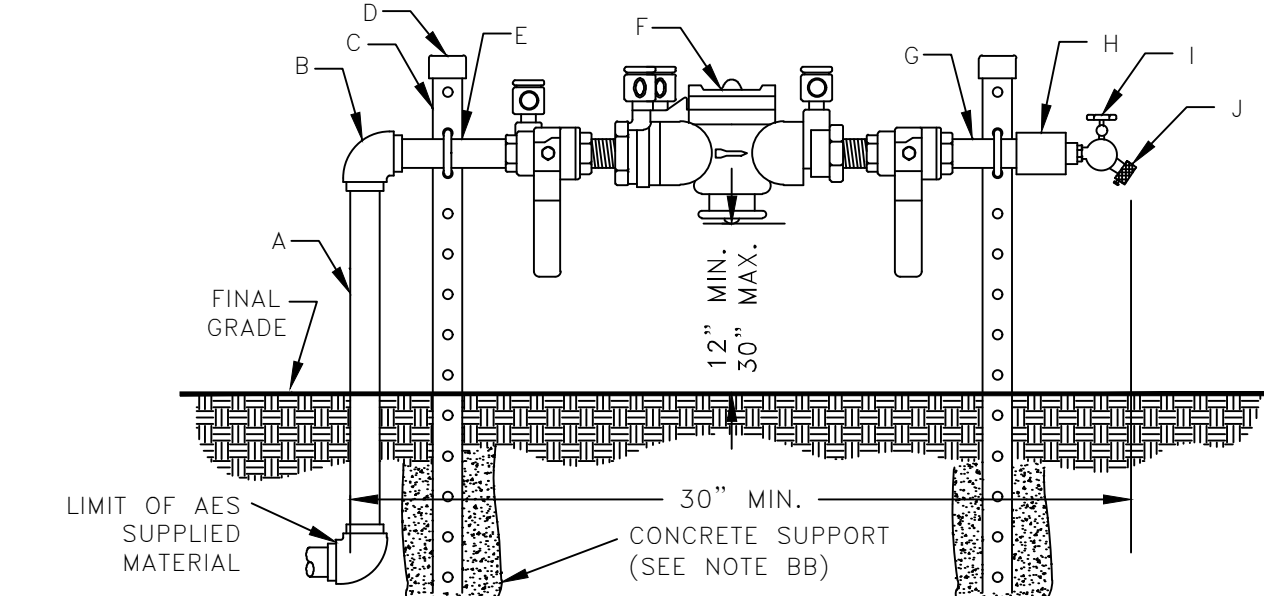
HUB AND INVERT LOCATION

ITEMS	CLOCK POSITION
DISCHARGE LINES	3:00
PRIMARY INVERT	7:00
SECONDARY INVERT	N/A
LOCATION OF CONTROL PANEL	12:00

NOTE: BACKFILL AROUND LIFT STATION FROM ANTI-FLOATATION RING UP TO FINISHED GRADE SHALL BE COMMON FILL COMPACTED IN 12-INCH MAX. LIFTS TO 98% DENSITY PER AASHTO T-180. CONTRACTOR SHALL EXERCISE CARE NOT TO DAMAGE WETWELL DURING COMPACTION.



SCHEMATIC BASED ON THE STATION'S DISCHARGE BEING LOCATED AT THE #3 CLOCK POSITION. SEE SCHEDULE FOR LOCATION OF INVERTS AND CONTROL PANEL. LOCATIONS SUBJECT TO CHANGE.



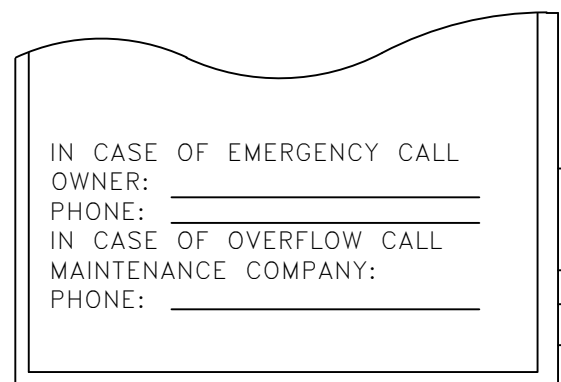
ITEM	QTY.	DESCRIPTION
A	1	3/4" x 24" S.S. NIPPLE
B	2	3/4" x 1" S.S. 90° ELBOW
C	2	1"x1"x40" S.S. SUPPORT BRACKET
D	2	SUPPORT BRACKET CAPS P/N 2419
E	2	3/4" S.S. PIPE BOLTS

DETAIL B

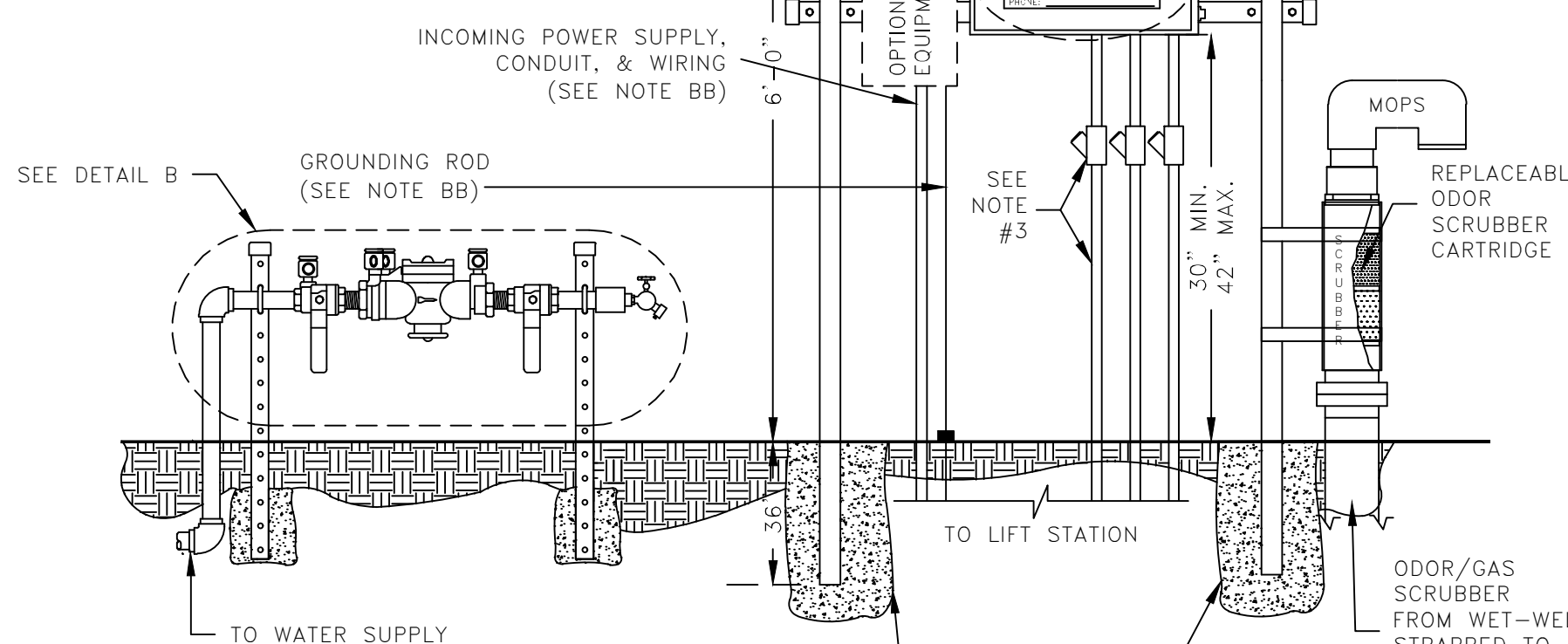
R.P.Z. BACKFLOW PREVENTER ASSEMBLY DETAIL

U.S.C. AND A.S.S.E. APPROVED

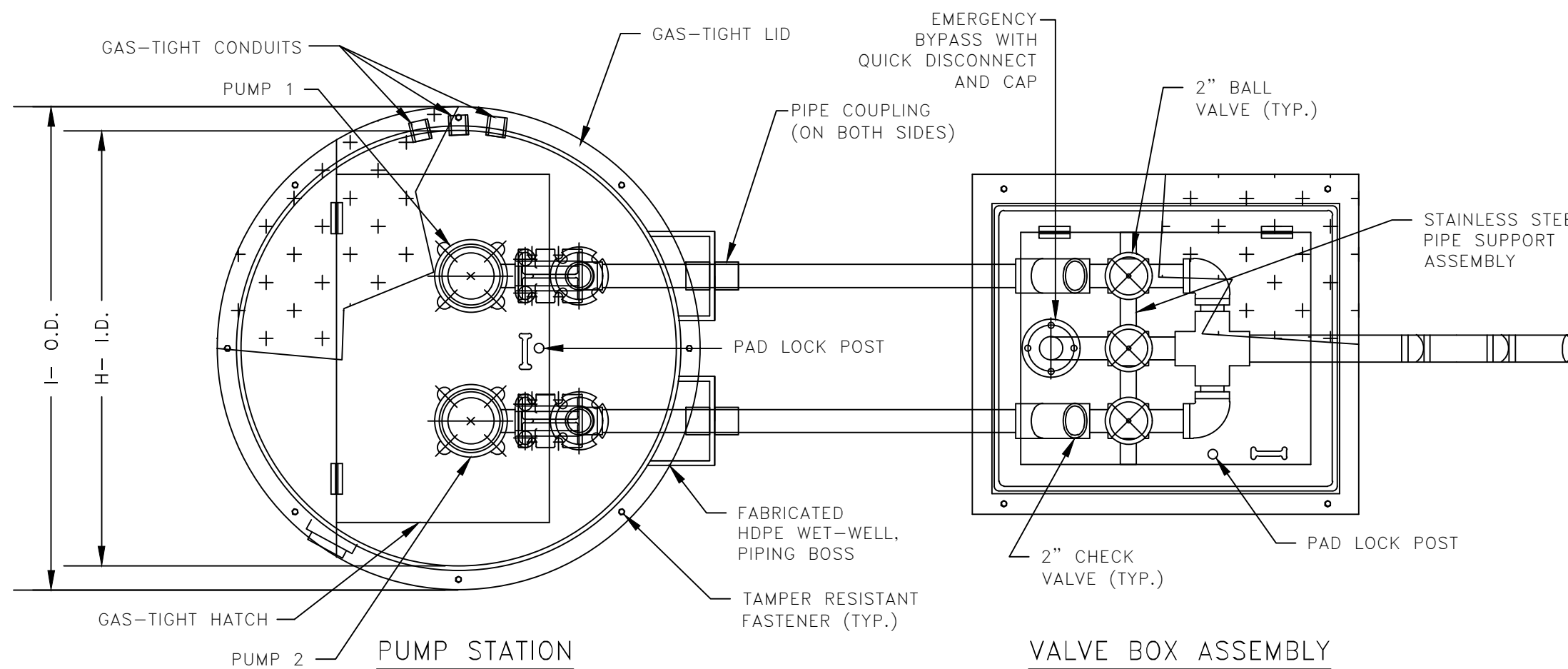
N.T.S.



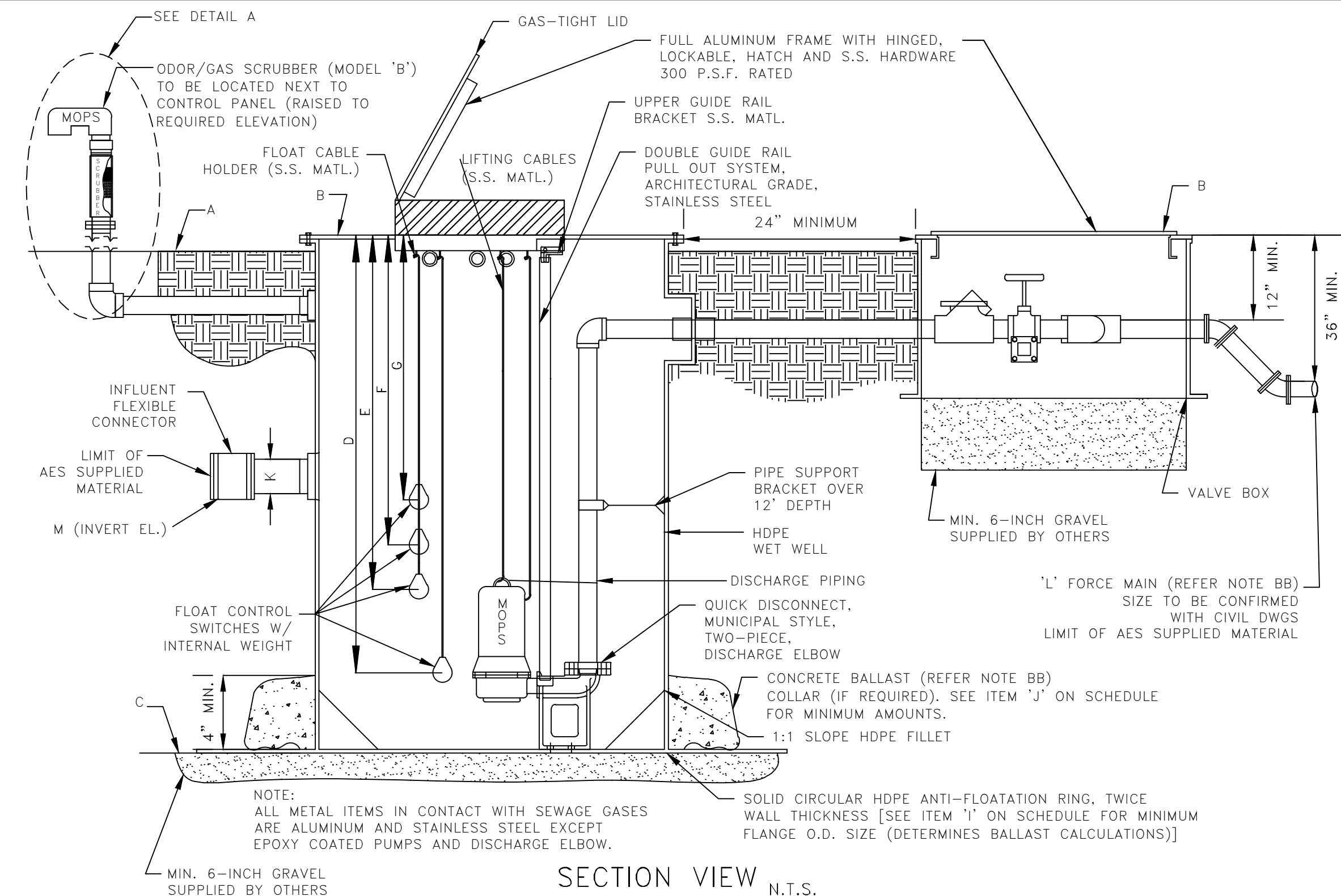
DETAIL C
(SUPPLIED BY MAINT.
COMPANY)



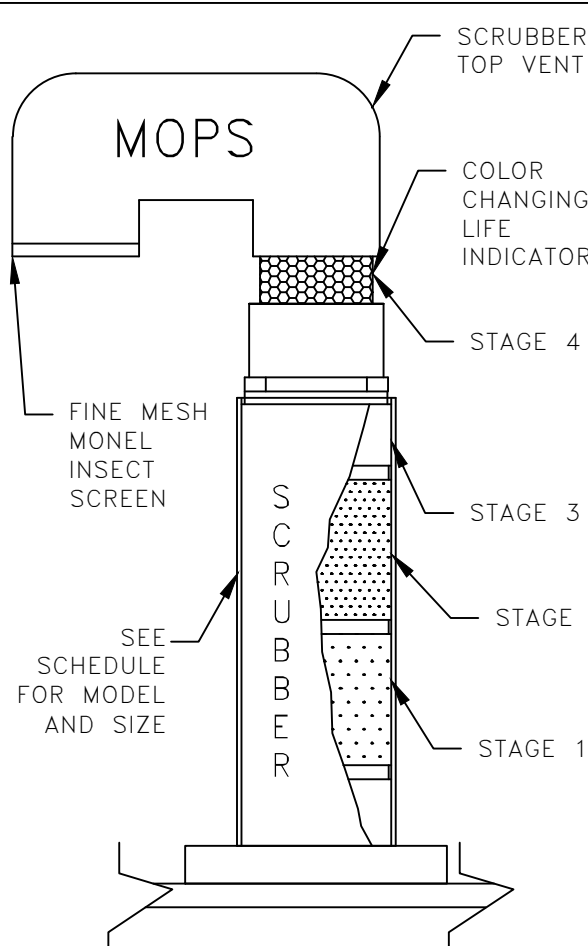
CONTROL CENTER ASSEMBLY AND INSTALLATION N.T.S.



TOP VIEW N.T.S.



SECTION VIEW N.T.S.



DETAIL A

- MOPS ODOR/GAS SCRUBBER
NOTES:
- SCRUBBER DESIGNED TO REMOVE TOXIC SEWAGE GASES, H₂S, AND OFFENSIVE ODORS SUCH AS SKATOLES AND MERCAPTANS. SCRUBBER'S LIFE EXPECTANCY CALCULATIONS ARE INCLUDED IN SHOP DRAWING SUBMITTALS.
 - SCRUBBER UNIT CAN BE MOUNTED INSIDE WET-WELL OR TOP MOUNTED.
 - MODEL 'B' SHOWN.

MOPS
MANUFACTURED ODORLESS PUMP STATION
ATLANTIC ENVIRONMENTAL SYSTEMS, INC.
LAKE WORTH, FL 33461
PH: (561) 547-8080 FAX: (561) 547-3999 © 2000

PRIVATE SERIES

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MOPS PUMP STATION SCHEDULE

MOPS SERIES	ITEM DESCRIPTION
INITIAL DESIGN FLOW (G.P.M.)	100 YEAR FLOOD ELEVATION
INITIAL DESIGN HEAD (T.D.H.)	25 YEAR FLOOD ELEVATION
SECONDARY DESIGN FLOW (G.P.M.)	A GRADE ELEVATION
SECONDARY DESIGN HEAD (T.D.H.)	B TOP ELEVATION OF WET WELL
RATED PERFORMANCE SPEED	C BOTTOM ELEVATION OF WET WELL
RATED MOTOR HORSEPOWER	D ALL PUMPS OFF ELEVATION
SUBMERSIBLE PUMP TYPE (P-1,P-2)	E LEAD PUMP ON ELEVATION
PUMP MODEL NUMBER	F LAG PUMP ON ELEVATION
SERVICE ENTRANCE VOLTAGE	G HIGH ALARM ELEVATION
SERVICE ENTRANCE PHASE	H INSIDE DIAMETER OF WET-WELL
CONTROL CENTER FULL LOAD AMPS	I OUTSIDE DIAMETER OF ANTI-FLOATATION RING
NEMA 4XSS PAINTED STEEL DISCONNECT SWITCH, RATED AMPS	J MINIMUM CUBIC FEET OF CONCRETE BALLAST (CU YDS)
WET WELL SCOURER SYSTEM	K INVERT PIPE DIAMETER
REMOTE STATION MONITOR (TELEMETRY)	L FORCE MAIN DIAMETER
ON-SITE GENERATOR SYSTEM	M PRIMARY INVERT ELEVATION
	N SECONDARY INVERT ELEVATION

MOPS EQUIPMENT IDENTIFICATION	QTY.	MODEL DESIGNATION
MOPS PUMP STATION	1	B22-48144-C-2.0-HDPE
MOPS VALVE BOX ASSEMBLY (VBA)	1	VBA-22
MOPS ODOR/GAS SCRUBBER (OGS)	1	OGS-B
MOPS R.P.Z. ASSEMBLY	1	75
MOPS CONTROL CENTER	1	PSC-222-2.0
MOPS DISCONNECT SWITCH	1	FDS-30-3-2-SS
MOPS CONTROL CENTER MOUNTING ASSEMBLY	1	CCMA-32SS
MOPS WET WELL SCOURER SYSTEM	0	N/A
MOPS REMOTE STATION MONITOR	1	PROVIDED WITH SERVICE AGREEMENT
1st YEAR SERVICE/MAINTENANCE CONTRACT	1	LEVEL 1 WITH REMOTE MONITOR
MOPS ON-SITE GENERATOR SYSTEM	0	N/A
MOPS FIELD SERVICE WORK	1	CONTROL INSTALLATION & START-UP

MOPS PUMP STATION COMPLIANCE NOTES:

- THIS PUMP STATION DESIGN COMPLIES WITH THE FOLLOWING REQUIRED STANDARDS:
- STATE OF FLORIDA ENVIRONMENTAL PROTECTION STANDARDS
 - FLORIDA ADMINISTRATIVE CODE (F.A.C.): 62-640.400- COLLECTION AND TRANSMISSION SYSTEMS
 - NATIONAL ELECTRIC CODE (NEC) CLASS 1, DIVISION 1, GROUP D- HAZARDOUS LOCATIONS
 - UNDERWRITER'S LABORATORIES (U.L.) 508A-MOTOR CONTROL CENTERS AND U.L. 698A-INTRINSICALLY SAFE CONTROL CENTERS
 - RECOMMENDED STANDARDS FOR WASTEWATER FACILITIES (1997 EDITION).

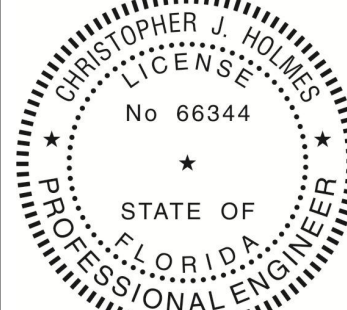
- PUMPS ARE RATED BY FACTORY MUTUAL FOR CLASS 1, DIVISION 1, GROUP D ATMOSPHERES AS REQUIRED BY NEC.
- THE CONTROL CENTER INCORPORATES INTRINSICALLY SAFE RELAYS AND IS LISTED TO UL 698A INTRINSICALLY SAFE FOR CLASS 1, DIVISION 1 ATMOSPHERES.
- THE CONDUIT PROVIDED, ALONG WITH CONDUIT GAS-SEAL-OFFS, ARE RATED FOR CLASS 1, DIVISION 1 LOCATIONS.
- THE WASTEWATER PUMPS AND THE CONTROL CENTER INCORPORATE A MECHANICAL SEAL FAILURE DETECTION AND NOTIFICATION SYSTEM.
- THE CONTROL CENTER INCLUDES EITHER A REMOTE TELEMETRY UNIT (RTU) OR A SELF-CHARGING, BACK-UP ALARM SYSTEM TO OPERATE ON POWER FAILURE.
- THE PUMP STATION INCORPORATES AN ODORLESS DESIGN WITH A SCRUBBER SYSTEM TO CONTROL TOXIC GASES AND ODORS FOR COMPLIANCE TO F.A.C. 62-604.400.
- THE BOTTOM OF THE TOP RIM ELEVATION OF PUMP STATION MUST BE LOCATED AT A HIGHER ELEVATION THAN THE 25 YEAR FLOOD ELEVATION. THE LISTED 25 YEAR FLOOD ELEVATION PROVIDED BY SITE CIVIL ENGINEER.
- THE BOTTOM ELEVATION OF THE MOPS CONTROL CENTER MUST BE LOCATED AT A HIGHER ELEVATION THAN THE 100 YEAR FLOOD ELEVATION. THE LISTED 100 YEAR FLOOD ELEVATION PROVIDED BY THE SITE CIVIL ENGINEER.

MOPS ENGINEERING NOTES:

- AA. THE HORSEPOWER SHOWN ON THE SCHEDULE IS A MINIMUM HORSEPOWER REQUIREMENT BASED ON THE STATION'S DESIGN CRITERIA AND THE REQUIRE TORQUE. (LOWER RATED HORSEPOWER EQUIPMENT WILL NOT BE ACCEPTABLE.)
- BB. THESE ITEMS ARE NOT SUPPLIED BY A.E.S. WITH THE MOPS STATION.
- CC. INVERT ELEVATIONS BASED ON INSIDE BOTTOM OF PIPE.
- DD. THE MOPS CONTROL ASSEMBLY CONSISTS OF THE FOLLOWING: CONTROL CENTER DISCONNECT SWITCH, MOUNTING ASSEMBLY, ELECTRICAL CONDUITS, AND SEAL-OFF. THESE ITEMS MUST BE SUPPLIED AND INSTALLED BY THE MOPS PUMP STATION MANUFACTURER TO VALIDATE MOPS WARRANTY PROGRAM.
- EE. FOR STATIONS IN MIAMI-DADE COUNTY, THE MOPS PUMP STATION IS SUPPLIED WITH A REMOTE TELEMETRY MONITORING UNIT AND A.E.S. MAINTENANCE SERVICE. THE R.T.U. ALLOWS FOR MONITORING OF LAG ALARM, HIGH ALARM, AND POWER FAILURE PER CHAPTER 24.42.2(5). THE R.T.U. IS EQUIPPED WITH A BATTERY BACK UP AND IS INSTALLED ABOVE THE 100 YEAR FLOOD ELEVATION.
- THE MOPS WASTEWATER PUMP STATION DESIGN AND EQUIPMENT SHOWN ON THIS DRAWING HAS BEEN REVIEWED, PERMITTED, AND CERTIFIED AS COMPLYING WITH ALL THE STATE OF FLORIDA D.E.P. AND LOCAL REQUIREMENTS. ANY SUBSTITUTION FROM THIS DESIGN MAY REQUIRE NEW PERMITS, APPLICATION FEES, AND ENGINEERING SERVICES FOR RE-CERTIFICATION AND DESIGN REVIEW.

P.E. CERTIFICATION:

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THE WATERFORD
INDEPENDENT LIVING & MEMORY CARE EXPANSION
601 UNIVERSE BOULEVARD
JUNO BEACH, FLORIDA 33408
LIFT STATION DETAILS

SHEET

C-710

OF

2920.04