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Indian River County, Florida

SEPTEMBER 17 2021

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CIVIL ENGINEER

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STRUCTURAL ENGINEER

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License No. AA0002238

INDEX OF DRAWINGS

I/O	Dwg. No	Drawing Name
☒	A0.10	COVER SHEET/INDEX OF DRAWINGS

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05/14/21 BLD. DEPT. COMMENTS 1

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NORTH COUNTY LIBRARY EXPANSION

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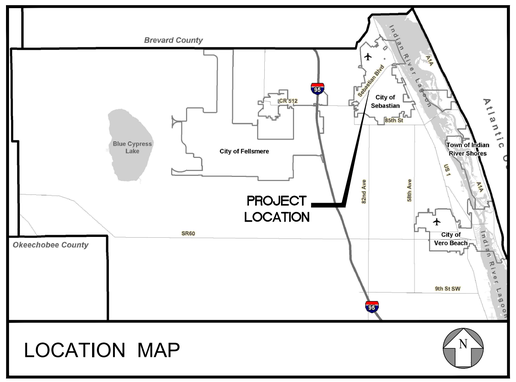
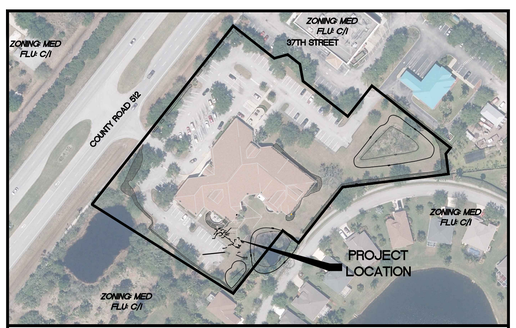
SECTION 14 & 23, TOWNSHIP 31, RANGE 38
INDIAN RIVER COUNTY, FLORIDA
APRIL 2021



LOCATION MAP



VICINITY MAP

OWNER / APPLICANT

Indian River County
Board of County Commissioners
ircgov.com

BOARD OF COUNTY COMMISSIONERS

JOSEPH E. FLESCHER - CHAIRMAN
PETER D. O'BRYAN - VICE-CHAIRMAN
SUSAN ADAMS - COMMISSIONER
JOE EARMAN - COMMISSIONER
LAURA MOSS - COMMISSIONER
JASON E. BROWN - COUNTY ADMINISTRATOR
RICHARD B. SZPYRKA, P.E. - PUBLIC WORKS DIRECTOR

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AARON G. STANTON
LICENSE
No. 72460
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

AARON G. STANTON
FL. P.E. #72460

DATE:

PROJECT: 20-0089

SHEET
C1

09/16/2021 BID SET

CONSTRUCTION NOTES:

1. THE CONTRACTOR IS ADVISED TO THOROUGHLY REVIEW THIS PLAN PACKAGE SO AS TO BE TOTALLY PREPARED TO PRESENT HIS BID PRICES IN THE CONTRACT DOCUMENTS. THE PLAN PACKAGE SUFFICIENTLY DELINEATES THE SCOPE AND INTENT OF THE ROADWAY WORK TO BE ACCOMPLISHED. IT WILL, THEREFORE, BE INCUMBENT ON THE CONTRACTOR TO ADJUST HIS FEE DOLLARS TO REFLECT ANY AND ALL ITEMS WHICH MAY NOT BE CLEARLY OUTLINED OR THOSE ITEMS WHICH MAY NOT BE INDICATED BUT WHICH ARE NECESSARY FOR THE SUCCESSFUL COMPLETION OF THIS PROJECT WITHOUT ADDITIONAL COSTS TO THE OWNER.
2. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CITY OF SEBASTIAN, INDIAN RIVER COUNTY AND FDOT STANDARDS AND SPECIFICATIONS.
3. THE INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UNDERGROUND AND OTHER UTILITIES IS BASED ON AVAILABLE RECORDS AND IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO THE TYPE AND LOCATION OF UNDERGROUND AND OTHER UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO AND IS RESPONSIBLE FOR THE COORDINATION OF UTILITY RELOCATION.
4. CONTRACTOR SHALL LOCATE ALL EXISTING UTILITIES IN THE FIELD WITH UTILITY OWNER'S REPRESENTATIVE PRIOR TO CONSTRUCTION.
5. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY ALL UTILITY COMPANIES A MINIMUM OF TWO WORKING DAYS PRIOR TO EXCAVATION, AS REQUIRED BY THE UNDERGROUND FACILITY DAMAGE PREVENTION AND SAFETY ACT. NOTIFY SUNSHINE AT 811.
6. SURFACE INFORMATION SHOWN ON THESE DRAWINGS WAS OBTAINED FOR USE IN ESTABLISHING DESIGN CRITERIA FOR THE PROJECT. THE ACCURACY OF THIS INFORMATION IS NOT GUARANTEED AND IS NOT TO BE CONSTRUED AS PART OF THE PLANS GOVERNING CONSTRUCTION OF THE PROJECT. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INQUIRE OF THE ENGINEER IF ADDITIONAL INFORMATION IS AVAILABLE, TO MAKE ARRANGEMENTS TO REVIEW SAME PRIOR TO BIDDING, AND IS TO MAKE HIS OWN DETERMINATION AS TO ALL SUBSURFACE CONDITIONS.
7. CONTRACTOR SHALL NOTIFY THE ENGINEER IF SOIL OR SUBSURFACE CONDITIONS UNSUITABLE FOR CONSTRUCTION ARE ENCOUNTERED.
8. ALL EXCAVATED SOILS DEEMED SUITABLE AS FILL MATERIAL AS DETERMINED BY THE ENGINEER SHALL BE UTILIZED ON SITE BY THE CONTRACTOR AT HIS OWN EXPENSE. THE EXACT LOCATION OF DELIVERY ON SITE SHALL BE DETERMINED BY THE ENGINEER. ALL EXCAVATED SOILS DEEMED UNSUITABLE SHALL BE DISPOSED OF BY THE CONTRACTOR AT HIS OWN EXPENSE.
9. ITEM IN CONFLICT WITH DESIGN SUCH AS EXISTING CURBS AND GUTTERS, SIDEWALKS, DRAINAGE STRUCTURES, PAVEMENT AND EXCESS EXCAVATIONS ARE TO BE REMOVED BY THE CONTRACTOR AND DISPOSED OF IN A LEGAL AND PROPER MANNER AWAY FROM THE JOB SITE AT HIS OWN EXPENSE.
10. IT SHOULD BE NOTED THAT THE OCCUPATIONAL SAFETY AND HEALTH ACT PROHIBITS THE OPERATING OF EQUIPMENT OR MACHINES CLOSER THAN TEN (10) FEET TO ENERGIZED ELECTRIC LINES RATES AT FIFTY KILOVOLTS OR BELOW. ALSO, NO EXCAVATION IS PERMITTED WITHIN FIVE (5) FEET OF POWER POLE FACILITIES.
11. ALL IRONS AND MONUMENTS (P.R.M.'S) SHOWN ON PLANS, OR FOUND, SHALL BE PRESERVED. THOSE SHOWN IN PROPOSED PAVEMENT SHALL BE PROTECTED WITH A CAST IRON VALVE BOX.
12. ANY PUBLIC LAND CORNERS WITHIN THE LIMITS OF CONSTRUCTION ARE TO BE PROTECTED. IF A CORNER MONUMENT IS IN DANGER OF BEING DESTROYED OR DISTURBED, THE CONTRACTOR WILL NOTIFY THE ENGINEER.
13. WHEN REFERENCED TO, FDOT REFERS TO FLORIDA DEPARTMENT OF TRANSPORTATION ROADWAY AND TRAFFIC DESIGN STANDARDS,CURRENT EDITION.
14. THE CONTRACTOR SHALL RESTORE ALL AREAS DISTURBED BY CONSTRUCTION TO A CONDITION EQUAL TO, OR BETTER THAN, THAT NOW EXISTING.
15. BACKFILL, GRADE AND SOD AS REQUIRED AROUND ALL NEW CONSTRUCTION AND ALL DEVELOPED LOTS TO PREVENT EROSION. SEED AND MULCH WILL ONLY BE ALLOWED TO RESTORE UNDEVELOPED LOTS AFFECTED BY CONSTRUCTION OR AS DIRECTED BY THE ENGINEER.
16. SODDING TO BE USED AT LOCATIONS AS DIRECTED BY THE ENGINEER.
17. PROPERTY OWNERS AND BUSINESSES WITHIN THE AREA OF CONSTRUCTION SHALL BE GIVEN ACCESS TO THEIR PROPERTY AT ALL TIMES DURING THE PERIOD OF CONSTRUCTION.
18. CONTRACTOR TO PROTECT ALL SPRINKLER HEADS NOT IN CONFLICT WITH DESIGN AND RELOCATE ALL THOSE WHICH ARE IN CONFLICT TO A LOCATION DETERMINED IN FIELD.
19. THE CONTRACTOR IS REQUIRED TO PERFORM THEIR WORK IN ACCORDANCE WITH THE REQUIREMENTS OF THE VARIOUS PERMITS WHICH WILL BE OBTAINED PRIOR TO BEGINNING CONSTRUCTION.
20. THE CONTRACTOR SHALL PROVIDE ANY TEMPORARY DRAINAGE MEASURES AS REQUIRED TO ADEQUATELY DRAIN THE PROJECT AND ANY TEMPORARILY TRAVELED AREAS. TEMPORARY DRAINAGE DESIGN, CONSTRUCTION AND MAINTENANCE IS THE CONTRACTOR'S RESPONSIBILITY; HOWEVER, ALL SUCH MEASURES MUST BE APPROVED BY THE ENGINEER.
21. THE EXISTING SIDEWALKS SHALL NOT BE DISTURBED UNLESS OTHERWISE NOTED.
22. GRADES SHOWN ARE FINISHED GRADES UNLESS OTHERWISE NOTED.
23. SAWCUT CONCRETE OR ASPHALT DRIVEWAYS AS REQUIRED FOR REPLACEMENT.
24. ALL ABANDONED UTILITIES (INCLUDING PIPES, CABLES AND STRUCTURES) FOUND IN THE RIGHT OF WAY AND NOT SHOWN ON THE PLANS, ARE TO BE REMOVED AND PROPERLY DISPOSED OF AT THE EXPENSE OF THE CONTRACTOR. THIS INCLUDES ALL EXOTIC PIPES LIKE ASBESTOS-CEMENT PIPE. COST TO BE INCLUDED IN CLEARING AND GRUBBING ITEM.
25. BENCHMARK DATUM IN N.A.V.D. 1988.
26. THE CONTRACTOR SHALL SUBMIT A CONSTRUCTION SCHEDULE (SEQUENCE OF OPERATIONS) PRIOR TO THE PRE-CONSTRUCTION MEETING.
27. ALL EXISTING SWALES SHALL BE PROTECTED BY THE CONTRACTOR. ANY DAMAGE TO THE SWALE LINE SHALL BE CORRECTED BY THE CONTRACTOR AT HIS OWN EXPENSE.
28. PAYMENT FOR INCIDENTAL ITEMS NOT SPECIFICALLY COVERED IN THE INDIVIDUAL BID ITEMS SHALL BE INCLUDED IN THE CONTRACT PRICES FOR BID ITEMS.
29. MAINTAIN A MINIMUM OF ONE (1) FOOT CLEARANCE BETWEEN POWER POLE AND EDGE OF SIDEWALK AS APPLICABLE.
30. WHEN ALL OTHER PERMANENT CONSTRUCTION IS COMPLETE, THE FINAL SURFACE COURSE SHALL BE PLACED.
31. CONSTRUCTION OPERATIONS FOR PLACEMENT OF THE FINAL SURFACE COURSE SHALL BE LIMITED TO A DISTANCE, AS DIRECTED BY THE ENGINEER, THE CONTRACTOR CAN COMPLETE IN ONE (1) DAY.
32. THE CONTRACTOR SHALL IMPLEMENT TEMPORARY PAVEMENT MARKINGS UNTIL THE FINAL SURFACE COURSE HAS CURED (MINIMUM FOURTEEN (14) DAYS AFTER FINAL SURFACE COURSE PLACEMENT). ANY TEMPORARY PAINTED MARKINGS PLACED ON THE FINAL.
33. PAVEMENT TRANSITION SHALL BE MADE IN ACCORDANCE WITH PAVEMENT TRANSITION DETAILS.

ROADWAY, DRIVE AISLES AND PARKING LOT SPECIFICATIONS

GENERAL

IT IS INTENDED THAT THE FLORIDA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" MOST CURRENT EDITION BE USED WHERE APPLICABLE FOR VARIOUS WORK, AND THAT WHERE SUCH WORDING THEREIN REFERS TO THE STATE OF FLORIDA AND ITS DEPARTMENT OF TRANSPORTATION AND PERSONNEL, SUCH WORDING IS INTENDED TO BE REPLACED WITH THAT WORDING WHICH WOULD PROVIDE PROPER TERMINOLOGY, THEREBY MAKING SUCH "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" AS THE "STANDARD SPECIFICATIONS" FOR THIS PROJECT.

IF WITHIN THAT PARTICULAR SECTION ANOTHER SECTION, ARTICLE OR PARAGRAPH IS REFERRED TO, IT SHALL BE A PART OF THE STANDARD SPECIFICATIONS ALSO.

ALL WORK SHALL BE IN WORKMANLIKE MANNER AND SHALL CONFORM WITH ALL APPLICABLE CITY, COUNTY, STATE AND FEDERAL REGULATIONS AND/OR CODES. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND LICENSES REQUIRED TO BEGIN WORK.

THE CONTRACTOR SHALL GIVE THE ENGINEER 24 HOURS NOTICE PRIOR TO REQUESTING INSPECTIONS AND SHALL SUPPLY ALL EQUIPMENT NECESSARY TO PROPERLY TEST AND INSPECT THE COMPLETED WORK.

THE CONTRACTOR SHALL GUARANTEE ALL WORK AND MATERIALS FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF PROJECT ACCEPTANCE, DURING WHICH ALL FAULTY CONSTRUCTION AND/OR MATERIALS SHALL BE CORRECTED AT THE CONTRACTOR'S EXPENSE.

GRADING

THE CONTRACTOR SHALL PERFORM ALL GRADING NECESSARY TO ACHIEVE THE PROPOSED PLAN GRADES INCLUDING TYPICAL SECTIONS.

ALL WORK SHALL BE IN ACCORDANCE WITH SECTION 120 OF THE STANDARD SPECIFICATIONS.

STAKING

CONSTRUCTION STAKING WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.

STABILIZING

STABILIZED SUBGRADE SHALL BE CONSTRUCTED TO THE LIMEROCK BEARING RATIO AS PER PLAN FOR THE DEPTH AND LIMITS SHOWN ON THE PLAN, AND IN ACCORDANCE WITH SECTION 160 OF THE STANDARD SPECIFICATIONS.

(TYPE C STABILIZATION). ALL STABILIZED AREAS SHALL BE COMPACTED TO AT LEAST 98% OF THE MAXIMUM DENSITY AS DETERMINED BY AASHTO T-180.

BASE COURSE

THE BASE SHALL BE CONSTRUCTED OF EITHER LIMEROCK MATERIAL IN ACCORDANCE WITH SECTION 911 OR CEMENTED COQUINA SHELL MATERIAL IN ACCORDANCE WITH SECTION 915 OF THE STANDARD SPECIFICATIONS.

LIMEROCK BASE AND CEMENTED COQUINA SHELL BASE SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 200 OF THE STANDARD SPECIFICATIONS. THE CONTRACTOR SHALL PROVIDE ROCK PIT CERTIFICATION FOR CEMENTED COQUINA SHELL MATERIAL. BASE SHALL BE COMPACTED BY AT LEAST 98% OF THE MAXIMUM DENSITY AS DETERMINED BY AASHTO T-180. BASE SHALL BE APPROVED PRIOR TO PRIME COAT.

PRIME AND TACK COAT

PRIME AND TACK COAT FOR THE BASE SHALL BE IN ACCORDANCE WITH SECTION 300 OF THE STANDARD SPECIFICATIONS.

ASPHALTIC CONCRETE SURFACE COURSE (A.C.S.C.)

TYPE SP 9.5 & SP12.5 ACSC SHALL BE CONSTRUCTED FOR THE DEPTH AND LIMITS SHOWN ON THE PLAN, IN ACCORDANCE WITH SECTIONS 320, AND 330 OF THE STANDARD SPECIFICATIONS.

TESTING

THE CONTRACTOR SHALL RETAIN THE SERVICES OF AN APPROVED INDEPENDENT TESTING LABORATORY (TO BE INCLUDED IN THEIR BID) TO CONDUCT ALL REQUIRED TESTS ON SUBGRADE, BASE AND SURFACE COURSE MATERIALS. TEST RESULTS MUST BE SUBMITTED PRIOR TO ANY REQUEST FOR PAYMENT ON THE ABOVE ITEMS.

THE SCHEDULE FOR TESTING OF THE ROAD, PARKING OR OTHER PAVED SURFACES CONSTRUCTION SHALL BE AS FOLLOWS:

A. SUBGRADE:
   1. DENSITY TESTS SHALL BE TAKEN AT INTERVALS OF NOT MORE THAN 200 FEET OR CLOSER AS MIGHT BE NECESSARY.
B. BASE:
   1. DENSITY TESTS SHALL BE TAKEN AT INTERVALS OF NOT MORE THAN 500 FEET OR CLOSER AS MIGHT BE NECESSARY.

ALL TESTING SHALL BE TAKEN IN A STAGGERED SAMPLING PATTERN FROM A POINT 1 1/2 INCHES INSIDE THE LEFT EDGE, TO THE CENTER, TO A POINT 12 INCHES INSIDE THE RIGHT EDGE OF THE ITEM TESTED.

IF ANY TEST INDICATES THAT THE WORK DOES NOT MEET THE SPECIFICATIONS, THE SUBSTANDARD AREA SHALL BE REWORKED OR CORRECTED AND RETESTED, AT THE CONTRACTOR'S EXPENSE, UNTIL THE PROVISIONS OF THESE SPECIFICATIONS ARE MET.

ALL FAILING TESTS SHALL BE PAID FOR BY THE CONTRACTOR.

CLEAN-UP

THE CONTRACTOR MUST PROVIDE CLEAN-UP OF EXCESS CONSTRUCTION MATERIAL UPON COMPLETION OF THE PROJECT. THE SITE MUST BE LEFT IN A NEAT, CLEAN, GRADED CONDITION.

DRAINAGE & TRAFFIC SPECIFICATIONS

STORM INLETS AND MANHOLES SHALL BE CONSTRUCTED IN GENERAL ACCORDANCE WITH SECTION 425 OF THE STANDARD SPECIFICATIONS OF THE FLORIDA DEPARTMENT OF TRANSPORTATION.

CONCRETE SHALL HAVE A MINIMUM 28-DAY STRENGTH OF 3000 PSI.

ALL REINFORCING STEEL TO BE ASTM A 615-72 GRADE 40, FYP = 40,000 PSI, AND SHALL BE HANDLED AND PLACED IN ACCORDANCE WITH ACI 318-71.

PRECAST CONCRETE MANHOLES AND STORM INLETS MAY BE USED UPON THE ENGINEER'S APPROVAL OF THE MANUFACTURER'S SHOP DRAWINGS.

STORM SEWER CONSTRUCTION SHALL BE IN ACCORDANCE WITH SECTION 430 AND RELATED SECTIONS OF THE STANDARD SPECIFICATIONS OF THE FLORIDA DEPARTMENT OF TRANSPORTATION.

FILL

IMPORTED, SANDY FILL SHALL HAVE A PERMEABILITY RANGING FROM 20 FT/DAY - 35 FT/DAY (HSG A) WITH MINIMUM 8%-10% FINES PASSING THROUGH A #200 SIEVE. THE MATERIAL SHALL BE PROVIDED FROM A MINE WITHIN 200 MILES OF THE SITE AND SHALL NOT BE PROCESSED OR WASHED. THE SPECIFICATIONS OF FILL FROM THE BORROW PIT MUST BE PROVIDED TO AND APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT ON THE SITE.

CONCRETE

UNLESS OTHERWISE SPECIFIED OR INDICATED, ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS OF 3000 PSI. ALL WORK SHALL COMPLY WITH THE CURRENT EDITION OF THE AMERICAN CONCRETE INSTITUTE (ACI) BUILDING CODE AND THE APPLICABLE BUILDING CODES HAVING JURISDICTION IN THE AREA.

PRECAST CONCRETE DRAINAGE PRODUCTS

ALL PRECAST CONCRETE DRAINAGE PRODUCTS (INCLUDING BUT NOT LIMITED TO ROUND CONC. PIPE. ELLIPTICAL CONC. PIPE, UNDERDRAINS, MANHOLES, INLETS, ENDWALLS, JUNCTION BOXES, THREE SIDED CONC. CULVERTS, AND CONC. BOX CULVERTS) SHALL BE IN ACCORDANCE WITH SECTION 449 OF THE STANDARD SPECIFICATIONS.

RECORD DRAWINGS

CONTRACTOR SHALL KEEP AND MAINTAIN RECORD DRAWINGS ON THE PROJECT SITE AT ALL TIMES WHICH SHALL BE ANNOTATED BY THE CONTRACTOR DEPICTING ANY CHANGES MADE IN THE FIELD WHICH DIFFER FROM THE CONTRACT DRAWINGS. RECORD DRAWINGS SHALL INCLUDE, BUT NOT LIMITED TO, INVERT AND TOP ELEVATIONS OF CULVERTS AND INLET STRUCTURES. CONTRACTOR SHALL SUBMIT COMPLETE AND FINAL RECORD DRAWINGS TO ENGINEER UPON COMPLETION OF PROJECT AND PRIOR TO FINAL INSPECTION AND FINAL PAYMENT.

DRAINAGE & TRAFFIC SPECIFICATIONS (CONTINUED)

INSPECTION -MINIMUM CONSTRUCTION INSPECTION CHECKPOINTS
THE ENGINEER SHALL BE NOTIFIED:

1. PRIOR TO ANY MAJOR DEVIATION FROM THE APPROVED PLANS.
2. PRIOR TO BACKFILLING ANY PIPE TRENCHES.
3. UPON COMPLETION OF SUBGRADE GRADING AND COMPACTION.
4. UPON BEGINNING OF SPREADING OF ROCK BASE MATERIAL.
5. UPON COMPLETION OF GRADING AND COMPACTION OF THE BASE MATERIAL AND PRIOR TO PRIMING.
6. IMMEDIATELY PRIOR TO AND UPON APPLICATION OF A.C.S.C.
7. UPON COMPLETION OF CONSTRUCTION.

GENERAL NOTES:

1. CONTRACTOR IS RESPONSIBLE FOR CHECKING ACTUAL SITE CONDITIONS BEFORE STARTING CONSTRUCTION.
2. ANY DISCREPANCIES ON THE DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE COMMENCING WORK.
3. CONTRACTOR SHALL OBTAIN COPIES OF ALL REQUIRED PERMITS BEFORE COMMENCING WORK. CONTRACTOR SHALL FAMILIARIZE HIMSELF OF ALL PERMIT CONDITIONS AND PERFORM ALL WORK AN ACCORDANCE WITH ALL SAID CONDITIONS.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATION OF ALL EXISTING UTILITIES. THE CONTRACTOR SHALL CONTACT ALL CONCERNED UTILITIES AT LEAST 48 HOURS IN ADVANCE FOR CONSTRUCTION OPERATIONS.
5. NO FIELD CHANGES OR DEVIATIONS FROM DESIGN TO BE MADE WITHOUT PRIOR APPROVAL OF THE ENGINEER.
6. CONTRACTOR SHALL SUPPLY DENSITY TESTS TO ENGINEER ON ALL SUB-GRADE AND BASE. TESTS SHALL BE PREPARED PER AASHTO T-180 METHOD.
7. SLOPE GRADES FROM ELEVATIONS SHOWN TO EXISTING GRADE AT PROPERTY LINE. MAXIMUM SLOPE 3:1.
8. ENGINEER SHALL BE NOTIFIED AT LEAST 24 HOURS IN ADVANCE FOR ANY INSPECTION.
9. ALL TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH M.U.T.C.D. STANDARDS.
10. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE FLORIDA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", CURRENT EDITION.
11. THE PRESENCE OF GROUNDWATER SHOULD BE ANTICIPATED ON THIS PROJECT. CONTRACTORS BID SHALL INCLUDE CONSIDERATION FOR ADDRESSING THIS ISSUE. SHOULD DEWATERING BE REQUIRED, CONTRACTOR MUST APPLY FOR, AND OBTAIN, A CITY OF SEBASTIAN DEWATERING PERMIT.
12. ALL INLETS SHALL HAVE A 6" MIN. SUMP BELOW LOWEST INVERT.
13. EROSION CONTROL FENCING MUST BE IN PLACE PRIOR TO GRADING.
14. PIPE LENGTHS AND SLOPES SHOWN ARE APPROXIMATE.
15. IF ANY EXISTING STRUCTURES TO REMAIN ARE DAMAGED DURING CONSTRUCTION IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO REPAIR AND/OR REPLACE THE EXISTING STRUCTURE AS NECESSARY TO RETURN IT TO EXISTING CONDITIONS OR BETTER.
16. ALL STORM PIPE ENTERING STRUCTURES SHALL BE GROUTED TO ASSURE CONNECTION AT STRUCTURE IS WATERTIGHT.
17. CONTRACTOR SHALL ADJUST INLET/STRUCTURE OR CONNECTION LOCATION AS REQUIRED TO ENSURE PROPOSED STRUCTURES AND PIPES ARE IN PROPER ALIGNMENT AND MATCH SLOPE OF EXISTING PIPES OR CONNECTIONS.
18. FILL MATERIAL MAY NOT BE STOCKPILED HIGHER THAN SIX (6) VERTICAL FEET ONSITE PER INDIAN RIVER COUNTY CODE.
19. DIMENSIONS SHOWN ARE TO EDGE OF GUTTER OR PAVEMENT. RADII SHOWN ARE TO FACE OF CURB.
20. ALL SIGNS SHALL BE MUTCD STANDARD.
21. ALL PAVEMENT MARKINGS, EXCEPT PARKING STALL STRIPING, SHALL BE THERMOPLASTIC PER INDIAN RIVER COUNTY REQUIREMENTS.
22. THE USES PROPOSED AS PART OF THIS PLAN DO NOT REQUIRE A SUBMITTAL OF A RISK MANAGEMENT PLAN PURSUANT TO U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA) REGULATIONS AND SHALL NOT EXCEED THE EPA'S RMP THRESHOLD QUANTITIES OF LISTED SUBSTANCES.
23. REGARDLESS OF PRIVATE OR PUBLIC DEDICATIONS, THERE SHALL BE NO UTILITY CONNECTIONS, METER BOXES OR VALVE BOXES IN EXISTING OR PROPOSED SIDEWALK OR DRIVEWAY AREAS.
24. CONTRACTOR SHALL ADJUST INLET/STRUCTURE OR CONNECTION LOCATION AS REQUIRED TO ENSURE PROPOSED STRUCTURES AND PIPES ARE IN PROPER ALIGNMENT AND MATCH SLOPE OF EXISTING PIPES OR CONNECTIONS.
25. ANY STATE AND FEDERAL PERMITS THAT MAY BE REQUIRED AS A RESULT OF LAND CLEARING AND LANDSCAPING ACTIVITIES ARE THE RESPONSIBILITY OF THE CONTRACTOR.
26. CONTRACTOR IS RESPONSIBLE TO PROTECT AND/OR REPLACE ALL SURVEY MONUMENTATION BY A LICENSED SURVEYOR IN THE STATE OF FLORIDA.
27. ALL PARKING SPACES WITH EXCEPTION OF THE HANDICAPPED PARKING SPACES SHALL BE STRIPED IN WHITE, RETRO-REFLECTIVE TRAFFIC PAINT AND BE IN ACCORDANCE WITH THE FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) STANDARD SPECIFICATIONS FOR ROAD & BRIDGE CONSTRUCTION, 2018, SECTION 710.
28. ALL SOLID, NON-BREAKAWAY OBJECTS (GATE POSTS, BOLLARDS, STREET POLES, ETC.) ALONGSIDE INTERIOR STREETS AND DRIVING AISLES WITH A DESIGN SPEED OF 25MPH OR LESS, THE MINIMUM CLEAR ZONE IS 2.5 FEET FROM THE FACE OF THE CURB (TYPE D OR F), OR 6 FEET FROM THE EDGE OF THE TRAVEL LANE, BOTH PUBLIC AND PRIVATE.
29. CONSTRUCTION ACTIVITIES WITHIN THE CITY OF SEBASTIAN CITY LIMITS SHALL ONLY BE ALLOWED DURING THE HOURS OF 7AM TO 7PM, MONDAY THROUGH FRIDAY, AND 8AM TO 5PM ON SATURDAY AND SUNDAY.

ALL ELEVATIONS NAVD 1988

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8		
7		
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△		

JOB NO.	20-0089
DESIGNED	TH
DRAWN	WDO
DATE	JUNE 2020
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DATE ISSUED	08-19-2020

MBV ENGINEERING, INC.
MOAL BOWLES VILLAMIZAR & ASSOCIATES CONSULTING ENGINEERING CA #3728
MELBOURNE, FL. PH (321) 253-1510
FT. PIERCE, FL. PH (772) 468-9003
1893 - 28TH STREET
VERO BEACH, FL 32960
PH: (772) 778-3377
FX: (772) 778-3317

GENERAL NOTES AND SPECIFICATIONS

NORTH COUNTY LIBRARY EXPANSION

CITY OF SEBASTIAN FLORIDA

AARON G. STANTON LICENSE No. 72460 STATE OF FLORIDA PROFESSIONAL ENGINEER

AARON G. STANTON
FL. P.E. #72460

SHEET
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20-0089

09/16/2021 BID SET

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LEGAL DESCRIPTION

THOSE LANDS CURRENTLY KNOWN AS THE NORTH COUNTY LIBRARY, SAID LANDS LYING IN SECTIONS 14 & 23, TOWNSHIP 31 SOUTH, RANGE 38 EAST; AS RECORDED IN OFFICIAL RECORDS BOOK 817, PAGE 1677 AND OFFICIAL RECORDS BOOK 1180, PAGE 1423, AS RECORDED IN THE PUBLIC RECORDS OF INDIAN RIVER COUNTY, FLORIDA; BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

PARCEL No. 1, AS SHOWN ON THE PLAT OF THE SEBASTIAN LAKES LIBRARY SITE, PER PLAT BOOK 13, PAGE 1 OF THE PUBLIC RECORDS OF INDIAN RIVER COUNTY, FLORIDA;

TOGETHER WITH:

ALL OF PARCEL 4 OF THE PLAT OF SEBASTIAN LAKES COMMONS, AS RECORDED IN PLAT BOOK 15, PAGE 18 OF THE PUBLIC RECORDS OF INDIAN RIVER COUNTY, FLORIDA;

TOGETHER WITH:

A PORTION OF PARCEL 3 OF SAID PLAT OF SEBASTIAN LAKES COMMONS; BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCE AT THE EASTERLY MOST CORNER OF SAID PARCEL 3, THENCE RUN S54°30'40"W, ALONG THE SOUTHERLY LINE OF SAID PARCEL 3, A DISTANCE OF 161.40 FEET; THENCE RUN S82°57'21"W, A DISTANCE OF 127.27 FEET TO THE POINT OF BEGINNING; THENCE RUN S82°55'04"W, A DISTANCE OF 212.86 FEET TO THE POINT OF CURVATURE OF A NON-TANGENT CURVE CONCAVE TO THE NORTHEAST, HAVING A RADIUS OF 750.00 FEET AND A CHORD BEARING OF N20°28'42"W; THENCE DEPARTING SAID SOUTHERLY LINE RUN ALONG THE ARC OF SAID CURVE THRU A CENTRAL ANGLE OF 17°20'57", AN ARC DISTANCE OF 227.10 FEET TO A POINT ON THE SOUTHWESTERLY LINE OF PARCEL 1 OF SAID SEBASTIAN LAKES COMMONS PLAT; THENCE RUN S51°40'35"E, ALONG SAID SOUTHWESTERLY LINE, A DISTANCE OF 113.92 FEET TO THE SOUTHEAST CORNER OF SAID PARCEL 1; THENCE RUN N38°19'25"E, ALONG THE EASTERLY LINE OF PARCEL 1, A DISTANCE OF 78.02 FEET TO THE SOUTHWEST CORNER OF PARCEL 2 OF SAID PLAT; THENCE RUN S51°40'35"E, ALONG THE SOUTHERLY LINE OF SAID PARCEL 2, A DISTANCE OF 200.00 FEET TO THE SOUTHEAST CORNER OF SAID PARCEL 2; THENCE RUN S38°19'25"W, A DISTANCE OF 15.00 FEET; THENCE RUN S07°04'58"E, A DISTANCE OF 40.78 FEET TO THE POINT OF BEGINNING.

CONTAINING: 4.12 ACRES, MORE OR LESS.

.

SURVEYOR'S NOTES:

1. THE BEARINGS SHOWN HEREON ARE BASED THE SURVEY BASELINE AS SHOWN ON THE INDIAN RIVER COUNTY RIGHT OF WAY MAP FOR COUNTY ROAD 512, PER PLAT BOOK 24, PAGE 70, OF THE PUBLIC RECORDS OF INDIAN RIVER COUNTY, FLORIDA; DERIVING A GRID BEARING OF N38°19'25"E BETWEEN STATIONS 325+00.00 TO 342+62.34, AS SHOWN HEREON.

2. THE POSITION OF ALL MAPPED FEATURES SHOWN HEREON ARE BASED THE 1983 NORTH AMERICAN DATUM, 2011 ADJUSTMENT, AND PROJECTED IN THE FLORIDA STATE PLANE COORDINATE SYSTEM, EAST ZONE. THIS SURVEY WAS TIED TO THE FLORIDA PERMANT REFERENCE NETWORK (MAINTAINED BY THE FLORIDA DEPARTMENT OF TRANSPORTATION'S SURVEY DEPARTMENT).

3. ONLY ABOVE GROUND APPURTENANCES, THE BURIED SANITARY SEWER LINE AND STORM SEWER CULVERTS SHOWN HEREON HAVE BEEN FIELD LOCATED. THE SUBSURFACE GAS LINE WAS DESIGNATED (PAINT MARKS) BY AN UNKNOWN UTILITY PROVIDER AND FIELD LOCATED BY I.R.C SURVEY PERSONNEL. THE BUILDING FOUNDATION WAS NOT LOCATED.

4. THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A TITLE SEARCH REPORT. THEREFORE, THERE MAY BE EASEMENTS, RESTRICTIONS AND/OR OTHER ENCUMBRANCES NOT SHOWN HEREON, BUT CAN BE FOUND IN THE PUBLIC RECORDS OF I.R.C.

5. THE SUBJECT PROPERTY LIES IN FLOOD ZONE 'AE' (SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD – BASE FLOOD ELEVATIONS DETERMINED) AND UNSHADED FLOOD ZONE 'X' (AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN), AS SCALED FROM THE FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAP; PANEL 113 OF 390, MAP No. 12061C0113 H; MAP REVISED: DECEMBER 4, 2012.

6. ALL MAPPED FEATURES SHOWN HEREON WERE LOCATED AND PREPARED UNDER THE DIRECTION OF THE CERTIFYING SURVEYOR PER CHAPTER 5J-17, FLORIDA ADMINISTRATIVE CODE.

7. THIS SURVEY MEETS AND/OR EXCEEDS THE ACCURACY REQUIREMENTS FOR A BOUNDARY AND TOPOGRAPHIC SURVEY PER CHAPTER 5J-17, FLORIDA ADMINISTRATIVE CODE. ALL FEATURES AND LINE WORK HAVE A HORIZONTAL POSITIONAL ACCURACY OF 0.1 FEET, MORE OF LESS. ELEVATIONS MEASURED ON HARD SURFACES (PAVEMENT, CULVERTS ETC.) HAVE A VERTICAL POSITIONAL ACCURACY OF 0.04' AND SOFT SURFACES (NATURAL GROUND AND SLOPES) HAVE A VERTICAL POSITIONAL ACCURACY OF 0.1'.

8. THE ELEVATIONS SHOWN HEREON ARE BASED UPON THE INDIAN RIVER COUNTY VERTICAL NETWORK (I.R.C.V.C.N.) AND ARE RELATIVE TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (N.A.V.D. 88). ALL BENCHMARKS IN THE I.R.C.V.C.N. MEET OR EXCEED THE ACCURACY REQUIREMENT PER CHAPTER 5J-17, FLORIDA ADMINISTRATIVE CODE. THIS SURVEY WAS TIED TO I.R.C. BENCHMARK BM347003 (ELEVATION=20.05') AND NATIONAL GEODETIC SURVEY BENCHMARK U 436 (ELEVATION=20.34').

9. THE TOPOGRAPHY AND BOUNDARY INFORMATION SHOWN HEREON WAS OBTAINED FROM A FIELD SURVEY BY INDIAN RIVER COUNTY SURVEY CREWS THAT WAS COMPLETED ON APRIL 17, 2020. PER THE SCOPE OF SERVICES, ONLY THE TOPOGRAPHY LOCATED SOUTH AND EAST OF THE MAIN LIBRARY ENTRANCE ALONG COUNTY ROAD 512 AND THE BACK ENTRANCE FROM THE FIRST NATIONAL BANK WAS FIELD LOCATED. THIS SURVEY WAS PREPARED FOR THE PURPOSE OF MODIFYING THE EXISTING PARKING LOT AND RETENTION PONDS.

10. ONLY TREES 6" OR LARGER WERE LOCATED. THIS SURVEY IS NOT INTENDED TO DELINEATE WETLANDS, LOCAL AREAS OF CONCERN, OR OTHER JURISDICTIONAL DETERMINATION.

11. SYMBOLS SHOWN HEREON DEPICT THE HORIZONTAL POSITION OF THAT SPECIFIC IMPROVEMENT. THE SYMBOLS (FOR GRAPHICAL PURPOSE) ARE NOT DRAWN TO SCALE.

12. THE MEASUREMENTS FOR THIS SURVEY WERE MADE UTILIZING CONVENTIONAL AND REAL TIME KINEMATIC SURVEYING METHODS WITH THE FOLLOWING EQUIPMENT: LEICA VIVA GLOBAL POSITIONING SYSTEM, A TOPCON GTS-500 ROBOTIC TOTAL STATION WITH MAGNET SOFTWARE AND A LEICA NA AUTOMATIC LEVEL.

13. ALL MEASUREMENTS SHOWN HEREON AND TAKEN FOR THE PREPARATION OF THE SURVEY ARE IN U.S. SURVEY FEET.

14. SHEET 2 OF 3 (THE BOUNDARY SURVEY) OF THIS MAP IS INTENDED TO BE DISPLAYED AT A SCALE OF 1"=40' OR SMALLER. SHEET 3 OF 3 (THE TOPOGRAPHIC SURVEY) IS INTENDED TO BE DISPLAYED AT A SCALE OF 1"=30' OR SMALLER.

15. IT APPEARS THAT THE ROOF DRAINS ARE TIED TO THE TWO CATCH BASINS WITH 10" P.V.C. PIPES AND THE CATCH BASIN WITH THE 8" POLYVINYL PIPE EAST OF THE BUILDING. BECAUSE OF THE DEPTH OF THE PIPES, THE DIRECTION OF ALL P.V.C. PIPES CONNECTED TO THE ROOF DRAINS CANNOT BE DETERMINED.

SYMBOLS & ABBREVIATIONS:

A/C = AIR CONDITIONER
BOTT = BOTTOM
B/B = BOTTOM OF BANK
B/SLP = BOTTOM OF SLOPE
CB = CATCH BASIN
CBS = CONCRETE BLOCK STRUCTURE
(C) = CALCULATED COURSE OR DISTANCE
C.M. = CONCRETE MONUMENT
CONC = CONCRETE
COR = CORNER
(D) = DEED
D.B. = DEED BOOK
DWY = DRIVEWAY
E = EAST
ELEV = ELEVATION
E'LY = EASTERLY
E/P = EDGE OF PAVEMENT
ESMT = EASEMENT
(f) = FIELD MEASURED
FNC = FENCE
FND = FOUND
F.F. = FINISHED FLOOR
ID = IDENTIFICATION
INC = INCORPORATED
I.P. = IRON PIPE
I.R. = IRON ROD
I.R.C. = INDIAN RIVER COUNTY
I.R.&C. = IRON ROD AND CAP
INV = INVERT
L = ARC LENGTH
(M) = RIGHT OF WAY MAP OR CONTROL MAP
MAG = MAGNETIC
MES = MITERED END SECTION
M/H = MANHOLE
N = NORTHING
NAVD = NORTH AMERICAN VERTICAL DATUM
NGVD = NATIONAL GEODETIC VERTICAL DATUM
N&D = NAIL AND DISK
No = NUMBER
N/V = NOT VERIFIED
OE = OVERHEAD ELECTRIC
O.R.B. = OFFICIAL RECORD BOOK
(P) = PLATTED COURSE AND/OR DISTANCE
P.B. = PLAT BOOK
P.C.N.T. = POINT OF CURVATURE NON-TANGENT
PG = PAGE
P.I.D. = PARCEL IDENTIFICATION
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POLY = CORRIGATED POLYVINYL PIPE
PROP = PROPERTY
PSM = PROFESSIONAL SURVEYOR AND MAPPER
P.U. = PUBLIC UTILITY
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R.C.P. = REINFORCED CONCRETE PIPE
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S = SOUTH
SE = SOUTHEAST
SEC = SECTION–TOWNSHIP (SOUTH)–RANGE (EAST)
S'LY = SOUTHERLY
SS = SANITARY SEWER
S.R.D. = STATE ROAD DEPARTMENT
STS = STORM SEWER
SW = SOUTHWEST
SWK = SIDEWALK
T/B = TOP OF BANK
T/SLP = TOP OF SLOPE
UTIL = UTILITY
W = WEST
W/ = WITH

+/– = APPROXIMATE
= BENCHMARK
= BREAKLINE SYMBOL
= SANITARY SEWER CLEANOUT
= 10" DIAMETER ROUND CONCRETE COLUMN
= DELTA AND/OR CENTRAL ANGLE
= 10" DIAMETER ROUND CONCRETE COLUMN
= FLAG
= FLOOD LIGHT
= HANDICAP PARKING SPACE
= IRRIGATION CONTROL VALVE
= BURIED FIBER OPTIC CABLE OWNED BY THE INDIAN RIVER COUNTY PUBLIC WORKS (TELECOMMUNICATIONS DIVISION) DEPARTMENT (REFERENCED INTO DRAWING FROM THE COMMUNITY DEVELOPMENT'S GEOGRAPHIC INFORMATION SYSTEM DATABASE–SIZE & TYPE UNKNOWN)
= DESIGNATED (PAINT MARKS) GAS LINE (SIZE, MATERIAL & OWNER UNKNOWN)
= 8" POLYVINYL CHLORIDE SANITARY SEWER LINE OWNED BY THE INDIAN RIVER COUNTY UTILITY DEPARTMENT

= SET 5/8" I.R.&C. "IR COUNTY"
= SIGN
= SANITARY SEWER MANHOLE
STOP = STOP SIGN
+20.5 = SPOT ELEVATION
= SPRINKLER HEAD

= CYPRESS TREE (SIZE AS NOTED)
= MAGNOLIA TREE (SIZE AS NOTED)
= MISCELLANEUS TREE (SIZE AS NOTED)
= METAL LIGHT POLE
= MYRTLE TREE (SIZE AS NOTED)
= OAK TREE (SIZE AS NOTED)
= PALM TREE (SIZE AS NOTED)
= TREE STUMP (SIZE AS NOTED)

ALL ELEVATIONS NAVD 1988

EXISTING CONDITIONS PLAN

GRAPHIC SCALE
30 0 15 30
(IN FEET)
1 inch = 30 ft.

72 HOURS BEFORE DIGGING CALL TOLL FREE 811 Know what's below. Call before you dig.

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EXISTING CONDITIONS PLAN

NORTH COUNTY LIBRARY EXPANSION

CITY OF SEBASTIAN FLORIDA

AARON G. STANTON
LICENSE No. 72460 * STATE OF FLORIDA
PROFESSIONAL ENGINEER
AARON G. STANTON
FL. P.E. #72460

SHEET
C3

20-0089

09/16/2021 BID SET

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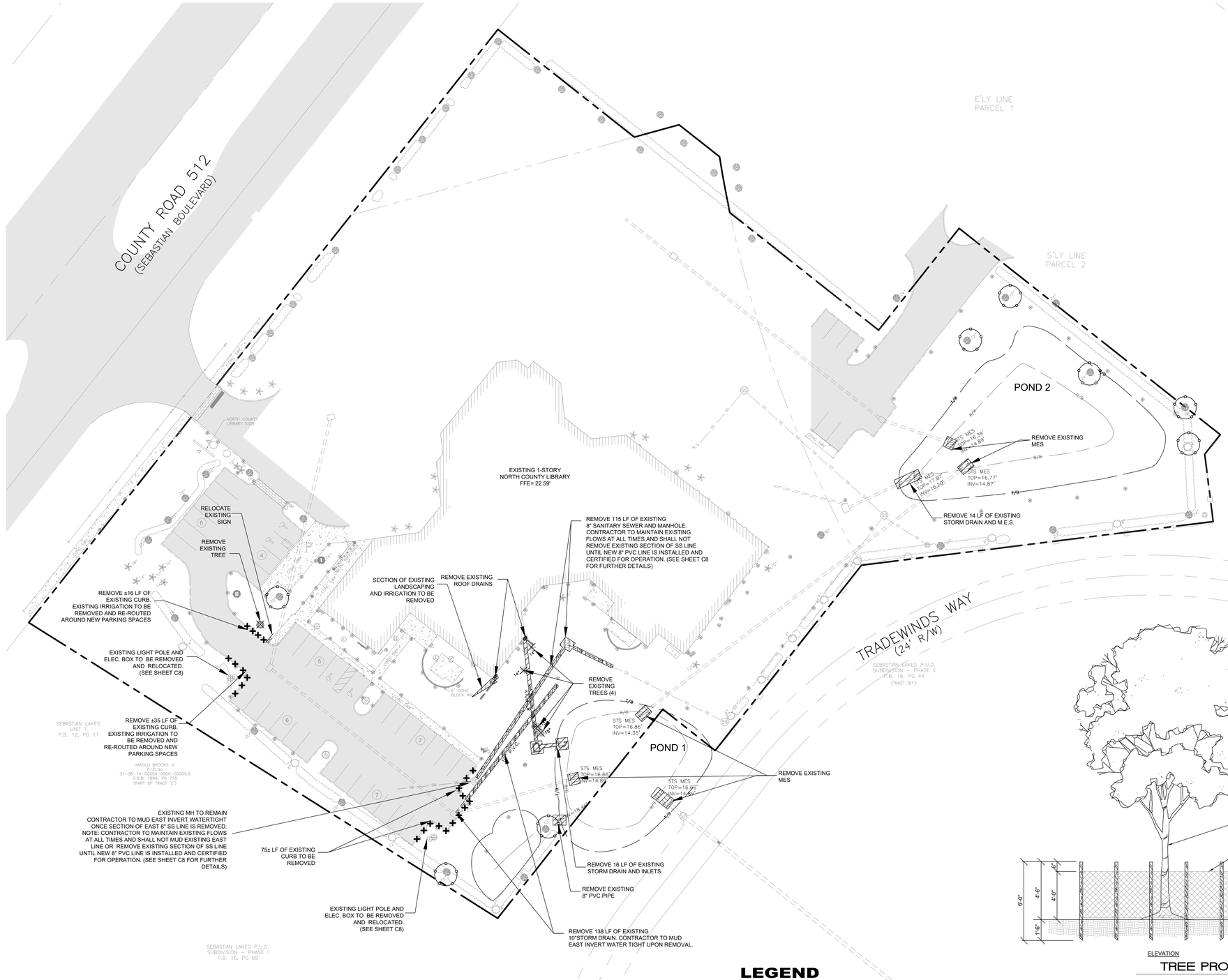

DEMOLITION PLAN

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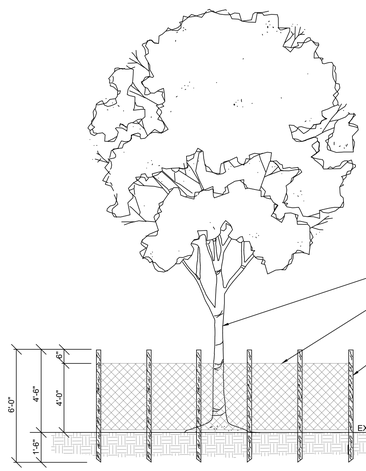
G G G = DESIGNATED (PAINT MARKS) GAS LINE (SIZE, MATERIAL & OWNER UNKNOWN)
SS SS SS = 8" POLYVINYL CHLORIDE SANITARY SEWER LINE OWNED BY THE INDIAN RIVER COUNTY UTILITY DEPARTMENT

LEGEND

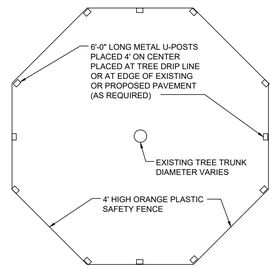
EXISTING CONCRETE
EXISTING PAVEMENT
EXISTING PIPE OR STRUCTURE TO BE REMOVED
EXISTING TREE TO BE REMOVED
EXISTING CURB AREA TO BE REMOVED
TREE PROTECTION FENCE (SEE DETAIL THIS SHEET)

NOTE:
ALL EXISTING EXOTICS SHALL BE REMOVED FROM THE SOUTH SIDES OF THE STORMWATER TRACTS AS APPLICABLE.



ELEVATION

TREE PROTECTION NOTES:
1. ALL TREES RETAINED ON A SITE SHALL BE PROTECTIVELY BARRICADED BEFORE AND DURING CONSTRUCTION ACTIVITIES.
2. UNDERGROUND UTILITY LINES SHALL BE ROUTED AROUND EXISTING TREES TO THE OUTSIDE OF THE DRIPLINE WHERE ABLE.
3. INSTALLATION OF FENCES AND WALLS SHALL TAKE INTO CONSIDERATION THE ROOT SYSTEMS OF EXISTING TREES.
4. FENCES/ BARRICADE SHALL BE INSTALLED AT PERIMETER OF ALL TREES OR GROUP OF TREES TO BE PRESERVED. FENCE SHALL BE MAINTAINED DURING CONSTRUCTION.



PLAN VIEW

TREE PROTECTION BARRIER DETAIL

NTS

ALL ELEVATIONS NAVD 1988

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DEMOLITION PLAN

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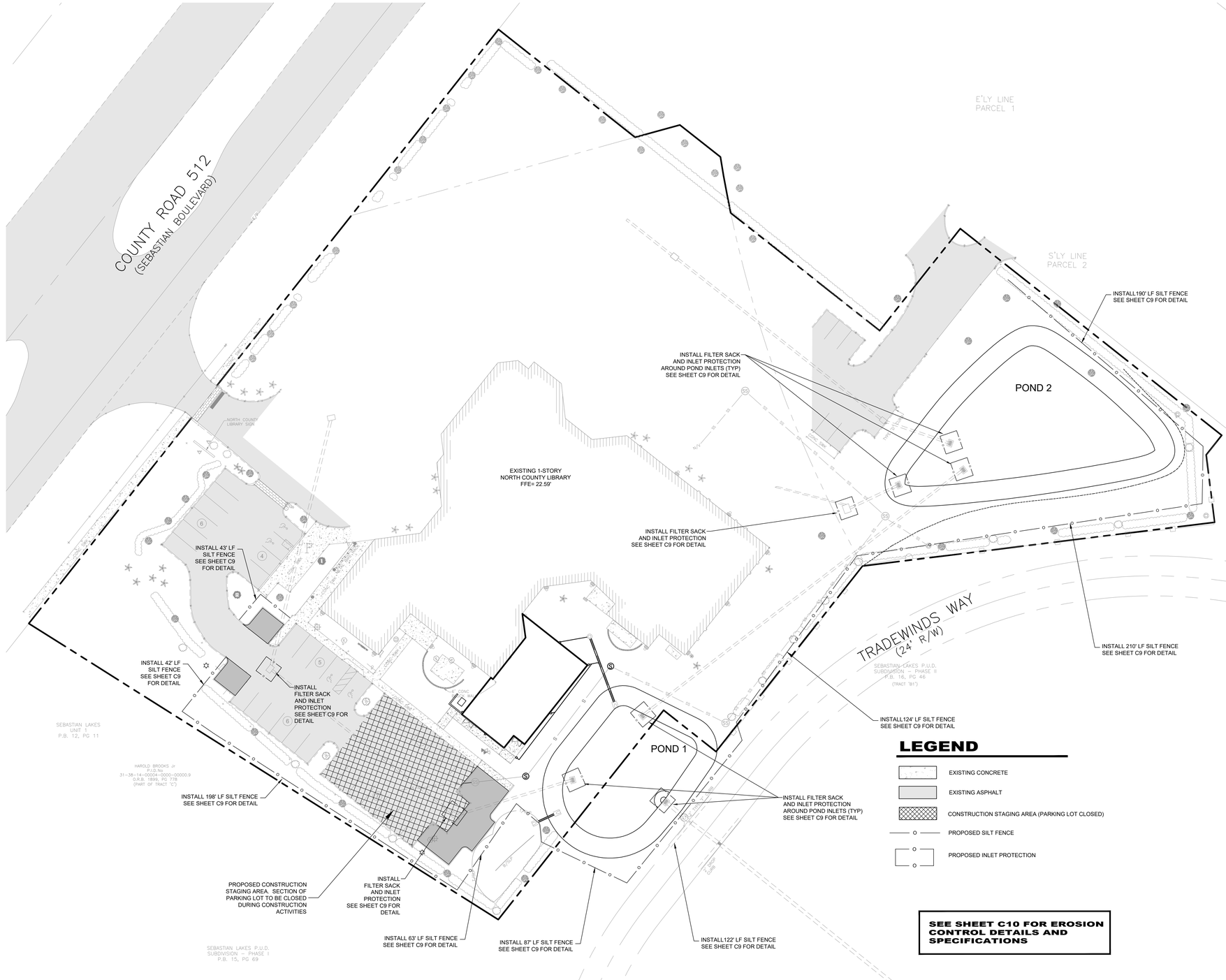


LEGEND

- EXISTING CONCRETE
- EXISTING ASPHALT
- CONSTRUCTION STAGING AREA (PARKING LOT CLOSED)
- PROPOSED SILT FENCE
- PROPOSED INLET PROTECTION

SEE SHEET C10 FOR EROSION CONTROL DETAILS AND SPECIFICATIONS

STORMWATER POLLUTION PREVENTION NOTES

1. CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS FROM FDEP AS REQUIRED TO MEET NPDES STANDARDS.
2. CONTRACTOR SHALL INCORPORATE BEST MANAGEMENT PRACTICES AND EROSION CONTROLS AS SHOWN OR NOTED ON THIS PLAN TO MINIMIZE OR ELIMINATE THE POTENTIAL FOR POLLUTION DISCHARGES.
3. CONTRACTOR SHALL BE RESPONSIBLE TO PERFORM ALL WORK AND MAINTAIN ALL DEVICES IN ACCORDANCE WITH FDEP NPDES STANDARDS.
4. CONTRACTOR SHALL PERFORM ALL REQUIRED INSPECTIONS AND REPORTING.
5. CONTRACTOR SHALL PROVIDE ADDITIONAL EROSION CONTROL DEVICES, AS MAYBE NECESSARY, TO PREVENT OFF-SITE POLLUTION DISCHARGES.
6. CONTRACTOR SHALL MAINTAIN UPDATED AND REVISED SWPP TO MATCH SITE CONDITIONS THROUGHOUT CONSTRUCTION.
7. CONTRACTOR SHALL REMOVE EROSION CONTROL DEVICES ONLY AFTER ALL DISTURBED AREAS ARE ADEQUATELY STABILIZED AS ACKNOWLEDGED BY APPLICABLE AGENCY INSPECTIONS.
8. CONTRACTOR SHALL FILE AND OBTAIN ALL REQUIRED CERTIFICATIONS OF COMPLETION FROM FDEP TO MEET NPDES STANDARDS.

EROSION AND SEDIMENTATION CONTROL

1. THE LAND-DISTURBING ACTIVITY SHALL CONFORM TO EXISTING TOPOGRAPHY AND SOIL TYPE SO AS TO CREATE THE LOWEST PRACTICAL EROSION POTENTIAL.
2. LAND -DISTURBING ACTIVITIES SHALL BE CONDUCTED IN A MANNER MINIMIZING EROSION.
3. THE DISTURBED AREA AND THE DURATION OF EXPOSURE TO EROSIVE ELEMENTS SHALL BE KEPT TO A PRACTICAL MINIMUM.
4. EROSION CONTROL MUST BE STRICTLY MAINTAINED DURING CUT AND FILL OPERATIONS.
5. DISTURBED SOIL SHALL BE STABILIZED AS QUICKLY AS PRACTICAL.
6. WHENEVER FEASIBLE, NATURAL VEGETATION SHALL BE RETAINED, PROTECTED AND SUPPLEMENTED.
7. TEMPORARY VEGETATION OR MULCHING SHALL BE EMPLOYED TO PROTECT EXPOSED CRITICAL AREAS DURING DEVELOPMENT.
8. PERMANENT VEGETATION AND STRUCTURAL EROSION CONTROL MEASURES SHALL BE INSTALLED AS SOON AS PRACTICAL.
9. ADEQUATE PROVISIONS MUST BE PROVIDED TO MINIMIZE DAMAGE FROM SURFACE WATER TO CUT THE FACE OF EXCAVATIONS OR THE SLOPING SURFACE OF FILLS.
10. TO THE EXTENT NECESSARY, SEDIMENT IN RUNOFF WATER MUST BE TRAPPED BY THE USE OF DEBRIS BASINS, SEDIMENT BASINS, SILT TRAPS OR SIMILAR MEASURES UNTIL THE DISTURBED AREA IS STABILIZED.
11. CUTS AND FILLS MUST BE CONSTRUCTED IN SUCH A MANNER THAT EROSION AND RUNOFF FROM THE SITE DOES NOT ENDANGER ADJOINING PROPERTY.
12. CONTRACTOR TO PLACE SILT FENCE IN ALL AREAS WHERE THE POTENTIAL FOR OFFSITE EROSION EXISTS.

DEWATERING NOTE

DEWATER POND 1 INTO POND 2. ONCE POND 1 IS COMPLETE, DEWATER POND 2 INTO POND 1. ALL OTHER SITE DEWATERING, IF APPLICABLE, WILL DEWATER INTO THE EXISTING DRY PONDS/

EROSION CONTROL PLAN

GRAPHIC SCALE
30 0 15 30
(IN FEET)
1 inch = 30 ft.

ALL ELEVATIONS NAVD 1988

72 HOURS BEFORE DIGGING
CALL TOLL FREE 811
Know what's below. Call before you dig.

8		
7		
6	ARCH. ADDED AC PAD	09/16/2021
5	IRC BUILDING DEPT.	08/05/2021
4	SJRWMD RAI	07/09/2021
3	PER CITY OF SEBASTIAN	06/28/2021
2	SJRWMD RAI	05/14/2021
1	PER CITY OF SEBASTIAN	09/29/2020
△	**REVISIONS**	**DATE**

JOB NO.	20-0089
DESIGNED	TH
DRAWN	WDO
DATE	JUNE 2020
CHECKED	AS
DATE ISSUED	08-19-2020

MBV ENGINEERING, INC.
MOJA, BOWLES, VILLAMIZAR & ASSOCIATES
CONSULTING ENGINEERING CA #3728
1835 - 28TH STREET
VERO BEACH, FL 32960
PH. (772) 778-7378
FX. (772) 778-7417
MELBOURNE, FL. PH (321) 253-1510
FT. PIERCE, FL., PH (772) 468-9005

EROSION CONTROL PLAN

NORTH COUNTY LIBRARY EXPANSION
CITY OF SEBASTIAN FLORIDA

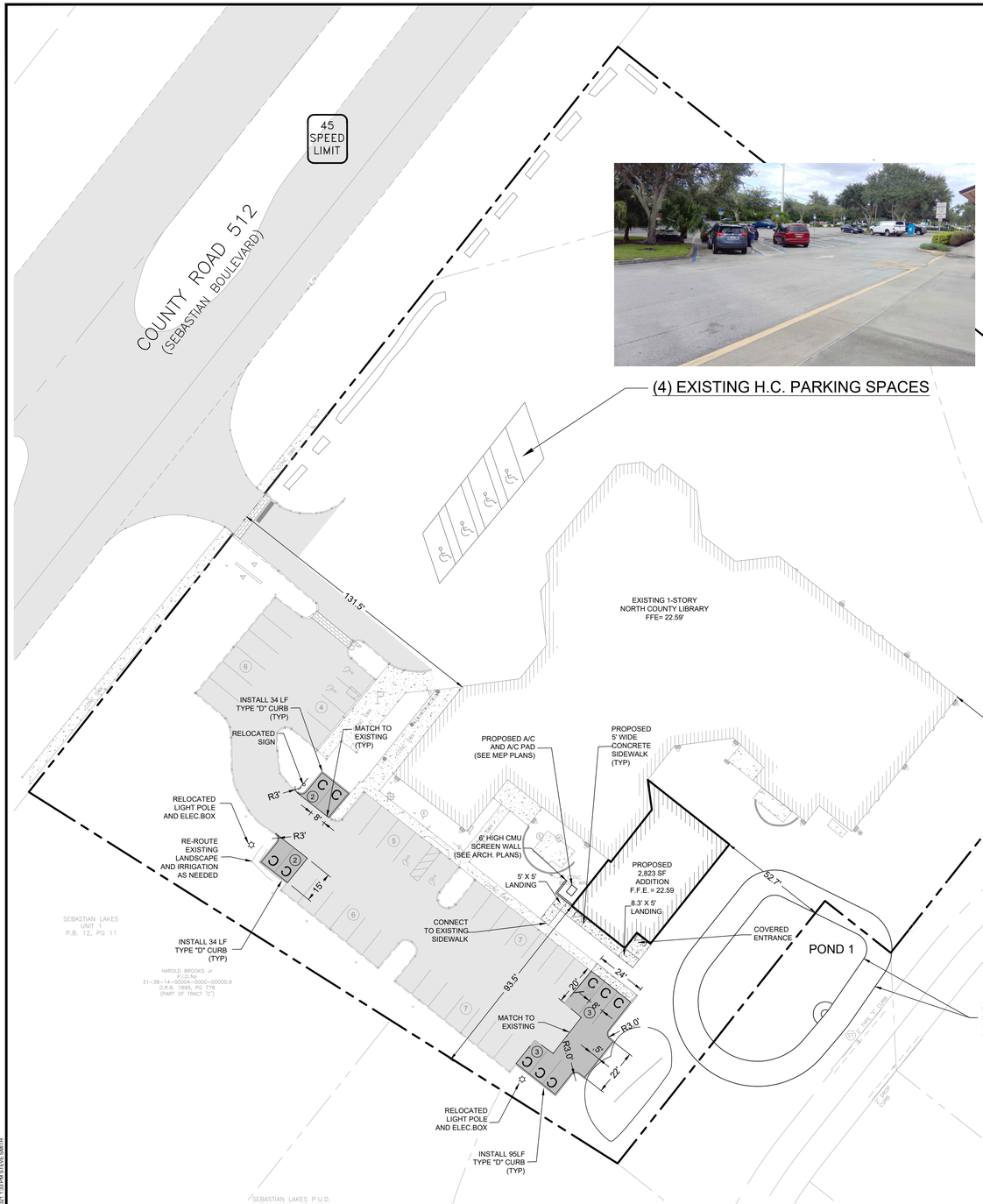
AARON G. STANTON
LICENSE
No. 72460
STATE OF FLORIDA
PROFESSIONAL ENGINEER
AARON G. STANTON
FL. P.E. #72460

SHEET
C5

20-0089

09/16/2021 BID SET

O:\DRAWINGS\2020\20-0089 North County Library Expansion\Drawing\20-0089 BASE.dwg 9/20/2021 1:33 PM STEVE SMITH



SITE PLAN

GRAPHIC SCALE
30 0 15 30
(IN FEET)
1 inch = 30 ft.

SITE LEGEND

- EXISTING CONCRETE
- PROPOSED CONCRETE
- EXISTING ASPHALT
- PROPOSED ASPHALT
- C — PROPOSED COMPACT PARKING SPACE SPACE TO BE 8'W x 15'L EXCEPT WHERE NOTED OTHERWISE

SEE SHEET C2 FOR GENERAL NOTES

SEE SHEET C10 FOR SITE DETAILS

SEE SHEET C12 FOR LANDSCAPE PLAN

SITE INFORMATION

SITE ADDRESS
1001 SEBASTIAN BOULEVARD
SEBASTIAN, FLORIDA 32958

OWNER
INDIAN RIVER COUNTY
1801 27TH STREET
VERO BEACH, FLORIDA 32960

APPLICANT
INDIAN RIVER COUNTY
1801 27TH STREET
VERO BEACH, FLORIDA 32960

ENGINEER
MBV ENGINEERING, INC.
1835 20TH STREET
VERO BEACH, FLORIDA 32960
PHONE (772) 569-0035

SURVEYOR
INDIAN RIVER COUNTY
DEPARTMENT OF PUBLIC
WORKS ENGINEERING DIVISION
1801 27TH STREET VERO
BEACH, FLORIDA 32960

TAX PARCEL I.D. NUMBER(S)
31-38-14-00004-0000-00000.7

ZONING
PS

LAND USE
INSTITUTIONAL

BUILDING DATA	REQUIRED	EXISTING	PROPOSED
BUILDING SETBACKS			
FRONT	30'	131.5'	NO CHANGE
SIDE (WEST)	10'	25'	93.5'
REAR (EXISTING)	25'	91.9'	NO CHANGE
REAR (ADDITION)	25'	100'	52.7'
BUILDING COVERAGE	40% MAX.	13.88%	15.45%
OPEN SPACE	45% MIN.	50.84%	48.07%
IMPERVIOUS SURFACE	60% MAX.	49.16%	51.93%

EXISTING SITE DATA

TOTAL SITE AREA	= 179,467 SF	= 4.12 Ac	= 100.00 %
EXISTING BUILDING AREA	= 24,996 SF	= 0.57 Ac	= 13.88 %
EXISTING PAVEMENT AND CONCRETE AREA	= 63,240 SF	= 1.45 Ac	= 35.24 %
TOTAL IMPERVIOUS AREA	= 88,236 SF	= 2.02 Ac	= 49.16 %
TOTAL OPEN AREA	= 91,231 SF	= 2.10 Ac	= 50.84 %

PROPOSED SITE DATA

TOTAL SITE AREA	= 179,467 SF	= 4.12 Ac	= 100.00 %
EXISTING BUILDING AREA	= 24,996 SF	= 0.57 Ac	= 13.88 %
EXISTING PAVEMENT AND CONCRETE AREA	= 63,240 SF	= 1.45 Ac	= 35.24 %
PROPOSED BUILDING AREA	= 2,823 SF	= 0.06 Ac	= 1.57 %
PROPOSED PAVEMENT AND SIDEWALK AREA	= 2,147 SF	= 0.05 Ac	= 1.20 %
TOTAL IMPERVIOUS AREA	= 93,206 SF	= 2.14 Ac	= 51.93 %
TOTAL OPEN AREA	= 86,261 SF	= 1.98 Ac	= 48.07 %
NET NEW IMPERVIOUS AREA	= 4,970 SF	= 0.11 Ac	= 2.77 %

PERMITS REQUIRED
CITY OF SEBASTIAN MAJOR SITE PLAN APPROVAL
CITY OF SEBASTIAN LAND CLEARING PERMIT
CITY OF SEBASTIAN DEWATERING PERMIT
ST. JOHNS RIVER WMD MODIFICATION
INDIAN RIVER COUNTY UTILITY CONNECTION PERMIT
INDIAN RIVER COUNTY FIRE PREVENTION APPROVAL
ABANDONMENT OF EASEMENT (BY IRC)

PARKING REQUIREMENTS - LIBRARY USE

PARKING REQUIRED (EXISTING): 1SP / 300 SF = (24,966 SF / 300 SF)	= 83 SPACES	
PARKING REQUIRED (PROPOSED): 1SP / 300 SF = (2,823 SF / 300 SF)	= 10 SPACES	
TOTAL PARKING REQUIRED:	= 93 SPACES	
EXISTING PARKING PROVIDED:	= 123 SPACES	(118) STANDARD, (5) H.C.
ADDITIONAL PARKING PROPOSED:	= 10 SPACES	
TOTAL PARKING PROVIDED WITH ADDITION	= 133 SPACES	(118) STANDARD,(10 COMPACT), (5) H.C.

FLOOD ZONE
THE SUBJECT PROPERTY LIES IN FLOOD ZONE 'AE' (SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD - BASE ELEVATION DETERMINED) AND UNSHADE FLOOD ZONE 'X' (AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNNUAL CHANCE FLOOD PLAIN), AS SCALED FROM THE FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAP, PANEL 113 OF 390, MAP No. 12061C0113 H. MAP REVISED: DECEMBER 4, 2012.

CONSTRUCTION SCHEDULE
CONSTRUCTION START: TBD
CONSTRUCTION END: TBD

LEGAL DESCRIPTION
THE NORTHEAST 1/4 OF THE NORTHWEST 1/4 OF SECTION 36, TOWNSHIP 32 SOUTH, RANGE 39EAST LESS AND EXCEPT THE WEST 520.00 FEET AND LESS AND EXCEPT THE EAST 275.00 FEET OF THE SOUTH 800.00 FEET AND LESS THE SOUTH 310 FEET AND THE NORTH 75 FEET THEREOF.

THOSE LANDS CURRENTLY KNOWN AS THE NORTH COUNTY LIBRARY, SAID LANDS LYING IN SECTIONS 14 & 23, TOWNSHIP 31 SOUTH, RANGE 38 EAST; AS RECORDED IN OFFICIAL RECORDS BOOK 817, PAGE 1677 AND OFFICIAL RECORDS BOOK 1180, PAGE 1423, AS RECORDED IN THE PUBLIC RECORDS OF INDIAN RIVER COUNTY, FLORIDA; BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

PARCEL No. 1, AS SHOWN ON THE PLAT OF THE SEBASTIAN LAKES LIBRARY SITE, PER PLAT BOOK 13, PAGE 1 OF THE PUBLIC RECORDS OF INDIAN RIVER COUNTY, FLORIDA;

TOGETHER WITH:
ALL OF PARCEL 4 OF THE PLAT OF SEBASTIAN LAKES COMMONS, AS RECORDED IN PLAT BOOK 15, PAGE 18 OF THE PUBLIC RECORDS OF INDIAN RIVER COUNTY, FLORIDA;

TOGETHER WITH:
A PORTION OF PARCEL 3 OF SAID PLAT OF SEBASTIAN LAKES COMMONS; BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCE AT THE EASTERLY MOST CORNER OF SAID PARCEL 3, THENCE RUN S54°30'40"W, ALONG THE SOUTHERLY LINE OF SAID PARCEL 3, A DISTANCE OF 161.40 FEET; THENCE RUN S82°57'21"W, A DISTANCE OF 127.27 FEET TO THE POINT OF BEGINNING; THENCE RUN S82°55'04"W, A DISTANCE OF 212.86 FEET TO THE POINT OF CURVATURE OF A NON-TANGENT CURVE CONCAVE TO THE NORTHEAST, HAVING A RADIUS OF 750.00 FEET AND A CHORD BEARING OF N20°28'42"W; THENCE DEPARTING SAID SOUTHERLY LINE RUN ALONG THE ARC OF SAID CURVE THRU A CENTRAL ANGLE OF 17°20'57", AN ARC DISTANCE OF 227.10 FEET TO A POINT ON THE SOUTHWESTERLY LINE OF PARCEL 1 OF SAID SEBASTIAN LAKES COMMONS PLAT; THENCE RUN S51°40'35"E, ALONG SAID SOUTHWESTERLY LINE, A DISTANCE OF 113.92 FEET TO THE SOUTHEAST CORNER OF SAID PARCEL 1; THENCE RUN N38°19'25"E, ALONG THE EASTERLY LINE OF PARCEL 1, A DISTANCE OF 78.02 FEET TO THE SOUTHWEST CORNER OF PARCEL 2 OF SAID PLAT; THENCE RUN S51°40'35"E, ALONG THE SOUTHERLY LINE OF SAID PARCEL 2, A DISTANCE OF 200.00 FEET TO THE SOUTHEAST CORNER OF SAID PARCEL 2; THENCE RUN S38°19'25"W, A DISTANCE OF 15.00 FEET; THENCE RUN S07°04'58"E, A DISTANCE OF 40.78 FEET TO THE POINT OF BEGINNING. CONTAINING: 4.12 ACRES, MORE OR LESS.

DRAINAGE STATEMENT
THIS PROJECT'S PURPOSE TO CONSTRUCT A 2,823 SF NEW BUILDING ADDITION, (10) NEW PARKING SPACES AND ADDITIONAL SIDEWALKS AS DEPICTED ON THE PLANS. THE EXISTING SITE DRAINS TO THE PREVIOUSLY PERMITTED AND CONSTRUCTED ON-SITE STORM SYSTEM, WHICH CONSISTS OF A NETWORK OF PIPES AND CATCH BASINS THAT FLOW TO A SERIES OF CONNECTED ON-SITE DRY RETENTION PONDS. THE POND SYSTEM IS CONNECTED TO THE SEBASTIAN LAKES MASTER PUD STORMWATER SYSTEM THAT WAS PREVIOUSLY PERMITTED AND CONSTRUCTED TO INCLUDE THIS PARCEL, ALONG WITH ITS ALLOWABLE TOTAL IMPERVIOUS AREA OF 2.183 AC. THE PROPOSED ADDITION AMD NEW PAVEMENT / SIDEWALK AREA WILL BRING THE SITE TO A TOTAL OF 2.14 AC, STILL WITHIN THE PREVIOUS PERMITTED THRESHOLD FOR THE SITE. THEREFORE, NO IMPROVEMENTS ARE REQUIRED TO THE STORM POND SYSTEMS.

TRAFFIC STATEMENT
PER ITE, 10TH EDITION:
EXISTING ADT:
LIBRARY (590)
24,996 SF / 1,000 SF = 1801 ADT (900 ENTRY, 901 EXIT)

PROPOSED ADT:
LIBRARY (590)
27,819 SF / 1,000 SF = 2004 ADT (1002 ENTRY, 1002 EXIT)

NET NEW ADT: 203 TRIPS

ALL ELEVATIONS NAVD 1988

72 HOURS BEFORE DIGGING CALL TOLL FREE 811 Know what's below. Call before you dig.

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SITE PLAN

NORTH COUNTY LIBRARY EXPANSION

CITY OF SEBASTIAN FLORIDA

AARON G. STANTON LICENSE No. 72460 STATE OF FLORIDA PROFESSIONAL ENGINEER

AARON G. STANTON
FL. P.E. #72460

SHEET
C6

20-0089

09/16/2021 BID SET

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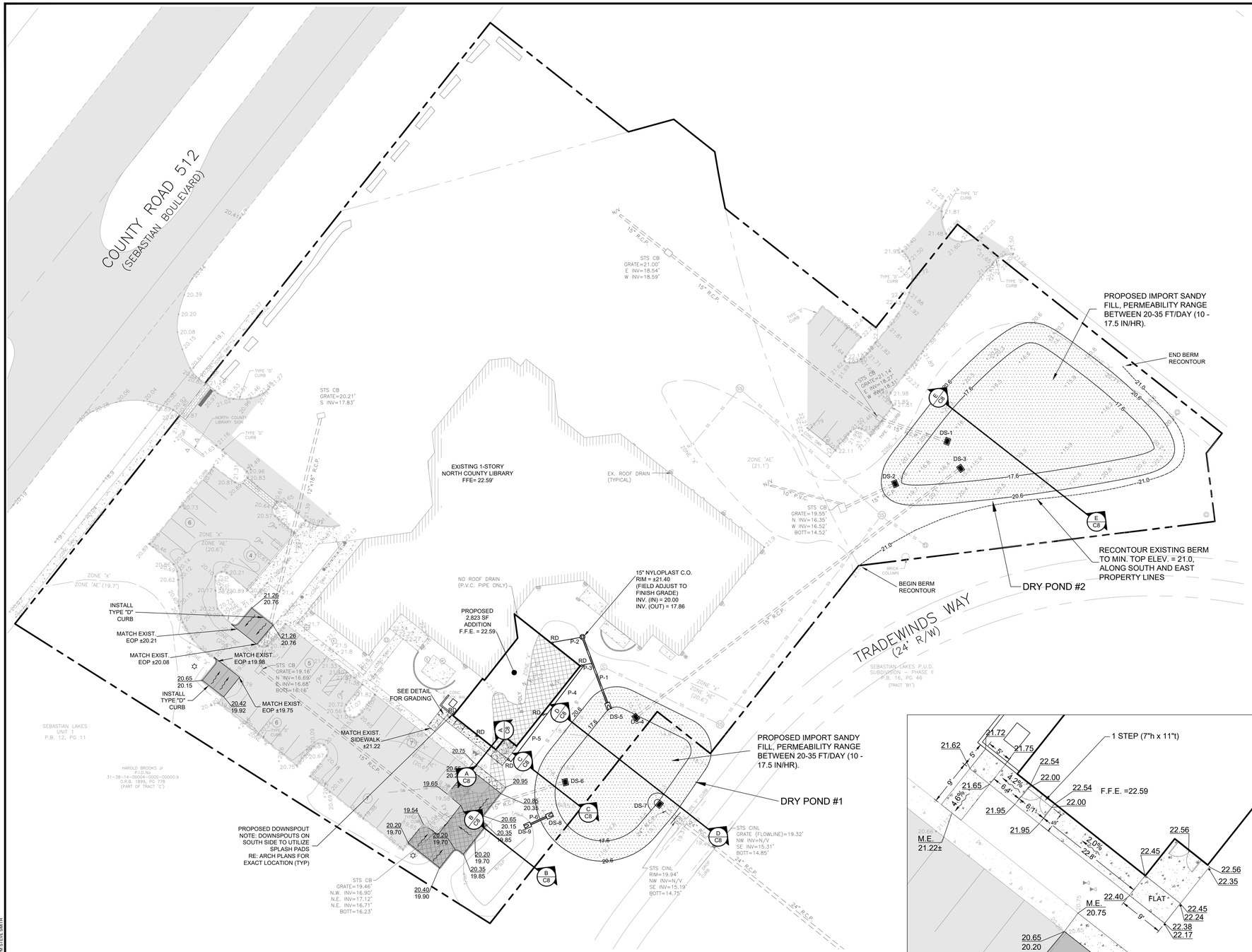

PAVING, GRADING, DRAINAGE PLAN

ACCESS RAMP DETAIL

SCALE: 1"=10'

SEE SHEET C2 FOR GENERAL NOTES

SEE SHEET C10 FOR SITE DETAILS

NOTES:

1. ANY WELLS DISCOVERED DURING SITE CLEARING SHALL BE MARKED AND CONTRACTOR TO INFORM ENGINEER OF LOCATION. ALL WELLS NOT BEING UTILIZED FOR IRRIGATION SHALL BE ABANDONED PER D.O.H. REGULATIONS BY CONTRACTOR.
2. CONTRACTOR SHALL ATTAIN ALL NECESSARY SITE DEMOLITION / DEWATERING PERMITS, SPECIFICALLY IRC R /W DEWATERING, PRIOR TO SCHEDULING OF A PRE-CONSTRUCTION CONFERENCE.

TECHNICAL SPECIFICATIONS

MATERIALS

A.) DRAINAGE PIPING:

1.) MINIMUM SIZED PIPING SHALL BE 12" OR EQUIVALENT ELLIPTICAL SIZE.

2.) ALL STORM PIPING SHALL MEET MANUFACTURER'S SPECIFICATIONS. CONTRACTOR TO COORDINATE WITH MANUFACTURER TO ENSURE PROPOSED PIPING DOES NOT REQUIRE ADDITIONAL INSTALLATION MATERIALS, INCLUDING BUT NOT LIMITED TO, STRAPPING, ANCHORING, BUOYANCY, ETC.

3.) ALL JOINTS SHALL BE WRAPPED WITH FILTER FABRIC.

B.) DRAINAGE STRUCTURES:

1.) ALL DRAINAGE STRUCTURES SHALL MEET SPECIFIC PLANNED USE AS DETERMINED BY THE DESIGN ENGINEER AND THE LOCAL GOVERNING AGENCY.

2.) ALL CATCH BASINS, INLETS OR MANHOLE STRUCTURES SHALL BE OF PRECAST REINFORCED TYPE PURSUANT TO FDOT DESIGN STANDARDS, LATEST EDITION, UNLESS OTHERWISE APPROVED.

3.) ALL STRUCTURES SHALL BE FREE OF DEFECTS SUCH AS CRACKING, HONEY COMBS AND EXPOSED STEEL REINFORCING INCLUDING BLEED THROUGH.

4.) SHOP DRAWINGS SHALL BE SUBMITTED BEFORE ORDERING MATERIAL FOR PLANNED PROJECT. CORRESPONDING SHALL BE BETWEEN THE DESIGN ENGINEER AND THE LOCAL GOVERNING AGENCY AND IS THE RESPONSIBILITY OF THE CONTRACTOR.

C.) MANHOLE COVERS & GRATES:

1.) MANHOLE FRAMES, COVERS AND GRATES SHALL MEET SPECIFIC PLANNED USE AS DETERMINED BY DESIGN ENGINEER AND THE LOCAL GOVERNING AGENCY.

2.) MANHOLE FRAMES AND COVERS SHALL BE OF CAST IRON MATERIALS, UNLESS OTHERWISE NOTED, AND BE FREE FROM CRACKS, HOLES OR COLD SHUTS. FRAMES AND COVERS SHALL CONFORM TO A MINIMUM STANDARD OF USF 1260 SERIES OR EQUIVALENT WITH COVERS STATING "STORM SEWER."

3.) FRAMES AND GRATES SHALL BE OF CAST IRON MATERIALS, UNLESS OTHERWISE NOTED, AND BE FREE FROM CRACKS, HOLES AND COLD SHUTS. FRAMES AND GRATES SHALL CONFORM TO A MINIMUM STANDARD OF USF 4160-6210 OR EQUIVALENT.

CLEAN-UP

THE CONTRACTOR MUST PROVIDE CLEAN-UP OF EXCESS CONSTRUCTION MATERIAL UPON COMPLETION OF THE PROJECT. THE SITE MUST BE LEFT IN A NEAT, CLEAN, GRADED CONDITION.

DRAINAGE SPECIFICATIONS

STORM INLETS AND MANHOLES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE STANDARD DESIGN CRITERIA OF THE FLORIDA DEPARTMENT OF TRANSPORTATION, LATEST ADDITION. PRECAST CONCRETE MANHOLES AND STORM INLETS MAY BE USED UPON THE ENGINEER'S APPROVAL OF THE MANUFACTURER'S SHOP DRAWINGS.

CONCRETE

UNLESS OTHERWISE SPECIFIED OR INDICATED, ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS OF 3000 PSI. ALL WORK SHALL COMPLY WITH THE CURRENT EDITION OF THE AMERICAN CONCRETE INSTITUTE (ACI) BUILDING CODE AND THE APPLICABLE BUILDING CODES HAVING JURISDICTION IN THE AREA.

GROUNDWATER

GROUND WATER MAY BE ENCOUNTERED ON SITE. CONTRACTOR TO PLAN ACCORDINGLY.

RECORD DRAWINGS

THE CONTRACTOR SHALL KEEP AND MAINTAIN RECORD DRAWINGS ON THE PROJECT SITE AT ALL TIMES WHICH SHALL BE ANNOTATED BY THE CONTRACTOR DEPICTING ANY CHANGES MADE IN THE FIELD WHICH DIFFER FROM THE CONTRACT DRAWINGS. RECORD DRAWINGS SHALL INCLUDE, BUT NOT LIMITED TO, INVERT AND TOP ELEVATIONS OF CULVERTS AND INLET STRUCTURES. CONTRACTOR SHALL SUBMIT COMPLETE AND FINAL RECORD DRAWINGS TO ENGINEER UPON COMPLETION OF PROJECT AND PRIOR TO FINAL INSPECTION AND FINAL PAYMENT.

DRAINAGE STRUCTURE SCHEDULE

STRUCTURE NUMBER	RIM ELEV.	PIPE INV. ELEVATION	DESCRIPTION
DS- 1	17.60	14.89 (EX.)	TYPE 'C' INLET
DS- 2	18.37	16.2 (EX.)	TYPE 'C' INLET
DS- 3	17.60	14.87 (EX.)	TYPE 'C' INLET
DS- 4	17.60	14.35 (EX.)	TYPE 'C' INLET
DS- 5	N/A	17.60	15" MITERED END SECTION
DS- 6	17.60	14.89 (EX.)	TYPE 'C' INLET
DS- 7	20.20	14.89 (EX.)	CONTROL STRUCTURE, SEE DETAIL, SHEET C10
DS- 8	N/A	18.60	8" MITERED END SECTION
DS- 9	N/A	18.60	8" MITERED END SECTION
RD	N/A	N/A	ROOF DRAIN PER ARCHITECT

DRAINAGE PIPE SCHEDULE

STRUCTURE NUMBER	SIZE	LENGTH	DESCRIPTION
P- 1	15"	52'	ADS N-12
P-2	4"	22'	SCH 40 (MIN.)
P-3	8"	6'	SCH 40 (MIN.)
P-4	6"	36'	SCH 40 (MIN.)
P-5	6"	37'	SCH 40 (MIN.)
P-6	8"	18'	SCH 40 (MIN.)

LEGEND

- EXISTING CONCRETE
- PROPOSED CONCRETE
- EXISTING ASPHALT
- PROPOSED ASPHALT
- PROPOSED FILL WITHIN PONDS (SEE ALSO CROSS SECTION SHEET C8)
- PROPOSED FILL AREA - FOR FLOODPLAIN CALCULATIONS
- DIRECTION OF FLOW
- EXISTING STORM PIPE
- PROPOSED STORM PIPE
- 19.7 EXISTING ELEVATION
- 20.20 PROPOSED ELEVATION
- P-# PROPOSED PIPE LENGTH / TYPE (SEE TABLE ABOVE)

ALL ELEVATIONS NAVD 1988

DATE	REVISIONS
09/29/2020	1 PER CITY OF SEBASTIAN
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	7
	8

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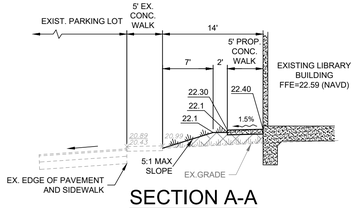
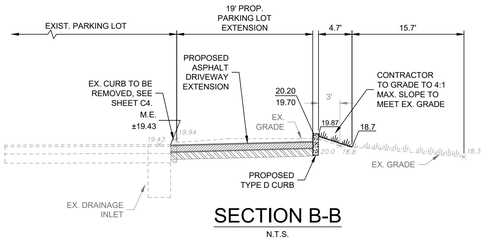
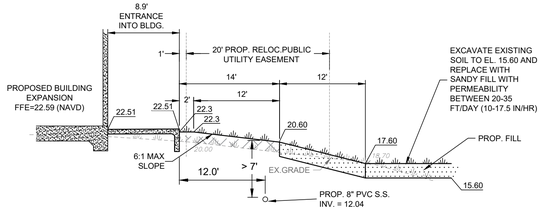


SECTION A-A
N.T.S.



SECTION B-B
N.T.S.



SECTION C-C
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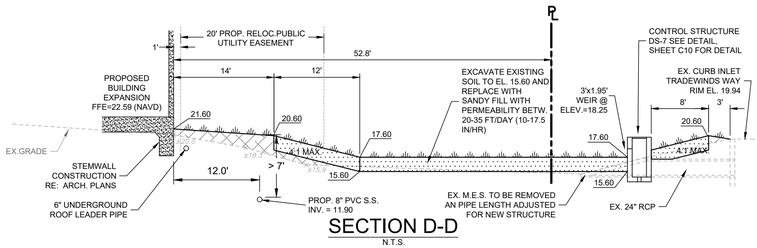

SECTION D-D
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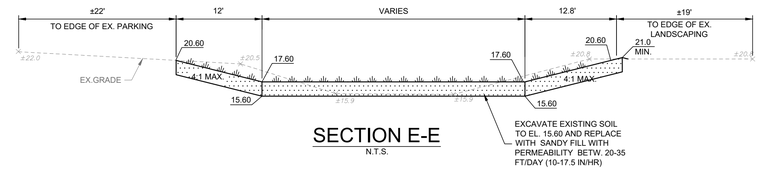

SECTION E-E
N.T.S.

SITE LEGEND

- SANDY FILL WITH MINIMUM PERMEABILITY BETWEEN 20-35 FT/DAY (10-17.5 IN/HR)
- CLEAN DIRT FILL

ALL ELEVATIONS NAVD 1988

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CROSS SECTIONS

NORTH COUNTY LIBRARY EXPANSION

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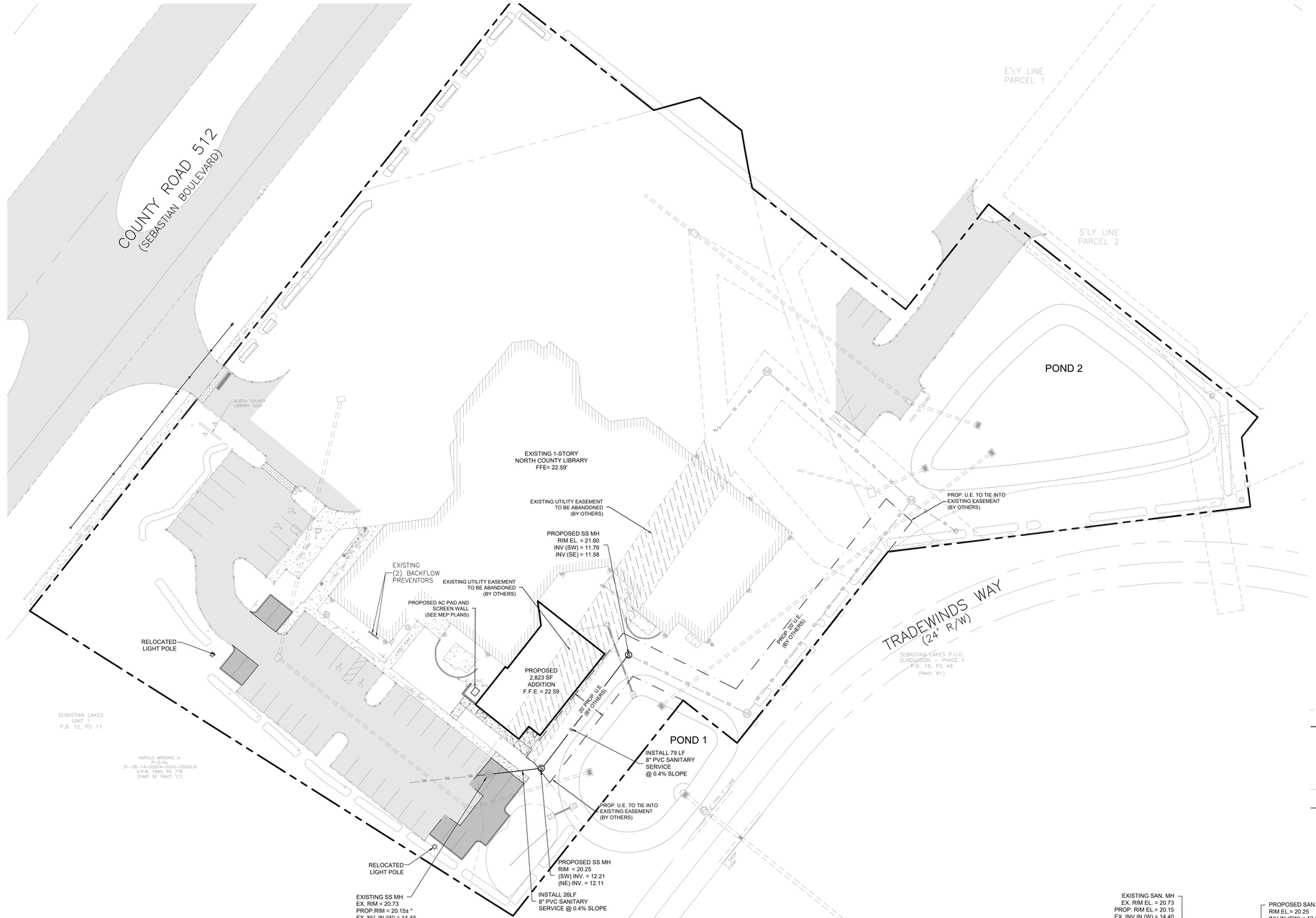


UTILITY PLAN

FDEP SEPARATION CRITERIA:

(1) HORIZONTAL SEPARATION BETWEEN UNDERGROUND WATER MAINS AND SANITARY OR STORM SEWERS, WASTEWATER OR STORM WATER FORCE MAINS, RECLAIMED WATER PIPELINES, AND ON-SITE SEWAGE TREATMENT AND DISPOSAL SYSTEMS.

(A) NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST THREE FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED STORM SEWER, STORM WATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 62-610,F.A.C.

(B) NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST THREE FEET, AND PREFERABLY TEN FEET, BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED VACUUM-TYPE SANITARY SEWER.

(C) NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST SIX FEET, AND PREFERABLY TEN FEET, BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED GRAVITY OR PREASSURE-TYPE SANITARY SEWER, WASTEWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610,F.A.C. THE MINIMUM HORIZONTAL SEPARATION DISTANCE BETWEEN WATER MAINS AND GRAVITY TYPE SANITARY SEWERS SHALL BE REDUCED TO THREE FEET WHERE THE BOTTOM OF THE WATER MAIN IS LAID AT LEAST SIX INCHES ABOVE THE TOP OF THE SEWER.

(D) NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST TEN FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND ALL PARTS OF ANY EXISTING OR PROPOSED "ON-SITE SEWAGE TREATMENT AND DISPOSAL SYSTEM" AS DEFINED IN SECTION 381.0065(2),F.S., AND RULE 64E-6.002, F.A.C.

(2) VERTICAL SEPARATION BETWEEN UNDERGROUND WATER MAINS AND SANITARY OR STORM SEWERS, WASTEWATER OR STORM WATER FORCE MAINS, AND RECLAIMED WATER PIPELINES.

(A) NEW OR RELOCATED, UNDERGROUND WATER MAINS CROSSING ANY EXISTING OR PROPOSED GRAVITY OR VACUUME-TYPE SANITARY SEWER OR STORM SEWER SHALL BE LAID SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST SIX INCHES, AND PREFERABLY 12 INCHES, ABOVE OR AT LEAST 12 INCHES BELOW THE OUTSIDE OF THE OTHER PIPELINE. HOWEVER, IT IS PREFERABLE TO LAY THE WATER MAIN ABOVE THE OTHER PIPELINE.

(B) NEW OR RELOCATED, UNDERGROUND WATER MAINS CROSSING ANY EXISTING OR PROPOSED PRESSURE-TYPE SANITARY SEWER, WASTEWATER OR STORM WATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER SHALL BE LAID SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST 12 INCHES ABOVE OR BELOW THE OUTSIDE OF THE OTHER PIPELINE. HOWEVER, IT IS PREFERABLE TO LAY THE WATER MAIN ABOVE THE OTHER PIPELINE.

(C) AT THE UTILITY CROSSINGS DESCRIBED IN PARAGRAPHS (A) AND (B) ABOVE, ONE FULL LENGTH OF WATER MAIN PIPE SHALL BE CENTERED ABOVE OR BELOW THE OTHER PIPELINE SO THE WATER MAIN JOINTS WILL BE AS FAR AS POSSIBLE FROM THE OTHER PIPELINE, ALTERNATIVELY, AT SUCH CROSSINGS, THE PIPES SHALL BE ARRANGED SO THAT ALL THE WATER MAIN JOINTS ARE AT LEAST THREE FEET FROM ALL JOINTS IN VACUUM-TYPE SANITARY SEWERS, STORM SEWERS, STORM WATER FORCE MAINS, OR PIPELINES CONVEYING RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C., AND AT LEAST SIX FEET FROM ALL JOINTS IN GRAVITY OR PRESSURE-TYPE SANITARY SEWERS, WASTEWATER FORCE MAINS, OR PIPELINES CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.

(3) SEPARATION BETWEEN WATER MAINS AND SANITARY OR STORM SEWER MANHOLES

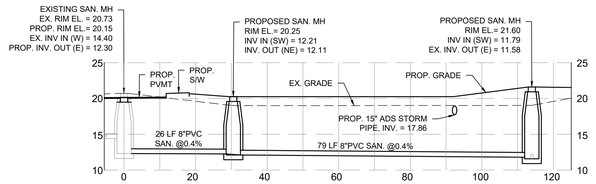
(A) NO WATER MAIN SHALL PASS THROUGH, OR COME INTO CONTACT WITH, ANY PART OF A SANITARY SEWER MANHOLE.

(B) EFFECTIVE AUGUST 28, 2003, WATER MAINS SHALL NOT BE CONSTRUCTED OR ALTERED TO PASS THROUGH, OR COME INTO CONTACT WITH, ANY PART OF A STORM SEWER MANHOLE OR INLET STRUCTURE.

(4) SEPARATION BETWEEN FIRE HYDRANT DRAINS AND SANITARY OR STORM SEWERS, WASTEWATER OR STORM WATER FORCE MAINS, RECLAIMED WATER PIPELINES, AND ON-SITE SEWAGE TREATMENT AND DISPOSAL SYSTEMS. NEW OR RELOCATED FIRE HYDRANTS WITH UNDERGROUND DRAINS SHALL BE LOCATED SO THAT THE DRAINS ARE AT LEAST THREE FEET FROM ANY EXISTING OR PROPOSED STORM SEWER, STORM WATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C; AT LEAST THREE FEET, AND PREFERABLY TEN FEET, FROM ANY EXISTING OR PROPOSED VACUUM-TYPE SANITARY SEWER; AT LEAST SIX FEET, AND PREFERABLY TEN FEET, FROM ANY EXISTING OR PROPOSED GRAVITY-OR PRESSURE-TYPE SANITARY SEWER, WASTEWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.; AND AT LEAST TEN FEET FROM ANY EXISTING OR PROPOSED "ON-SITE SEWAGE TREATMENT AND DISPOSAL SYSTEM" AS DEFINED IN SECTION 381.0065(2), F.S., AND RULE 64E-6.002, F.A.C.

LEGEND

- EXISTING CONCRETE
- PROPOSED CONCRETE
- EXISTING ASPHALT
- PROPOSED ASPHALT
- EXISTING UTILITY EASEMENT TO BE ABANDONED (BY OTHERS)
- SS — EXISTING 8" SANITARY SEWER SERVICE
- S — PROPOSED 8" SANITARY SEWER SERVICE
- EXISTING SANITARY SEWER MANHOLE
- PROPOSED SANITARY SEWER SERVICE
- EXISTING PUBLIC UTILITY EASEMENT LINE
- PROPOSED PUBLIC UTILITY EASEMENT LINE (BY OTHERS)
- EXISTING STORM PIPE
- PROPOSED STORM PIPE



UTILITY PROFILE

SCALE:
HORIZ. 1"=20'
VERT. 1"=10'

ALL ELEVATIONS NAVD 1988

72 HOURS BEFORE DIGGING
CALL TOLL FREE
811
Know what's below.
Call before you dig.

O:\DRAWINGS\2020\20-0089 North County Library Expansion\Drawing\20-0089 BASE.dwg 9/20/2021 1:34 PM STEVE SMITH

DATE	REVISIONS
09/16/2021	8
08/05/2021	7 ARCH. ADDED AC PAD
07/09/2021	6 IRC BUILDING DEPT.
06/28/2021	5 SJRWMD RAI
05/14/2021	4 PER CITY OF SEBASTIAN
09/29/2020	3 SJRWMD RAI
	2 PER CITY OF SEBASTIAN
	1

JOB NO.	20-0089
DESIGNED	TH
DRAWN	WDO
DATE	JUNE 2020
CHECKED	AS
DATE ISSUED	08-19-2020

MBV ENGINEERING, INC.
MOAL BOWLES VILLAMIZAR & ASSOCIATES
CONSULTING ENGINEERING CA #3728
1835 - 20TH STREET
VERO BEACH, FL 32960
PH. (772) 778-7378
FX. (772) 778-7317
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UTILITY PLAN

NORTH COUNTY LIBRARY
EXPANSION

CITY OF SEBASTIAN FLORIDA

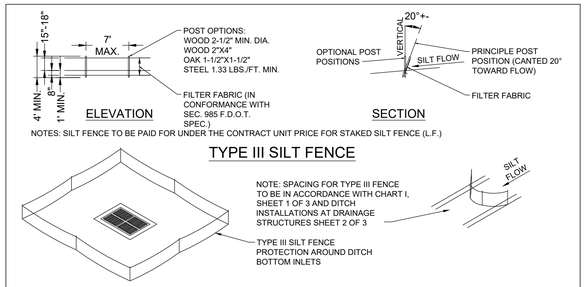
AARON G. STANTON
LICENSE
No. 72460
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

AARON G. STANTON
FL. P.E. #72460

SHEET
C9

20-0089

09/16/2021 BID SET



NOTES: SILT FENCE TO BE PAID FOR UNDER THE CONTRACT UNIT PRICE FOR STAKED SILT FENCE (L.F.)

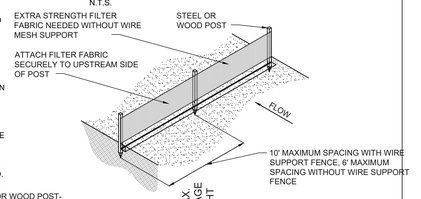
TYPE III SILT FENCE

DO NOT DEPLOY IN A MANNER THAT SILT FENCES WILL ACT AS A DAM ACROSS PERMANENT FLOWING WATERCOURSES. SILT FENCES ARE TO BE USED AT UPLAND LOCATIONS AND TURBIDITY BARRIERS USED AT PERMANENT BODIES OF WATER.

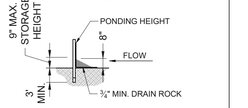
SILT FENCE APPLICATIONS

N.T.S.

NOTES:
1. SILT FENCE SHALL BE PLACED ON SLOPE CONTOURS TO MAXIMIZE PONDING EFFICIENCY.
2. INSPECT AND REPAIR FENCE AFTER EACH STORM EVENT AND REMOVE SEDIMENT WHEN NECESSARY. 9" MAXIMUM RECOMMENDED STORAGE HEIGHT.
3. REMOVED SEDIMENT SHALL BE DEPOSITED TO AN AREA THAT WILL NOT CONTRIBUTE SEDIMENT OFF-SITE AND CAN BE PERMANENTLY STABILIZED.



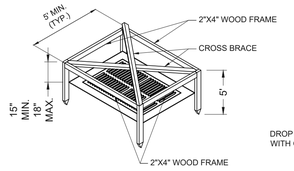
TRENCH DETAIL



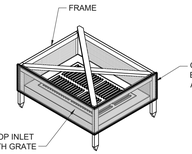
INSTALLATION WITHOUT TRENCHING

TYPE IV SILT FENCE

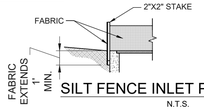
N.T.S.



VIEW OF FRAME WITHOUT SILT FENCE

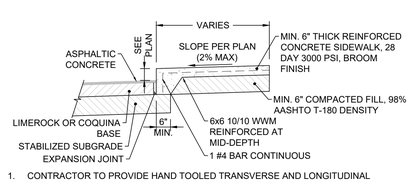


VIEW OF FRAME WITH SILT FENCE



SILT FENCE INLET PROTECTION

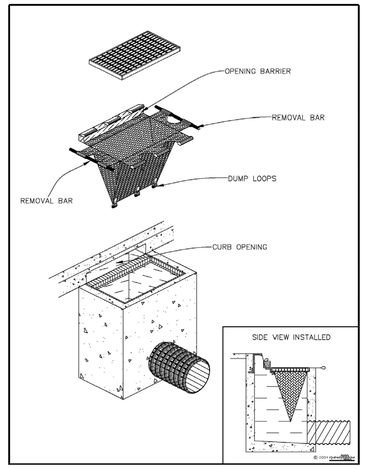
N.T.S.



1. CONTRACTOR TO PROVIDE HAND TOOLED TRANSVERSE AND LONGITUDINAL CONTRACTION JOINTS @ 5'-0" O.C. MAX. 3/8" EXPANSION JOINTS @ 25'-0" O.C. MAX.
2. IN LIEU OF WELDED WIRE FABRIC, FIBER MESH CONCRETE MAY BE USED.
3. FINISH EDGE OF SIDEWALK WITH EDGING TOOL HAVING A RADIUS OF 1/2".

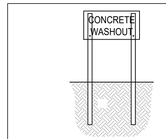
CONCRETE SIDEWALK ADJACENT TO PAVEMENT DETAIL

N.T.S.

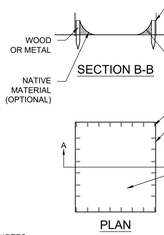


INLET INSERT SEDIMENT CONTAINMENT SYSTEM

N.T.S.



CONCRETE WASHOUT SIGN DETAIL (OR EQUIVALENT)

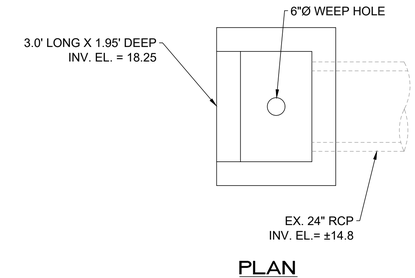


NOTES:
1. ACTUAL LAYOUT DETERMINED IN THE FIELD.
2. THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30' OF THE TEMPORARY CONCRETE WASHOUT FACILITY.

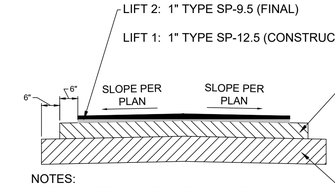
TYPE "ABOVE GRADE" WITH SILT FENCE

CONCRETE & STUCCO WASTE MANAGEMENT

N.T.S.



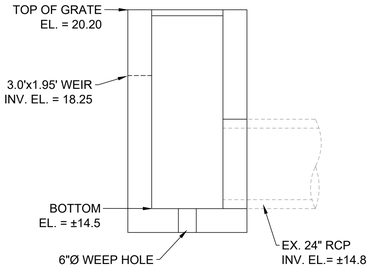
PLAN



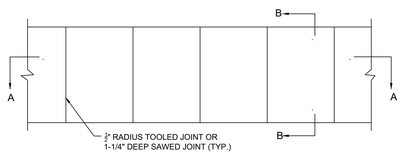
NOTES:
- ASPHALT TO BE INSTALLED IN TWO LIFTS.
- FINAL LIFT AT COMPLETION OF PROJECT

ON-SITE FLEXIBLE PAVEMENT DETAIL

N.T.S.

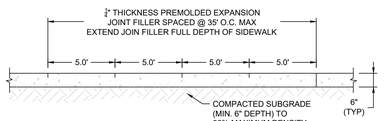


SECTION



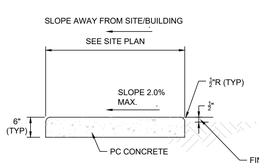
NOTE:
PROVIDE 1/2" EXPANSION JOINT BETWEEN SIDEWALK AND ALL FIXED OBJECTS

PLAN VIEW



SECTION A-A

NOTE:
WHERE REQUIRED REINFORCEMENT WILL BE No. 3 BARS 24" O.C. EACH WAY MAX. SPACING, OR 6 x 6 - W1.4 X W1.4 WWF, AND BE LOCATED 1 ½" FROM THE TOP.



SECTION B-B

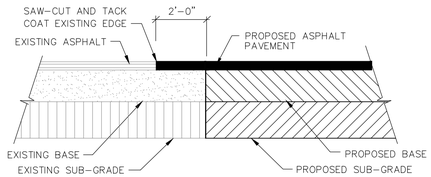
NOTE:
SLOPE SIDEWALK AS INDICATED AWAY FROM SITE/BUILDING

REINFORCED CONCRETE SIDEWALK DETAIL

N.T.S.

MODIFIED TYPE 'C' INLET CONTROL STRUCTURE DS-7

N.T.S.



PAVEMENT SAW-CUT AND BUTT JOINT DETAIL

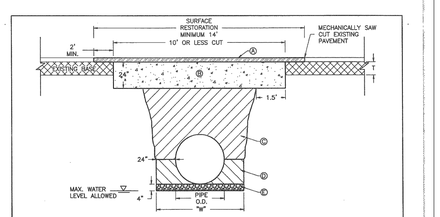
N.T.S.

EROSION AND SEDIMENTATION CONTROL NOTES

CONSTRUCTION ACTIVITIES CAN RESULT IN THE GENERATION OF SIGNIFICANT AMOUNTS OF POLLUTANTS WHICH MAY REACH SURFACE OR GROUND WATERS. ONE OF THE PRIMARY POLLUTANTS OF SURFACE WATERS IS SEDIMENT DUE TO EROSION. EXCESSIVE QUANTITIES OF SEDIMENT WHICH REACH WATER BODIES OF FLOOD PLAINS HAVE BEEN SHOWN TO ADVERSELY AFFECT THEIR PHYSICAL, BIOLOGICAL AND CHEMICAL PROPERTIES. TRANSPORTED SEDIMENT CAN OBSTRUCT STREAM CHANNELS, REDUCE HYDRAULIC CAPACITY OF WATER BODIES OF FLOOD PLAINS, REDUCE THE DESIGN CAPACITY OF CULVERTS AND OTHER WORKS, AND ELIMINATE BENTHIC INVERTEBRATES AND FISH SPAWNING SUBSTRATES BY SILTATION. EXCESSIVE SUSPENDED SEDIMENTS REDUCE LIGHT PENETRATION AND THEREFORE, REDUCE PRIMARY PRODUCTIVITY.

MINIMUM STANDARDS

1. SEDIMENT BASIN AND TRAPS, PERIMETER DIKES, SEDIMENT BARRIERS AND OTHER MEASURES INTENDED TO TRAP SEDIMENT SHALL BE CONSTRUCTED AS A FIRST STEP IN ANY LAND-DISTURBING ACTIVITY AND SHALL BE MADE FUNCTIONAL BEFORE UNSLOPE LAND DISTURBANCE TAKES PLACE.
2. ALL SEDIMENT CONTROL MEASURES ARE TO BE ADJUSTED TO MEET FIELD CONDITIONS AT THE TIME OF CONSTRUCTION AND BE CONSTRUCTED PRIOR TO ANY GRADING OR DISTURBANCE OF EXISTING SURFACE MATERIAL ON BALANCE OF SITE. PERIMETER SEDIMENT BARRIERS SHALL BE CONSTRUCTED TO PREVENT SEDIMENT OR TRASH FROM FLOWING OR FLOATING ON TO ADJACENT PROPERTIES.
3. PERMANENT OR TEMPORARY SOIL STABILIZATION SHALL BE APPLIED TO DENUDED AREAS WITHIN SEVEN DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE. TEMPORARY SOIL STABILIZATION SHALL BE APPLIED WITHIN SEVEN DAYS TO DENUDED AREAS THAT MAY NOT BE AT FINAL GRADE BUT WILL REMAIN UNDISTURBED FOR LONGER THAN 30 DAYS. PERMANENT STABILIZATION SHALL BE APPLIED TO AREAS THAT ARE TO BE LEFT UNDISTURBED FOR MORE THAN ONE YEAR.
4. DURING CONSTRUCTION OF THE PROJECT, SOIL STOCKPILES SHALL BE STABILIZED OR PROTECTED WITH SEDIMENT TRAPPING MEASURES. THE APPLICANT IS RESPONSIBLE FOR THE TEMPORARY PROTECTION AND PERMANENT STABILIZATION OF ALL SOIL STOCKPILES ON SITE AS WELL AS SOIL INTENTIONALLY TRANSPORTED FROM THE PROJECT SITE.
5. A PERMANENT VEGETATIVE COVER SHALL BE ESTABLISHED ON DENUDED AREAS NOT OTHERWISE PERMANENTLY STABILIZED. PERMANENT VEGETATION SHALL NOT BE CONSIDERED ESTABLISHED UNTIL A GROUND COVER IS ACHIEVED THAT, IN THE OPINION OF THE REVIEWER, IS UNIFORM, MATURE ENOUGH TO SURVIVE AND WILL INHIBIT EROSION.
6. STABILIZATION MEASURES SHALL BE APPLIED TO EARTHEN STRUCTURES SUCH AS DAMS, DIKES AND DIVERSIONS IMMEDIATELY AFTER INSTALLATION.
7. SURFACE RUNOFF FROM DISTURBED AREAS THAT IS COMPRISED OF FLOW FROM DRAINAGE AREAS GREATER THAN OR EQUAL TO THREE ACRES SHALL BE CONTROLLED BY A SEDIMENT BASIN. THE SEDIMENT BASIN SHALL BE DESIGNED AND CONSTRUCTED TO ACCOMMODATE THE ANTICIPATED SEDIMENT LOADING FROM THE LAND-DISTURBING ACTIVITY. THE OUTFALL DEVICE OR SYSTEM DESIGN SHALL TAKE INTO ACCOUNT THE TOTAL DRAINAGE AREA FLOWING THROUGH THE DISTURBED AREA TO BE SERVED BY THE BASIN.
8. AFTER ANY SIGNIFICANT RAINFALL, SEDIMENT CONTROL STRUCTURES WILL BE INSPECTED FOR INTEGRITY. ANY DAMAGED DEVICES SHALL BE CORRECTED IMMEDIATELY.
9. CONCENTRATED RUNOFF SHALL NOT FLOW DOWN CUT OR FILL SLOPES UNLESS CONTAINED WITHIN AN ADEQUATE TEMPORARY OR PERMANENT CHANNEL, FLUME OR SLOPE DRAIN STRUCTURE.
10. WHENEVER WATER SEEPS FROM A SLOPE FACE, ADEQUATE DRAINAGE OR OTHER PROTECTION SHALL BE PROVIDED.
11. SEDIMENT WILL BE PREVENTED FROM ENTERING ANY STORM DRAIN SYSTEM, DITCH OR CHANNEL. ALL STORM SEWER INLETS THAT ARE MADE OPERABLE DURING CONSTRUCTION SHALL BE PROTECTED SO THAT SEDIMENT-LADEN WATER CANNOT ENTER THE CONVEYANCE SYSTEM WITHOUT FIRST BEING FILTERED OR OTHERWISE TREATED TO REMOVE SEDIMENT.
12. BEFORE TEMPORARY OR NEWLY CONSTRUCTED STORMWATER CONVEYANCE CHANNELS ARE MADE OPERATIONAL, ADEQUATE OUTLET PROTECTION AND ANY REQUIRED TEMPORARY OR PERMANENT CHANNEL LINING SHALL BE INSTALLED IN BOTH THE CONVEYANCE CHANNEL AND RECEIVING CHANNEL.
13. WHEN WORK IN A LIVE WATERCOURSE IS PERFORMED, PRECAUTIONS SHALL BE TAKEN TO MINIMIZE ENCROACHMENT, CONTROL SEDIMENT TRANSPORT AND STABILIZE THE WORK AREA TO THE GREATEST EXTENT POSSIBLE DURING CONSTRUCTION. NONERODIBLE MATERIAL SHALL BE USED FOR THE CONSTRUCTION OF CAUSEWAYS AND COFFERDAMS. EARTHEN FILL MAY BE USED FOR THESE STRUCTURES IF ARMORED BY NONERODIBLE COVER MATERIALS.
14. WHEN A LIVE WATERCOURSE MUST BE CROSSED BY CONSTRUCTION VEHICLES, A TEMPORARY STREAM CROSSING CONSTRUCTED OF NONERODIBLE MATERIAL SHALL BE PROVIDED.
15. THE BED AND BANKS OF A WATERCOURSE SHALL BE STABILIZED IMMEDIATELY AFTER WORK IN THE WATERCOURSE IS COMPLETED.
16. PERIODIC INSPECTION AND MAINTENANCE OF ALL SEDIMENT CONTROL STRUCTURES MUST BE PROVIDED TO ENSURE INTENDED PURPOSE IS ACCOMPLISHED. THE CONTRACTOR SHALL BE CONTINUALLY RESPONSIBLE FOR ALL SEDIMENT LEAVING THE PROPERTY. SEDIMENT CONTROL MEASURES SHALL BE IN WORKING CONDITION AT THE END OF EACH WORKING DAY.
17. UNDERGROUND UTILITY LINES SHALL BE INSTALLED IN ACCORDANCE WITH THE FOLLOWING STANDARDS IN ADDITION TO OTHER APPLICABLE CRITERIA:
    A. NO MORE THAN 500 LINEAR FEET OF TRENCH MAY BE OPENED AT ONE TIME.
    B. EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF TRENCHES.
    C. EFFLUENT FROM DEWATERING OPERATIONS SHALL BE FILTERED OR PASSED THROUGH AN APPROVED SEDIMENT TRAPPING DEVICE, OR BOTH, AND DISCHARGED IN A MANNER THAT DOES NOT ADVERSELY AFFECT FLOWING STREAMS OR OFF-SITE PROPERTY.
    D. RESTABILIZATION SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THESE REGULATIONS.
18. WHERE CONSTRUCTION VEHICLE ACCESS ROUTES INTERSECT PAVED PUBLIC ROADS, PROVISIONS SHALL BE MADE TO MINIMIZE THE TRANSPORT OF SEDIMENT BY TRACKING ONTO THE PAVED SURFACE, WHERE SEDIMENT IS TRANSPORTED ONTO A PUBLIC ROAD SURFACE WITH CURBS AND GUTTERS, THE ROAD SHALL BE CLEANED THOROUGHLY AT THE END OF EACH DAY. SEDIMENT SHALL BE REMOVED FROM THE ROADS BY SHOVELING OR SWEEPING AND TRANSPORTED TO A SEDIMENT CONTROL DISPOSAL AREA. STREET WASHING SHALL BE ALLOWED ONLY AFTER SEDIMENT IS REMOVED IN THIS MANNER. THIS PROVISION SHALL APPLY TO INDIVIDUAL SUBDIVISION LOTS AS WELL AS TO LARGER LAND-DISTURBING ACTIVITIES.
19. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED, IN THE OPINION OF THE REVIEWER. DISTURBED SOIL AREAS RESULTING FROM THE DISPOSITION OF TEMPORARY MEASURES SHALL BE PERMANENTLY STABILIZED TO PREVENT FURTHER EROSION AND SEDIMENTATION.
20. PROPERTIES AND WATERWAYS DOWNSTREAM FROM CONSTRUCTION SITE SHALL BE PROTECTED FROM SEDIMENT DISPOSITION AND EROSION.
21. PHASED PROJECTS SHOULD BE CLEARED IN CONJUNCTION WITH CONSTRUCTION OF EACH PHASE.
22. EROSION CONTROL DESIGN AND CONSTRUCTION SHALL FOLLOW THE REQUIREMENTS IN INDEX NOS. 104 AND 105 OF FDOT ROADWAY AND TRAFFIC DESIGN STANDARDS.
23. THE REVIEWER MAY APPROVE MODIFICATIONS OR ALTER PLANS TO THESE EROSION CONTROL CRITERIA DUE TO SITE SPECIFIC CONDITIONS.



STORMWATER/UTILITY PIPE INSTALLATION

NOTES:
1. UTILITY CONSTRUCTION WITHIN THE RIGHT-OF-WAY SHALL COMPLY WITH COUNTY CODE CHAPTER 312.
1.1. ALL INSTALLATIONS LESS THAN 12" DIAMETER AND NON GRAVITY UTILITIES SHALL BE BY DIRECTIONAL BORE.
1.2. PARTIAL LANE CUTS REQUIRE A MINIMUM OF SINGLE LANE RESTORATION.
2. WHERE SOIL CONDITIONS CANNOT BE MAINTAINED AS SHOWN ABOVE, PROVIDE APPROVED METHOD OF CONSTRUCTION FOR APPROVAL BY THE COUNTY ENGINEER OR DESIGNEE PRIOR TO INSTALLATION.
3. SHORING MAY BE REQUIRED IN ACCORDANCE WITH ALL INDUSTRY STANDARDS.
4. NEW SURFACING MATERIALS SHALL BE CONSISTENT OR BETTER THAN EXISTING CONDITIONS AND SHALL HAVE BUTT JOINTS (2.5 INCH MINIMUM THICKNESS).
5. ALL ROADWAY RESTORATION SHALL COMPLY WITH INDIAN RIVER COUNTY PUBLIC WORKS AND FDOT STANDARDS (LATEST EDITION).
6. MINIMUM TRENCH WIDTH "W" = PIPE O.D. PLUS 2'-0" ON EACH SIDE.

Ⓐ MINIMUM EXISTING PAVEMENT DEPTH OR PER COUNTY ROADWAY DESIGN CRITERIA DETAIL, WHICHEVER IS GREATER.

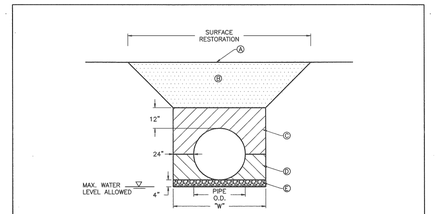
Ⓑ FLOWABLE FILL AS DEFINED AS NON-EXCAVATABLE IN ACCORDANCE WITH FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, SECTION 121, WITH STRENGTH OF 125-300 PSI.

Ⓒ A.A.S.H.T.O. TYPE A-3 MATERIAL IN MAXIMUM 6" LIFTS COMPACTED AT 98% A.A.S.H.T.O. T-180.

Ⓓ A.A.S.H.T.O. TYPE A-3 MATERIAL IN MAXIMUM 4" LIFTS COMPACTED AT 98% A.A.S.H.T.O. T-180. EXCAVATABLE FLOWABLE FILL IS ALLOWED WITH PRIOR APPROVAL OF PROPOSED MATERIAL STRENGTH BY THE COUNTY ENGINEER OR DESIGNEE.

Ⓔ ¾" DIAMETER, WASHED BEDDING ROCK OR PEA ROCK WHERE UNSUITABLE BEDDING MATERIAL EXISTS OR IF DEWATERING IS REQUIRED. SUITABLE MATERIAL IS DEFINED AS STABLE GRANULAR MATERIAL FREE OF ROCK FORMATION, OTHER FOREIGN FORMATIONS AND CONSTRUCTED TO UNIFORM GRADE AND LINE.

LAND DEVELOPMENT DESIGN STANDARDS AND SPECIFICATIONS		TRENCH (PAVED AREAS) 10' OR LESS CUT
DATE:	11/1/2016	James William Ennis, P.E. Florida Reg. No. 71938 Public Works – County Engineer
INDEX:	18	



STORMWATER/UTILITY PIPE INSTALLATION

NOTES:
1. UTILITY CONSTRUCTION WITHIN THE RIGHT-OF-WAY SHALL COMPLY WITH COUNTY CODE CHAPTER 312.
2. WHERE SOIL CONDITIONS CANNOT BE MAINTAINED AS SHOWN ABOVE, PROVIDE METHOD OF CONSTRUCTION FOR APPROVAL BY COUNTY ENGINEER OR DESIGNEE PRIOR TO INSTALLATION.
3. SHORING MAY BE REQUIRED IN ACCORDANCE WITH ALL INDUSTRY STANDARDS.
4. MINIMUM TRENCH WIDTH "W" = PIPE O.D. PLUS 2'-0" ON EACH SIDE.

Ⓐ MATCH EXISTING GROUND WITH SMOOTH, LEVEL TRANSITION.

Ⓑ UNPAVED ROADS IN ROW SHALL CONSIST OF 8" LIMEROCK BASE OR COQUINA SHELL IN A MINIMUM OF (2) 4" LIFTS WITH A MINIMUM LBR OF 100 COMPACTED TO 98% MAXIMUM DENSITY PER A.A.S.H.T.O. T-180. WHEN INSTALLATION IS NOT LOCATED IN A TRAVEL LANE, RESTORATION SHALL BE ACCORDING TO Ⓒ BELOW WITH 500 LAID WITHIN THREE DAYS OF FINAL GRADING.

Ⓒ A.A.S.H.T.O. TYPE A-3 MATERIAL IN MAXIMUM 6" LIFTS COMPACTED AT 98% A.A.S.H.T.O. T-180.

Ⓓ A.A.S.H.T.O. TYPE A-3 MATERIAL IN MAXIMUM 4" LIFTS COMPACTED AT 98% A.A.S.H.T.O. T-180. EXCAVATABLE FLOWABLE FILL IS ALLOWED WITH PRIOR APPROVAL OF PROPOSED MATERIAL STRENGTH BY COUNTY ENGINEER OR DESIGNEE.

Ⓔ ¾" DIAMETER, WASHED BEDDING ROCK OR PEA ROCK WHERE UNSUITABLE BEDDING MATERIAL EXISTS OR DEWATERING IS REQUIRED. SUITABLE MATERIAL IS DEFINED AS STABLE GRANULAR MATERIAL FREE OF ROCK FORMATION, OTHER FOREIGN FORMATIONS AND CONSTRUCTED TO UNIFORM GRADE AND LINE.

LAND DEVELOPMENT DESIGN STANDARDS AND SPECIFICATIONS		TRENCH (UNPAVED AREAS)
DATE:	11/1/2016	James William Ennis, P.E. Florida Reg. No. 71938 Public Works – County Engineer
INDEX:	2	

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4	07/09/2021	SJRWMD RAI
3	06/26/2021	PER CITY OF SEBASTIAN
2	05/14/2021	SJRWMD RAI
1	09/29/2020	PER CITY OF SEBASTIAN
△	08-19-2020	DATE ISSUED
	20-0089	JOB NO.
	TH	DESIGNED
	WDO	DRAWN
	JUNE 2020	DATE
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PAVING, GRADING, DRAINAGE, AND EROSION CONTROL DETAILS

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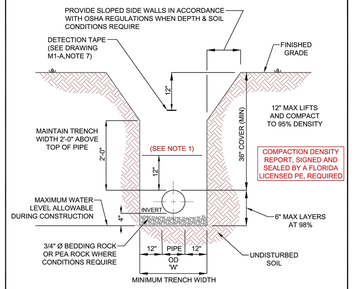


ELEVATION

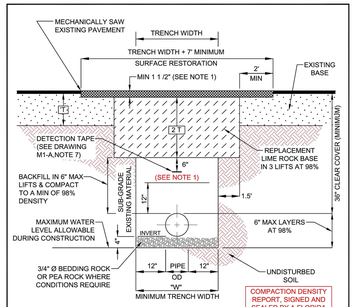
SEE TRENCH DETAIL NOTES DRAWING M-1A

NOTES:
1. MECHANICAL COMPACTION NOT ALLOWED BELOW THIS LEVEL OTHER THAN HAND VIBRATORY MEANS.
2. ALL RESTORATION IN EASEMENTS OR RIGHT-OF-WAYS OR WHEN REQUIRED BY OTHER JURISDICTIONAL AGENCIES SHALL CONFORM TO IRCDUS SPECIFICATIONS OR THE OTHER JURISDICTIONAL AGENCY SPECIFICATION, WHICHEVER IS MORE STRINGENT.

INDIAN RIVER COUNTY DEPARTMENT OF UTILITY SERVICES	TRENCH DETAIL (UNPAVED EASEMENT)	DRAWING NO. M-1
	MAY 2019	

NOTES:
1. WHERE SOIL CONDITIONS CANNOT BE MAINTAINED AS SHOWN ABOVE, PROVIDE METHOD OF CONSTRUCTION TO IRCDUS FOR APPROVAL.
2. SHEETING WILL BE REQUIRED AS DETERMINED IN THE FIELD IN ACCORDANCE WITH OSHA REGULATIONS.
3. COMPACTION PERCENTAGES SHOWN REFER TO AASHTO T-180 MODIFIED PROCTOR METHOD.
4. MECHANICAL COMPACTION NOT ALLOWED BELOW THIS LEVEL OTHER THAN HAND VIBRATORY MEANS.
5. COMPACTION REPORTS REQUIRED.
6. MINIMUM TRENCH WIDTH "W" = PIPE O.D. PLUS 2'-0".
7. 2" DETECTION TAPE WITH METALLIC BACKING TO BE INSTALLED OVER MAIN 6" BELOW BOTTOM OF BASE COURSE. TAPE TO BE MARKED "CAUTION-WATER LINE BELOW", "CAUTION-FORCE MAIN BELOW", OR "CAUTION-REUSE MAIN BELOW". TRACE WIRE SHALL BE USED CONTINUOUSLY ON ALL PIPE. SEE DRAWING, No. M-14, TRACE WIRE DETAIL.
8. ALL RESTORATION IN EASEMENTS OR RIGHT-OF-WAYS OR WHEN REQUIRED BY OTHER JURISDICTIONAL AGENCIES SHALL CONFORM TO IRCDUS SPECIFICATIONS OR THE OTHER JURISDICTIONAL AGENCY SPECIFICATION, WHICHEVER IS MORE STRINGENT.
9. ALL PIPE TO BE LOCATED A MINIMUM OF 5' O.C. (TYPICAL) FROM EDGE OF PAVEMENT.
10. EXCAVATABLE FLOWABLE FILL IS ALLOWED WITH PRIOR APPROVAL OF PROPOSED MATERIAL STRENGTH BY COUNTY PUBLIC WORKS ENGINEER OR DESIGNEE.

INDIAN RIVER COUNTY DEPARTMENT OF UTILITY SERVICES	TRENCH DETAIL NOTES	DRAWING NO. M-1 A
	MAY 2019	

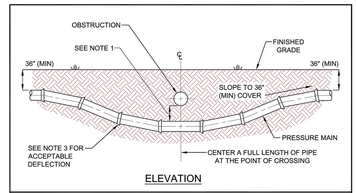


ELEVATION

SEE DRAWING M-1A,TRENCH DETAIL NOTES

NOTES:
1. MECHANICAL COMPACTION NOT ALLOWED BELOW THIS LEVEL OTHER THAN HAND VIBRATORY MEANS.
2. NEW SURFACE MATERIALS SHALL BE CONSISTENT IN DEPTH WITH EXISTING MATERIALS AND SHALL HAVE LAPPED JOINTS, (1 1/2" MINIMUM THICKNESS). PAVEMENT MATERIAL TO BE SPECIFIED.
3. MINIMUM TRENCH WIDTH "W" = PIPE OD PLUS 2'-0".
4. EXCAVATABLE FLOWABLE FILL IS ALLOWED WITH PRIOR APPROVAL OF PROPOSED MATERIAL STRENGTH BY COUNTY PUBLIC WORKS ENGINEER OR DESIGNEE.

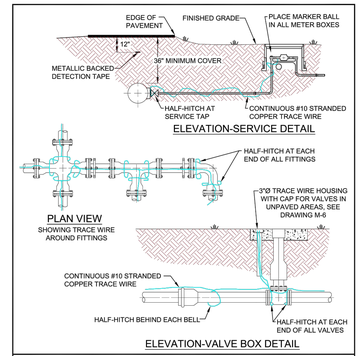
INDIAN RIVER COUNTY DEPARTMENT OF UTILITY SERVICES	TRENCH DETAIL (PAVED AREAS & SHOULDERS)	DRAWING NO. M-2
	MAY 2019	



ELEVATION

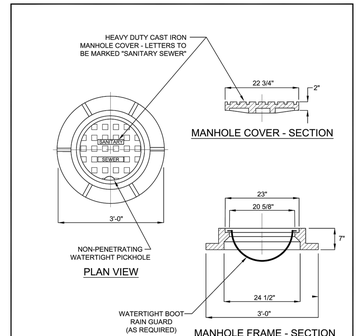
NOTES:
1. NEW OR RELOCATED, UNDERGROUND WATER MAINS CROSSING ANY EXISTING OR PROPOSED GRAVITY, VACUUM TYPE SANITARY SEWER, STORM SEWER, OR PRESSURE TYPE SANITARY SEWER, WASTEWATER, STORMWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER SHALL BE LAID SO THE WATER MAIN IS AT LEAST 6", AND PREFERABLY 12", ABOVE OR A MINIMUM OF 12 INCHES BELOW THE OTHER PIPELINE. IT IS PREFERABLE TO LAY THE WATER MAIN ABOVE THE OTHER PIPELINE IF 36" MINIMUM COVER CAN BE MAINTAINED ABOVE THE WATER MAIN AND 6" OF SEPARATION BETWEEN THE WATER MAIN AND THE OTHER PIPELINE.
2. AT UTILITY CROSSINGS, ONE FULL LENGTH OF WATER MAIN PIPE SHALL BE CENTERED ABOVE OR BELOW THE OTHER PIPELINE SO THE WATER MAIN JOINTS WILL BE FAR AS POSSIBLE FROM THE OTHER PIPELINE. ALTERNATIVELY, AT SUCH CROSSINGS, THE PIPES SHALL BE ARRANGED SO THAT ALL WATER MAIN JOINTS ARE AT LEAST THREE FEET FROM ALL JOINTS IN VACUUM TYPE SANITARY SEWERS, STORM SEWERS, STORMWATER FORCE MAINS, OR PIPELINES CONVEYING RECLAIMED WATER, AND AT LEAST SIX FEET FROM ALL JOINTS IN GRAVITY OR PRESSURE TYPE SANITARY SEWERS, WASTEWATER FORCE MAINS, OR PIPELINES CONVEYING RECLAIMED WATER.
3. CONSTRUCT STANDARD CROSSING NOT TO EXCEED 75% OF THE MANUFACTURER'S MAXIMUM JOINT DEFLECTION.
4. OTHER METHODS OF RESTRAINT MAY BE USED AS APPROVED BY IRCDUS IN LIEU OF DEFLECTING THE PIPE AS SHOWN ABOVE.
5. TRACER WIRE SHALL BE INSTALLED ABOVE THE PIPE. (SEE DRAWING, No. M-14)
6. ALL WATER AND SEWER PIPING SHALL BE LOCATED A MINIMUM HORIZONTAL SEPARATION EQUAL TO THE DEPTH OF THE PIPE PLUS THE DIAMETER OF THE PIPE FROM ANY PERMANENT ABOVE GROUND STRUCTURES (I.E. WALLS, TREES, TRANSFORMER PADS, ETC.) AND A MINIMUM HORIZONTAL SEPARATION EQUAL TO FOUR (4) FEET FROM ANY UNDERGROUND UTILITIES (I.E. GAS MAINS, TELEPHONE LINES, CABLE LINES, IRRIGATION MAINS, ETC.)
7. IRCDUS MAY REQUIRE AIR RELEASE VALVES ON EACH SIDE OF A UTILITY CROSSING.

INDIAN RIVER COUNTY DEPARTMENT OF UTILITY SERVICES	UTILITY CROSSINGS	DRAWING NO. M-4
	MAY 2019	



NOTES:
1. TRACE WIRE IS REQUIRED ON ALL PIPES REGARDLESS OF MATERIAL.
2. INCLUDE ALL COST OF MATERIAL AND LABOR TO INSTALL TRACE WIRE IN PRICE OF PIPE.
3. CONTRACTOR IS RESPONSIBLE FOR CONTINUITY THROUGHOUT ENTIRE PROJECT OF ALL TRACE WIRE.
4. ALL CONNECTIONS SHALL BE MADE WITH DIRECT BURY CONNECTORS.
5. ALL MATERIALS ARE TO BE PER IRCDUS APPROVED MANUFACTURERS' PRODUCT LIST.
6. COLOR OF TRACE WIRE SHALL BE: BLUE FOR WATER, GREEN FOR SEWER, AND PURPLE FOR RECLAIMED WATER.

INDIAN RIVER COUNTY DEPARTMENT OF UTILITY SERVICES	TRACE WIRE DETAILS	DRAWING NO. M-14
	MAY 2019	



NOTES:
1. A WATERTIGHT BOOT RAIN GUARD SHALL BE PROVIDED FOR ALL FRAME/COVERS AND BE APPROVED BY IRCDUS.
2. ALL MATERIALS SHALL BE PER IRCDUS APPROVED MANUFACTURERS' PRODUCT LIST.
3. A U.S. FOUNDRY 420 RING AND "C" COVER IS SHOWN IN ABOVE DRAWING.

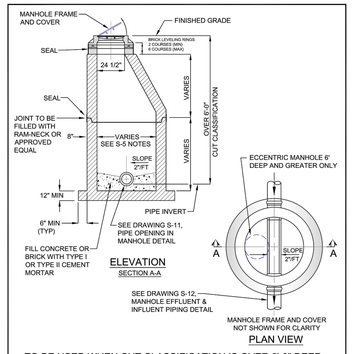
INDIAN RIVER COUNTY DEPARTMENT OF UTILITY SERVICES	STANDARD MANHOLE CASTING	DRAWING NO. S-4
	MAY 2019	

MANHOLE NOTES

1. REINFORCING AREA OF 0.20 SQ. IN./FT. FOR WALL SECTION, MINIMUM TO MEET OR EXCEED A.S.T.M. A-185.
2. ALL CEMENT MORTAR TO BE TYPE I OR TYPE II.
3. ALL CEMENT FOR PRECAST MANHOLES TO BE MINIMUM 3,000 P.S.I. TO MEET OR EXCEED A.S.T.M. C-478.
4. BOTTOMS AND CHANNELS OF ALL MANHOLES TO BE A MINIMUM OF 2,5000 P.S.I. FILL CONCRETE SHALL BE FINISHED SMOOTH WITH STEEL TROWEL.
5. CONCRETE MANHOLES TO HAVE A MINIMUM WALL THICKNESS OF 8".
6. INSIDE AND OUTSIDE OF MANHOLE SHALL BE COATED WITH TWO COATS OF EW-1 WATER BASED EPOXY, BLACK, WITH THE IRCDUS INSPECTOR PRESENT.
7. CHANNELS TO BE FORMED IN ALL MANHOLES TO ACCEPT T.V.CAMERA.
8. ORIENT ECCENTRIC CONE AS REQUIRED BY IRCDUS INSPECTOR IN FIELD.
9. BOTTOM SECTION TO BE MONOLITHIC POUR EXCEPT WHERE DROP CONNECTION REQUIRED.
10. CONNECTIONS TO EXISTING MANHOLE AND LIFT STATION WET WELL STRUCTURES SHALL BE BY MEANS OF BORING A PENETRATION IN THE STRUCTURE, RATHER THAN PUNCHING. THE CONTRACTOR SHALL TAKE POSITIVE MEASURES TO PREVENT ANY CONCRETE OR CONSTRUCTION DEBRIS FROM ENTERING THE WASTEWATER SYSTEM.
11. BUOYANCY CALCULATIONS SHALL BE REQUIRED FOR ALL MANHOLES.
12. NO. 4Ø BARS, 9" O.C. REQUIRED EACH WAY IN SLAB (TOP AND BOTTOM).
13. 2 COURSES BRICK MINIMUM, 6 COURSES MAXIMUM REQUIRED BETWEEN ALL PRECAST MANHOLE TOPS AND CASINGS.
14. 3 /4" CRUSHED STONE FOUNDATION FOR A MINIMUM DEPTH OF 12" SHALL BE PROVIDED AS REQUIRED BY IRCDUS.
15. MANHOLE LID SHALL BE TRAFFIC BEARING (H-20 LOADING).
16. SEWER PIPE INVERTS AT BOTTOM OF MANHOLES SHALL HAVE AS INVERT ELEVATION DIFFERENTIAL OF 0.1 FEET FOR A CHANGE IN DIRECTION AND 0.05 FEET FOR A STRAIGHT RUN.
17. A WATERTIGHT RAIN GUARD BOOT, TO BE PER IRCDUS APPROVED MANUFACTURER'S PRODUCT LIST, SHALL BE PROVIDED FOR ALL MANHOLE FRAME/COVERS.
18. MATERIALS FOR LINING MANHOLES, WHERE REQUIRED, TO BE PER IRCDUS, APPROVED MANUFACTURER'S PRODUCT LIST. MANHOLE LINERS SHALL BE INSTALLED ON ALL MANHOLES RECEIVING PUMPED SEWAGE, PLUS 5 MANHOLES IN EACH DIRECTION. (AS DIRECTED BY IRCDUS.)
19. PUMP CUT MANHOLE SHALL BE LOCATED WITHIN 20' OF LIFT STATION AND CONSTRUCTED OUT OF RIGHT-OF-WAY.
20. ALL EXISTING MANHOLES, LIFT STATION WET WELLS, VALVE VAULTS, JOINTS AND COURSES OF BRICK SHALL BE SEALED.
21. SLOPES ON ALL CHANNEL BOTTOMS TO BE EQUAL TO SLOPES OF PIPE ENTERING AND EXITING MANHOLE.
22. DIAMETERS OF MANHOLES SHALL BE:

DEPTH OF MANHOLE	LESS THAN 10'	GREATER THAN 10'
DIAMETER	4'	5'

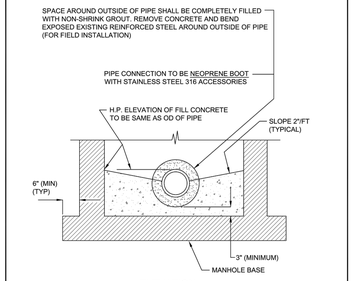
INDIAN RIVER COUNTY DEPARTMENT OF UTILITY SERVICES	MANHOLE NOTES	DRAWING NO. S-5
	MAY 2019	



TO BE USED WHEN CUT CLASSIFICATION IS OVER 6'-0" DEEP

NOTES:
1. SEE DRAWING, No. S-4, STANDARD, MANHOLE CASTING.
2. SEE DRAWING, No. S-5, MANHOLE NOTES.
3. SEE DRAWING, No. S-11, PIPE OPENING DETAIL.
4. SEE DRAWING, No. S-12, MANHOLE EFFLUENT AND INFLUENT DETAIL.
5. MANHOLE INSIDE DIAMETER (ID) VARIES DEPENDING ON DEPTH.
6. SEAL SHALL BE USED AT ALL JOINTS. SEE DRAWING No. S-5, NOTE 20.

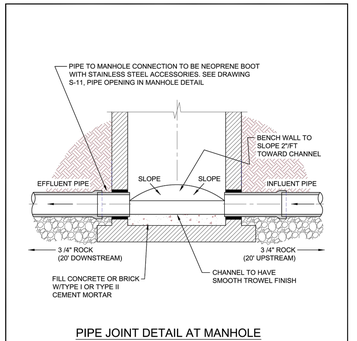
INDIAN RIVER COUNTY DEPARTMENT OF UTILITY SERVICES	MANHOLE STANDARD DEEP	DRAWING NO. S-8
	MAY 2019	



ELEVATION

NOTES:
1. SEE DRAWING, No. S-5, MANHOLE NOTES. NOTES 2, 4, 5, 7, 10, AND 16.
2. ALL MATERIALS ARE TO BE PER IRCDUS APPROVED MANUFACTURERS' PRODUCT LIST.

INDIAN RIVER COUNTY DEPARTMENT OF UTILITY SERVICES	PIPE OPENING IN MANHOLE DETAIL	DRAWING NO. S-11
	MAY 2019	



PIPE JOINT DETAIL AT MANHOLE

ELEVATION

NOTES:
1. PIPE JOINT DETAIL IS TYPICAL FOR ALL PIPE TO MANHOLE CONNECTIONS.
2. ALL MATERIALS ARE TO BE PER IRCDUS APPROVED MANUFACTURERS' PRODUCT LIST.
3. 3/4" ROCK SHALL BE USED AS BEDDING FOR 20' UPSTREAM AND 20' DOWNSTREAM OF MANHOLE.
4. SEE DRAWING, No. S-5, MANHOLE NOTES. NOTE 16.

INDIAN RIVER COUNTY DEPARTMENT OF UTILITY SERVICES	MANHOLE INFLUENT & EFFLUENT PIPING DETAIL	DRAWING NO. S-12
	MAY 2019	

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FL. P.E. #72460

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20-0089

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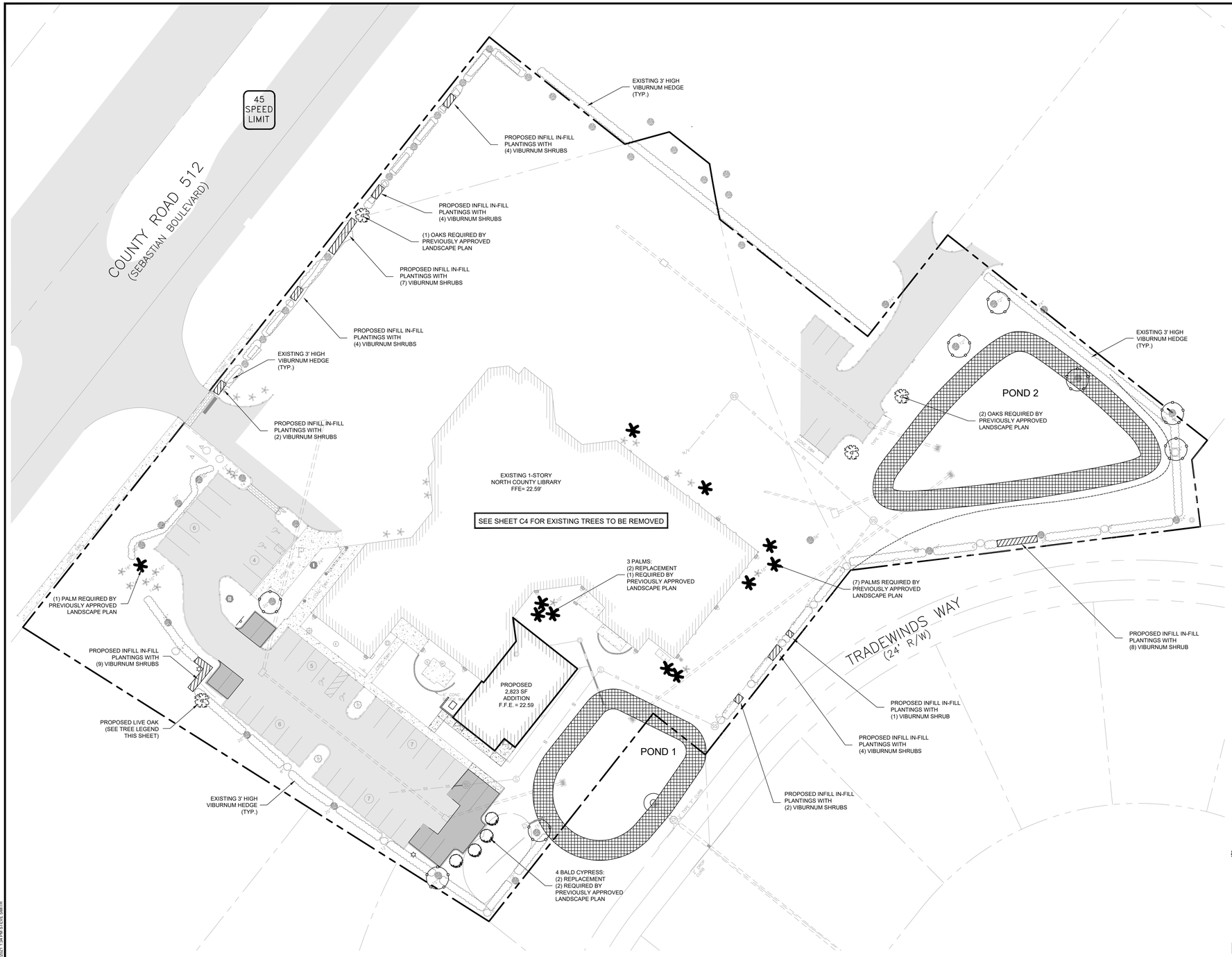


LANDSCAPE PLAN

GRAPHIC SCALE
30 0 15 30
(IN FEET)
1 inch = 30 ft.

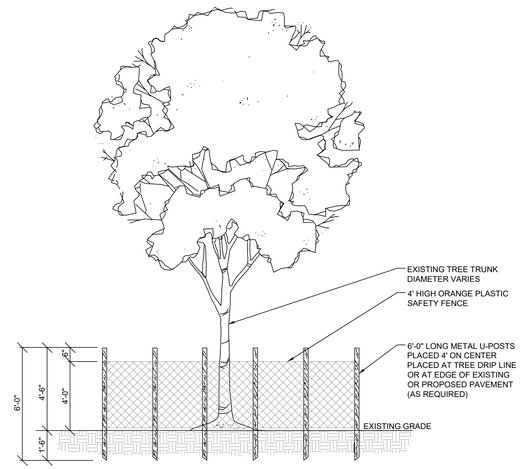
72 HOURS BEFORE DIGGING CALL TOLL FREE 811
Know what's below. Call before you dig.

SITE LEGEND

- EXISTING CONCRETE
- PROPOSED CONCRETE
- EXISTING ASPHALT
- PROPOSED ASPHALT

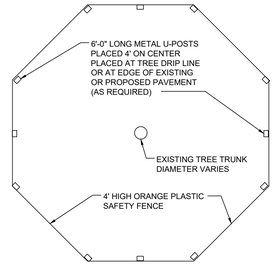
LANDSCAPE NOTES

1. POND BANKS AND ALL DISTURBED AREAS THAT WILL BE GRADED 6:1 OR MORE SHALL BE STABILIZED WITH BAHIA SOD WITHIN FOURTEEN DAYS (14) OF OF COMPLETION.
2. THE CONTRACTOR SHALL PROVIDE THE ENGINEER AND THE COUNTY DETAILS OF THE BACKFILL MATERIAL FOR THE SITE, INCLUDING SOURCE LOCATION AND PERMEABILITY RATE, PRIOR TO PLACEMENT ON THE SITE.



ELEVATION

TREE PROTECTION NOTES:
1. ALL TREES RETAINED ON A SITE SHALL BE PROTECTIVELY BARRICADED BEFORE AND DURING CONSTRUCTION ACTIVITIES.
2. UNDERGROUND UTILITY LINES SHALL BE ROUTED AROUND EXISTING TREES TO THE OUTSIDE OF THE DRIPLINE WHERE ABLE.
3. INSTALLATION OF FENCES AND WALLS SHALL TAKE INTO CONSIDERATION THE ROOT SYSTEMS OF EXISTING TREES.
4. FENCES/ BARRICADE SHALL BE INSTALLED AT PERIMETER OF ALL TREES OR GROUP OF TREES TO BE PRESERVED. FENCE SHALL BE MAINTAINED DURING CONSTRUCTION.



PLAN VIEW

TREE PROTECTION BARRIER DETAIL

NTS

TREES MISSING FROM PREVIOUS APPROVED PLAN

TREE COUNT	SPECIES	LOCATION
1	MAGNOLIA	CR 512 BUFFER
1	SABAL PALM	NW BUFFER
2	MAGNOLIA	END OF WEST PARKING AREA
1	SABAL PALM	NW BUFFER
1	SABAL PALM	SW CORNER OF BLDG.
1	SABAL PALM	SOUTH, MIDDLE OF BLDG
5	SABAL PALM	SE CORNERS OF BLDG

TREES REMOVED FOR THIS PROJECT

TREE COUNT	SPECIES	LOCATION
2	SABAL PALM	NEW ADDITION AREA
2	CYPRESS	NEW ADDITION AREA
1	MAGNOLIA	NEW ADDITION AREA

TREES PROPOSED FOR THIS PROJECT

TREE COUNT	SPECIES	LOCATION
4	CYPRESS	SEE LANDSCAPE PLAN
11	SABAL PALM	SEE LANDSCAPE PLAN
4	LIVE OAK	SEE LANDSCAPE PLAN

* SEE LANDSCAPE MATERIAL TABLE BELOW FOR PROPOSED TREES AND SHRUBS FOR THIS PROJET

LANDSCAPE LEGEND

- PROPOSED LIVE OAK (QUERCUS VIRGINIANA) MIN. 3" DBH, 12FT HT @ PLANTING
- PROPOSED BALD CYPRESS (TAXIDIUM DISTICHUM) MIN. 3" DBH, 12FT HT @ PLANTING
- PROPOSED SABAL PALM (SABAL PALMETTO) (MIN. 10FT CLEAR TRUNK @ PLANTING)
- = EX. CYPRESS TREE (SIZE AS NOTED)
- = EX. MAGNOLIA TREE (SIZE AS NOTED)
- = EX. MISCELLANEOUS TREE (SIZE AS NOTED)
- PROPOSED BAHIA SOD ON POND BANKS
- = EX. MYRTLE TREE (SIZE AS NOTED)
- = EX. OAK TREE (SIZE AS NOTED)
- = EX. PALM TREE (SIZE AS NOTED)
- = EX. TREE STUMP (SIZE AS NOTED)
- EXISTING 3FT HIGH VIBURNUM HEDGE LINE
- PROPOSED IN-FILL VIBURNUM HEDGE MIN. 36" HT @ PLANTING (SEE PLAN FOR QUANTITY)
- TREE PROTECTION FENCE (SEE DETAIL THIS SHEET)

LANDSCAPE MATERIAL SCHEDULE

	QTY	BOTANICAL NAME	COMMON NAME	SIZE	HGT	OTHER	NATIVE	DROUGHT TOLEREANCE	MISCELLANEOUS
TREES									
	4	Quercus virginiana	Live Oak	3" CAL	12'-0"	5' SPREAD	YES	HIGH	
	4	Taxodium ascendens	Pond Cypress	2"CAL	12'-0"	5' SPREAD	YES	HIGH	
PALMS									
	11	Sabal palmetto	Cabbage Palm	-	10'-12'	6' CLR. TRUNK HURRICANE CUT	YES	HIGH	STAGGER HEIGHTS IN GROUPS OF 3 OR MORE.
SHRUBS									
	46	Viburnum obovatum	Walter Viburnum	-	-	24"HT, 24" O.C.	YES	HIGH	INFILL AS DEPICTED ON PLAN

ALL ELEVATIONS NAVD 1988

	DATE	REVISIONS
8		
7		
6	09/16/2021	ARCH. ADDED AC PAD
5	08/05/2021	IRC BUILDING DEPT.
4	07/09/2021	SJRWMD RAI
3	06/28/2021	PER CITY OF SEBASTIAN
2	05/14/2021	SJRWMD RAI
1	09/29/2020	PER CITY OF SEBASTIAN

JOB NO.	20-0089
DESIGNED	TH
DRAWN	WDO
DATE	JUNE 2020
CHECKED	AS
DATE ISSUED	09-19-2020

MBV ENGINEERING, INC.
MOIA, BOWLES, VILLAMIZAR & ASSOCIATES CONSULTING ENGINEERING CA #3728
1833 - 20TH STREET
VERO BEACH, FL 32960
TX. (772) 778-7317
MELBOURNE, FL. PH (321) 253-1510
FT. PIERCE, FL., PH (772) 468-9005

LANDSCAPE PLAN

NORTH COUNTY LIBRARY EXPANSION

CITY OF SEBASTIAN FLORIDA

AARON G. STANTON LICENSE No. 72460 STATE OF FLORIDA PROFESSIONAL ENGINEER

AARON G. STANTON
FL. P.E. #72460

SHEET
C12

20-0089

09/16/2021 BID SET

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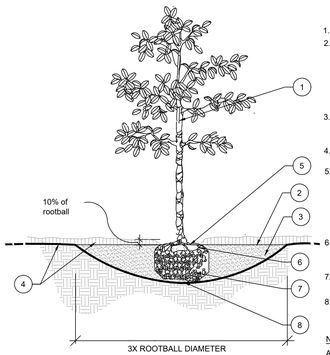


1. TRUNK
2. 3" MINIMUM OF MULCH AS SPECIFIED. WHERE TREES ARE PLACED IN SOD, MULCH RING FOR TREES COVER ROOTBALL SIDES AND EXTEND 18" BEYOND ON ALL SIDES. NO MULCH SHALL BE PLACED OVER TRUNK.
3. SHALLOW/ WIDE PLANT HOLE; TOP SHALL BE 3X THE SIZE OF ROOTBALL.
4. FINISHED GRADE - LANDSCAPE SOIL
5. FIND TOP-MOST ROOT ON ROOTBALL; POSITION ROOTBALL SO THIS TOP ROOT IS 1-2" ABOVE LANDSCAPE SOIL. (APPROX. 10% OF ROOTBALL SHALL BE ABOVE LANDSCAPE SOIL)
6. B & B OR CONTAINER (SEE SPECIFICATIONS FOR ROOT BALL REQUIREMENTS).
7. REMOVE ALL SYNTHETIC MATERIALS FROM ROOTBALL.
8. ROOTBALLS SHALL BE PLACED ON UNDISTURBED SOIL TO PREVENT SETTLING.

NOTES:

A. CONTRACTOR SHALL ASSURE PERCOLATION OF ALL PLANTING PITS PRIOR TO INSTALLATION.
B. FINAL TREE STAKING DETAILS AND PLACEMENT TO BE APPROVED BY OWNER.
C. SEE PRE-APPROVED STAKING METHODS, THIS SHEET

* ALL TREES SHALL BE PLUMB VERTICALLY WITHIN A TOLERANCE OF THREE DEGREES, UNLESS OTHERWISE DIRECTED BY OWNER'S REPRESENTATIVE.

TREE PLANTING

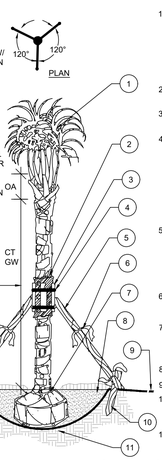
SECTION NTS

A. WASHINGTONIA PALMS SIMILAR W/ BOOTS INTACT.
B. SEE PLANS AND SPECS. FOR PALMS W/ BOOTS TO REMAIN ON TRUNK.
C. FINAL TREE STAKING DETAILS AND PLACEMENT TO BE APPROVED BY OWNER.
D. CONTRACTOR SHALL ASSURE PERCOLATION OF ALL PLANTING PITS PRIOR TO INSTALLATION - REFER TO POOR DRAINAGE CONDITION DETAIL.

QA=OVERALL PALM HEIGHT (MEASURED TO TOP OF BUD)

CT=CLEAR TRUNK (MEASURED TO BOTTOM OF LEAF SHEATHS)

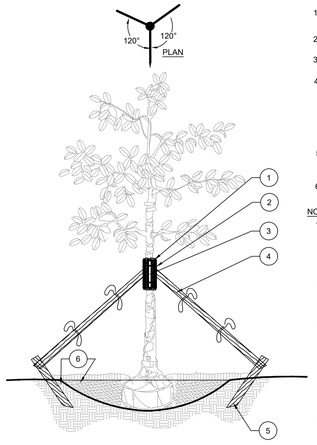
GW=GRAY WOOD (MEASURED TO TOP OF HARDENED TRUNK)



1. MINIMUM OF NINE (9) GOOD PALM FRONDS; PRUNE AND TIE FRONDS WITH HEMP TWINE. SABAL PALMS TO BE SELECTIVELY "HURRICANE CUT", LEAVING ONLY NEWLY-EMERGING GROWTH.
2. 5 LAYERS OF BURLAP TO PROTECT TRUNK.
3. FIVE (5) 18"L, 2X4 WOOD BATTENS. UNTREATED, #2
4. SECURE BATTENS WITH TWO (2) 3/4" CARBON STEEL BANDS TO HOLD BATTENS IN PLACE. NO NAILS SHALL BE DRIVEN INTO PALM. HEIGHT OF BATTENS SHALL BE LOCATED PROPORTIONATELY TO THE HEIGHT OF THE PALM FOR ADEQUATE BRACING.
5. THREE (3) 8'L 2X4 SUPPORTS. NAIL (DRILL AND NAIL IF NECESSARY) TO BATTENS AND 2" X 4" STAKES. PALMS SHALL BE PLUMB VERTICALLY UNLESS OTHERWISE NOTED.
6. PROVIDE FLAGGING AT MIDPOINT AND BASE OF SUPPORTS.
7. TOP-MOST ROOT SHALL BE VISIBLE AT THE SURFACE OF THE ROOTBALL, SLIGHTLY ABOVE SURROUNDING GRADE.
8. 3" SPECIFIED MULCH
9. FINISH GRADE
10. 24"L (MIN.) 2X4 P.T. WOOD STAKES, NAIL TO SUPPORT POLES
11. PREPARED PLANTING SOIL AS SPECIFIED

PALM PLANTING AND STAKING

SECTION NTS



1. FIVE (5) LAYERS OF BURLAP TO PROTECT TRUNK
2. TWO STEEL BANDS TO SECURE BATTENS
3. FIVE 2 X 4 X 18"L WOOD BATTENS
4. THREE (3) 2" X 8" LODGE POLES. DRILL, USING GALVANIZED SCREWS, TO BATTENS AND 2" X 4" STAKES. NO SCREWS SHALL PENETRATE TREE. FLAG AT MIDPOINT AND AT BASE.
5. 2" x 4" x 3' (MIN), P.T. WOOD STAKES BURIED 3" BELOW FINISHED GRADE.
6. FINISHED GRADE (SEE GRADING PLAN)

NOTES:

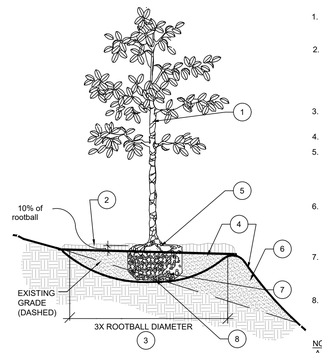
A. ALL TREES SHALL BE PLUMB VERTICALLY WITHIN A TOLERANCE OF THREE DEGREES, UNLESS OTHERWISE DIRECTED BY OWNER'S REPRESENTATIVE.
B. FINAL TREE STAKING DETAILS AND PLACEMENT TO BE APPROVED BY OWNER.
C. ALTERNATE TREE ANCHORING SYSTEMS MAY BE SUBSTITUTED FOR WOOD STAKING SYSTEM UPON APPROVAL BY OWNER OR OWNER'S REPRESENTATIVE

PRE-APPROVED SYSTEMS:
*BROOKS TREE BRACING
*ARBOR TIE TREE BRACING

D. RUBBER HOSE/WIRE SYSTEMS ARE NOT ALLOWED.

LARGE TREE STAKING - 100 GAL + OR B&B 4" +

SECTION NTS



1. TREES, PALMS, AND LARGE SHRUBS (15 GAL OR GREATER) SHALL BE PLANTED IN SIMILAR MANNER
2. 3" MINIMUM OF MULCH AS SPECIFIED. WHERE TREES ARE PLACED IN SOD, MULCH RING FOR TREES COVER ROOTBALL SIDES AND EXTEND 18" BEYOND ON ALL SIDES. NO MULCH SHALL BE PLACED OVER TRUNK.
3. SHALLOW/ WIDE PLANT HOLE; TOP SHALL BE 3X THE SIZE OF ROOTBALL.
4. FINISHED GRADE - LANDSCAPE SOIL
5. FIND TOP-MOST ROOT ON ROOTBALL; POSITION ROOTBALL SO THIS TOP ROOT IS 1-2" ABOVE LANDSCAPE SOIL. (APPROX. 10% OF ROOTBALL SHALL BE ABOVE LANDSCAPE SOIL)
6. BERM SOIL SO THAT TOP OF BERM IS JUST BELOW THE TOP 10% OF THE TOP OF THE ROOTBALL. SLOPE DOWNHILL PORTION OF BERM AS REQUIRED TO MEET EXISTING GRADE.
7. B & B OR CONTAINER REMOVE ALL SYNTHETIC MATERIALS FROM ROOTBALL. (SEE SPECIFICATIONS FOR OTHER ROOT BALL REQUIREMENTS)
8. ROOTBALLS SHALL BE PLACED ON UNDISTURBED SOIL TO PREVENT SETTLING.

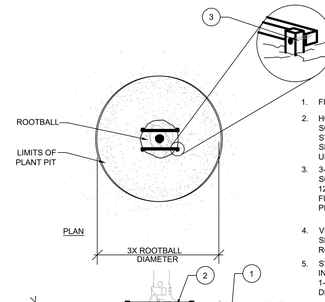
NOTES:

A. CONTRACTOR SHALL ASSURE PERCOLATION OF ALL PLANTING PITS PRIOR TO INSTALLATION.
B. FINAL TREE STAKING DETAILS AND PLACEMENT TO BE APPROVED BY OWNER.
C. SEE PRE-APPROVED STAKING METHODS, THIS SHEET

* ALL TREES SHALL BE PLUMB VERTICALLY WITHIN A TOLERANCE OF THREE DEGREES, UNLESS OTHERWISE DIRECTED BY OWNER'S REPRESENTATIVE.

PLANTING ON A SLOPE

SECTION NTS



1. FINISH GRADE
2. HORIZONTAL 2X2 SCREWED TO 2X2 STAKE. ALL WOOD SHALL BE #2 UNTREATED.
3. 3-1/2" DRYWALL SCREW, THREAD SIZE 12, SHARP POINT, FULL THREAD, BLACK PHOSPHATE FINISH
4. VERTICAL STAKES SHALL ABUT SIDE OF ROOTBALL
5. STAKES TO EXTEND INTO NATIVE SOIL BY 1-1/2 X THE ROOTBALL DEPTH MIN.

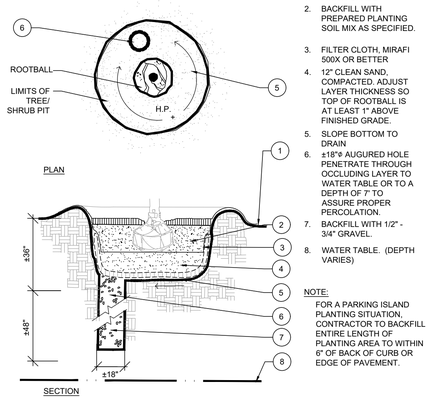
NOTE:

IF SPATIAL REQUIREMENTS PRECLUDE STAKING WITH THIS METHOD, SUBMIT ALTERNATE FOR LANDSCAPE ARCHITECT'S APPROVAL PRIOR TO INSTALLING PLANT.

SECTION

STAKING - UP TO 65 GAL. OR B&B TO 3-1/2" CAL.

PLAN/SECTION NTS



1. FINISH GRADE
2. BACKFILL WITH PREPARED PLANTING SOIL MIX AS SPECIFIED.
3. FILTER CLOTH, MIRAFI 500X OR BETTER
4. 12" CLEAN SAND, COMPACTED. ADJUST LAYER THICKNESS SO TOP OF ROOTBALL IS AT LEAST 1" ABOVE FINISHED GRADE.
5. SLOPE BOTTOM TO DRAIN
6. ±18"Ø AUGURED HOLE PENETRATE THROUGH OCCLUDING LAYER TO WATER TABLE OR TO A DEPTH OF 7' TO ASSURE PROPER PERCOLATION.
7. BACKFILL WITH 1/2" - 3/4" GRAVEL.
8. WATER TABLE. (DEPTH VARIES)

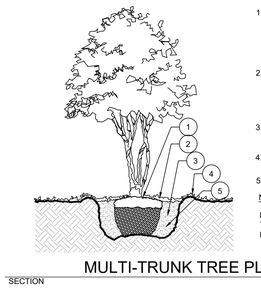
NOTE:

FOR A PARKING ISLAND PLANTING SITUATION, CONTRACTOR TO BACKFILL ENTIRE LENGTH OF PLANTING AREA TO WITHIN 6" OF BACK OF CURB OR EDGE OF PAVEMENT.

SECTION

POOR DRAINAGE CONDITION

PLAN/SECTION NTS



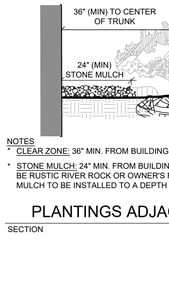
1. BASE OF TREE SHALL BE PLANTED SLIGHTLY ABOVE ADJACENT FINISH GRADE. REMOVE ALL TWINE & STRAPS & CUT BURLAP FROM TOP 1/3 OF ROOTBALL. NO SYNTHETIC BURLAP WILL BE ACCEPTED.
2. 3" MINIMUM OF MULCH AS SPECIFIED. WHERE TREES ARE PLACED IN SOD, MULCH RING FOR TREES SHALL BE 8' DIAMETER (MIN.) OR AS DIRECTED BY OWNER'S REPRESENTATIVE.
3. DIAMETER OF TREE PIT TO BE TWICE THE DIAMETER OF ROOTBALL-ROUGHEN SIDES OF TREE PIT.
4. 3" HIGH SOIL SAUCER/WATER RING AROUND TREE.
5. TOPSOIL MIX BACKFILL

NOTE:

IF SITE CONDITIONS REQUIRE GUYING OF THE TREE, GUYING DETAILS FROM SMALL TREE PLANTING SHALL BE USED.

MULTI-TRUNK TREE PLANTING DETAIL

SECTION NTS



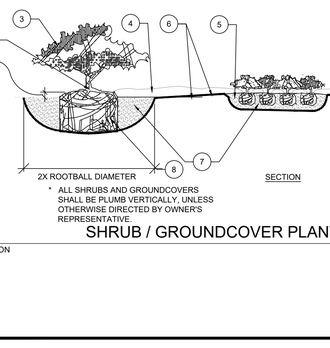
NOTES

* CLEAR ZONE: 36" MIN. FROM BUILDING TO CENTER OF NEAREST SHRUB.

* STONE MULCH: 24" MIN. FROM BUILDING. INSTALL STONE MULCH. MULCH TYPE TO BE RUSTIC RIVER ROCK OR OWNER'S REPRESENTATIVE APPROVED EQUAL. STONE MULCH TO BE INSTALLED TO A DEPTH OF 4"-6" (MIN.)

PLANTINGS ADJACENT TO BUILDINGS

SECTION NTS

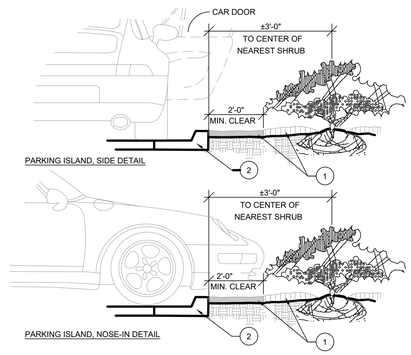


* ALL SHRUBS AND GROUNDCOVERS SHALL BE PLUMB VERTICALLY, UNLESS OTHERWISE DIRECTED BY OWNER'S REPRESENTATIVE.

1. FIND POINT WHERE TOPMOST ROOT EMERGES FROM TRUNK WITHIN 2" OF SURFACE. CLEAR EXCESS SOIL IF NECESSARY.
2. TOP 10% OF SHRUB AND GROUNDCOVER ROOTBALLS TO BE PLANTED ABOVE THE LANDSCAPE GRADE. DO NOT COVER EXPOSED 10% ON SIDES WITH SOIL.
3. PRUNE ALL LIKE SHRUBS WITHIN A PLANTED MASS TO ACHIEVE A UNIFORM MASS/HEIGHT.
4. 3" MINIMUM MULCH AS SPECIFIED - DO NOT COVER ENTIRE SHRUB ROOTBALL OR CREATE 'WATER RINGS' ONLY COVER SIDES OF ROOTBALL WITH MULCH
5. EXCAVATE ENTIRE BED SPECIFIED FOR GROUNDCOVER BED.
6. FINISHED GRADE (SEE GRADING PLAN).
7. PREPARED PLANTING SOIL AS SPECIFIED. NOTE: WHEN GROUND- COVERS AND SHRUBS USED IN MASSES, ENTIRE BED TO BE AMENDED WITH PLANTING SOIL MIX AS SPECIFIED.
8. SCARIFY ROOTBALL SIDES AND BOTTOM.

SHRUB / GROUNDCOVER PLANTING

PLAN/SECTION NTS



1. INSTALL CONTINUOUS MULCH BED ADJACENT TO PARKING SPACES AS SHOWN. MULCH SHALL BE MIN. 3" DEEP. NO POP-UP IRRIGATION HEADS SHALL BE LOCATED WITHIN 24" OF A PARKING SPACE ON ANY SIDE

2. CURB OR PARKING LOT EDGE, BY OTHERS

PARKING SPACE/CURB PLANTING

SECTION NTS

NOTES:

SPECIFIED TREE ROOT BARRIERS ARE A MECHANICAL BARRIER AND ROOT DEFLECTOR TO PREVENT TREE ROOTS FROM DAMAGING HARD- SCAPES AND LANDSCAPES. ASSEMBLED IN 2' LONG MODULES TO CREATE VARYING SIZES OF CYLINDERS FOR SURROUNDING ROOT BALLS (SURROUND PLANTING STYLE) OR FOR LINEAR APPLICATIONS DIRECTLY BESIDE A HARDSCAPE ADJACENT TO ONE SIDE OF THE TREES (LINEAR PLANTING STYLE).

A. MATERIALS

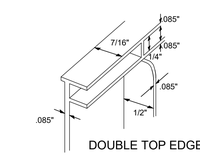
1. THE CONTRACTOR SHALL FURNISH AND INSTALL TREE ROOT BARRIERS AS SPECIFIED. THE TREE ROOT BARRIERS SHALL BE PRODUCT # UB 24-2 AS MANUFACTURED BY DEEP ROOT PARTNERS, L.P. 345 LORTON AVE. #103, BURLINGAME, CA (800-458-7668), OR APPROVED EQUAL. THE BARRIER SHALL BE BLACK, INJECTION MOLDED PANELS, OF 0.085" WALL THICKNESS IN MODULES 24" LONG BY 24" DEEP; MANUFACTURED WITH A MINIMUM 50% POST CONSUMER RECYCLED POLYPROPYLENE PLASTIC WITH ADDED ULTRAVIOLET-INHIBITORS; RECYCLABLE. EACH PANEL SHALL HAVE:

B. CONSTRUCTION AND INSTALLATION

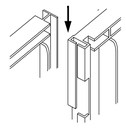
1. THE CONTRACTOR SHALL INSTALL THE TREE ROOT BARRIERS WITH THE NUMBER OF PANELS AND IN THE MANNER SHOWN ON THE DRAWINGS. THE VERTICAL ROOT DEFLECTING RIBS SHALL BE FACING INWARDS TO THE ROOT BALL AND THE TOP OF THE DOUBLE EDGE SHALL BE 1/2" ABOVE GRADE. EACH OF THE REQUIRED NUMBER OF PANELS SHALL BE CONNECTED TO FORM A CIRCLE AROUND THE ROOT BALL OR WHERE SPECIFIED JOINED IN A LINEAR FASHION AND PLACED ALONG THE ADJACENT HARDSCAPE.
ALL STREET TREES WITH TRUNKS CLOSER THAN 4 FT. TO PAVED SURFACES SHALL BE PLANTED WITH ROOT BARRIER BETWEEN THE ROOT BALL AND PAVING.
PLANTINGS WITHIN TREE WELLS REQUIRE ROOT BARRIERS ALONG ALL SIDES OF THE TREE WELL.
2. EXCAVATION AND SOIL PREPARATION SHALL CONFORM TO THE DRAWINGS
3. THE TREE ROOT BARRIERS SHALL BE BACKFILLED ON THE OUTSIDE WITH 3/4" TO 1 1/2" GRAVEL OR CRUSHED ROCK AS SHOWN ON THE DRAWINGS. NO GRAVEL BACKFILL IS REQUIRED FOR A LINEAR PLANTING

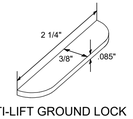
24" DEEPROOT TREE ROOT BARRIERS

SECTION NTS



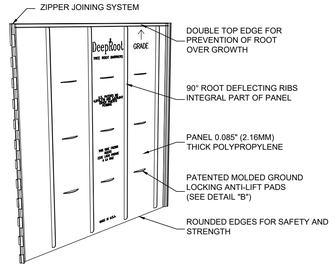
DOUBLE TOP EDGE

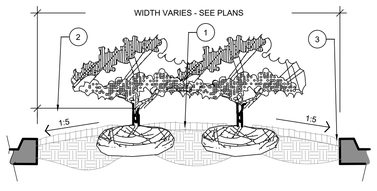




ANTI-LIFT GROUND LOCK

ZIPPER JOINING SYSTEM





PLANTER ISLAND NOTES

1. CROWN ISLANDS @ 5:1 SLOPES (OR AS SPECIFIED ON THE LANDSCAPE PLANS).
2. CLEAR ZONE: 36" MIN. FROM BACK OF CURB TO CENTER OF NEAREST SHRUB. CLEAR ZONE SHALL CONTAIN 3" CONTINUOUS MULCH OR TURF, SEE PLANS. SEE DETAIL 'I' FOR PLANTER MEDIANS ADJACENT TO PARKING SPACES.
3. 1" MIN VERTICAL CLEARANCE, TOP OF CURB TO TOP OF MULCH.

- EXCAVATE CONTINUOUS 36" DEEP (FROM TOP OF CURB) FOR ENTIRE LENGTH AND WIDTH OF ISLAND & BACKFILL WITH APPROVED PLANTING MIX.
- PROTECT AND RETAIN ALL CURBS AND BASE. COMPACTED SUBGRADE TO REMAIN FOR STRUCTURAL SUPPORT OF CURB SYSTEM (TYP).
- ALL ISLANDS SHALL UTILIZE POOR DRAINAGE DETAIL WHEN PERCOLATION RATES ARE 2" PER HOUR OR LESS.

PLANTED PARKING LOT ISLANDS / MEDIANS

SECTION

72 HOURS BEFORE DIGGING CALL TOLL FREE 811 Know what's below. Call before you dig.

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8			
7			
6	ARCH. ADDED AC PAD	09/16/2021	
5	IRC BUILDING DEPT.	08/05/2021	
4	SI/RWMD RAI	07/09/2021	
3	PER CITY OF SEBASTIAN	06/26/2021	
2	SI/RWMD RAI	05/14/2021	
1	PER CITY OF SEBASTIAN	09/29/2020	
△	**REVISIONS**	**DATE**	

JOB NO.	20-0089
DESIGNED	TH
DRAWN	WDO
DATE	JUNE 2020
CHECKED	AS
DATE ISSUED	09-19-2020

MBV ENGINEERING, INC.
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LANDSCAPE DETAILS

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AARON G. STANTON
FL. P.E. #72460

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GENERAL LANDSCAPE SPECIFICATIONS AND NOTES

A. SCOPE OF WORK

1. THE WORK CONSISTS OF: FURNISHING ALL LABOR, MATERIALS, EQUIPMENT, TOOLS, TRANSPORTATION, AND ANY OTHER APPURTENANCES NECESSARY FOR THE COMPLETION OF THIS PROJECT AS SHOWN ON THE DRAWINGS, AS INCLUDED IN THE PLANT LIST, AND AS HEREIN SPECIFIED.
2. WORK SHALL INCLUDE MAINTENANCE AND WATERING OF ALL CONTRACT PLANTING AREAS UNTIL CERTIFICATION OF ACCEPTABILITY BY THE OWNER.

B. PROTECTION OF EXISTING STRUCTURES

ALL EXISTING BUILDINGS, WALKS, WALLS, PAVING, PIPING, OTHER SITE CONSTRUCTION ITEMS, AND PLANTING ALREADY COMPLETED OR ESTABLISHED SHALL BE PROTECTED FROM DAMAGE BY THE CONTRACTOR UNLESS OTHERWISE SPECIFIED. ALL DAMAGE RESULTING FROM NEGLIGENCE SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE OWNER, AT NO COST TO THE OWNER.

C. PROTECTION OF EXISTING PLANT MATERIALS OUTSIDE LIMIT OF WORK

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL UNAUTHORIZED CUTTING OR DAMAGE TO TREES AND SHRUBS EXISTING OR OTHERWISE, CAUSED BY CARELESS EQUIPMENT OPERATION, MATERIAL STOCKPILING, ETC. THIS SHALL INCLUDE COMPACTION BY DRIVING OR PARKING INSIDE THE DRIP-LINE AND SPILLING OIL, GASOLINE, OR OTHER DELETERIOUS MATERIALS WITHIN THE DRIP-LINE. NO MATERIALS SHALL BE BURNED WHERE HEAT WILL DAMAGE ANY PLANT. EXISTING TREES KILLED OR DAMAGED SO THAT THEY ARE MISSHAPEN AND/ OR UNSIGHTLY SHALL BE REPLACED AT THE COST TO THE CONTRACTOR OF ONE HUNDRED DOLLARS ($100) PER CALIPER INCH ON AN ESCALATING SCALE WHICH ADDS AN ADDITIONAL TWENTY (20) PERCENT PER INCH OVER FOUR (4) INCHES CALIPER AS FIXED AND AGREED LIQUIDATED DAMAGES. CALIPER SHALL BE MEASURED SIX (6) INCHES ABOVE GROUND LEVEL FOR TREES UP TO AND INCLUDING FOUR (4) INCHES IN CALIPER AND TWELVE (12) INCHES ABOVE GROUND LEVEL FOR TREES OVER FOUR (4) INCHES IN CALIPER.

D. MATERIALS

1. GENERAL
   MATERIAL SAMPLES LISTED BELOW SHALL BE SUBMITTED FOR APPROVAL, ON THE SITE OR AS OTHERWISE DETERMINED BY THE OWNER. UPON SAMPLES' APPROVAL, DELIVERY OF MATERIALS MAY COMMENCE.

MATERIAL	SAMPLE SIZE
MULCH	ONE (1) CUBIC FOOT
TOPSOIL MIX	ONE (1) CUBIC FOOT
PLANTS	ONE (1) OF EACH VARIETY (OR TAGGED IN NURSERY)

2. PLANT MATERIALS
   a. PLANT SPECIES AND SIZE SHALL CONFORM TO THOSE INDICATED ON THE DRAWINGS. NOMENCLATURE SHALL CONFORM TO STANDARDIZED PLANT NAMES, 1942 EDITION. ALL NURSERY STOCK SHALL BE IN ACCORDANCE WITH GRADES AND STANDARDS FOR NURSERY PLANTS, LATEST EDITION, PUBLISHED BY THE FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES. ALL PLANTS SHALL BE FLORIDA GRADE NO. 1 OR BETTER AS DETERMINED BY THE FLORIDA DIVISION OF PLANT INDUSTRY. ALL PLANTS SHALL BE HEALTHY, VIGOROUS, SOUND, WELL-BRANCHED, AND FREE OF DISEASE AND INSECTS, INSECT EGGS AND LARVAE AND SHALL HAVE ADEQUATE ROOT SYSTEMS. TREES FOR PLANTING IN ROWS SHALL BE UNIFORM IN SIZE AND SHAPE. ALL MATERIALS SHALL BE SUBJECT TO APPROVAL BY THE OWNER. WHERE ANY REQUIREMENTS ARE OMITTED FROM THE PLANT LIST, THE PLANTS FURNISHED SHALL BE NORMAL FOR THE VARIETY. PLANTS SHALL BE PRUNED PRIOR TO DELIVERY ONLY WITH APPROVAL FROM OWNER OR OWNER'S REPRESENTATIVE. NO SUBSTITUTIONS SHALL BE MADE WITHOUT WRITTEN PERMISSION FROM THE OWNER'S REPRESENTATIVE.

   b. MEASUREMENTS: THE HEIGHT AND/OR WIDTH OF TREES SHALL BE MEASURED FROM THE GROUND OR ACROSS THE NORMAL SPREAD OF BRANCHES WITH THE PLANTS IN THEIR NORMAL POSITION. THIS MEASUREMENT SHALL NOT INCLUDE THE IMMEDIATE TERMINAL GROWTH. PLANTS LARGER IN SIZE THAN THOSE SPECIFIED IN THE PLANT LIST MAY BE USED IF APPROVED BY THE OWNER. IF THE USE OF LARGER PLANTS IS APPROVED, THE BALL OF EARTH OR SPREAD OF ROOTS SHALL BE INCREASED IN PROPORTION TO THE SIZE OF THE PLANT.

   c. INSPECTION: PLANTS SHALL BE SUBJECT TO INSPECTION AND APPROVAL AT THE PLACE OF GROWTH, OR UPON DELIVERY TO THE SITE, AS DETERMINED BY THE OWNER, FOR QUALITY, SIZE, AND VARIETY; SUCH APPROVAL SHALL NOT IMPAIR THE RIGHT OF INSPECTION AND REJECTION AT THE SITE DURING PROGRESS OF THE WORK OR AFTER COMPLETION FOR SIZE AND CONDITION OF ROOT BALLS OR ROOTS, LATENT DEFECTS OR INJURIES. REJECTED PLANTS SHALL BE REMOVED IMMEDIATELY FROM THE SITE. NOTICE REQUESTING INSPECTION SHALL BE SUBMITTED IN WRITING BY THE CONTRACTOR AT LEAST ONE (1) WEEK PRIOR TO ANTICIPATED DATE.

E. SOIL MIXTURE (PLANTING MEDIUM, PLANTING MIX, TOPSOIL MIX)

1. SOIL MIXTURE (PLANTING MEDIUM FOR PLANT PITS) SHALL CONSIST OF TWO PARTS OF TOPSOIL AND ONE PART SAND, AS DESCRIBED BELOW.
2. TOPSOIL FOR USE IN PREPARING SOIL MIXTURE FOR BACKFILLING PLANT PITS SHALL BE FERTILE, FRIABLE, AND OF A LOAMY CHARACTER. REASONABLY FREE OF SUBSOIL, CLAY LUMPS, BRUSH WEEDS AND OTHER LITTER: FREE OF ROOTS, STUMPS, STONES LARGER THAN 2" IN ANY DIRECTION, AND OTHER EXTRANEOUS OR TOXIC MATTER HARMFUL TO PLANT GROWTH. IT SHALL CONTAIN THREE (3) TO FIVE (5) PERCENT DECOMPOSED ORGANIC MATTER AND A PH BETWEEN 5.5 AND 7.0 - SUBMIT SAMPLE AND PH TESTING RESULTS FOR APPROVAL.
3. SAND SHALL BE COARSE, CLEAN, WELL-DRAINING, NATIVE SAND. CONTRACTOR SHALL SUBMIT RESULTS OF SOIL TESTS FOR TOPSOIL AND SAND PROPOSED FOR USE UNDER THIS CONTRACT FOR APPROVAL BY THE OWNER.
4. TREES SHALL BE PLANTED IN THE EXISTING NATIVE SOIL ON SITE, UNLESS DETERMINED TO BE UNSUITABLE - AT WHICH POINT THE CONTRACTOR SHALL CONTACT ENGINEER TO DISCUSS ALTERNATE RECOMMENDATION PRIOR TO PLANTING.
5. CONTRACTOR TO SUBMIT SAMPLES OF SOIL MIXTURE FOR OWNER'S REPRESENTATIVE APPROVAL PRIOR TO PLANT INSTALLATION OPERATIONS COMMENCE.

F. WATER

WATER NECESSARY FOR PLANTING AND MAINTENANCE SHALL BE OF SATISFACTORY QUALITY TO SUSTAIN AN ADEQUATE PLANT GROWTH AND SHALL NOT CONTAIN HARMFUL, NATURAL OR MAN-MADE ELEMENTS DETRIMENTAL TO PLANTS. WATER MEETING THE ABOVE STANDARD WILL BE OBTAINED ON THE SITE FROM THE OWNER, IF AVAILABLE, AND THE CONTRACTOR SHALL BE RESPONSIBLE TO MAKE ARRANGEMENTS FOR ITS USE BY HIS TANKS, HOSES, SPRINKLERS, ETC.. IF SUCH WATER IS NOT AVAILABLE AT THE SITE, THE CONTRACTOR SHALL PROVIDE SATISFACTORY WATER FROM SOURCES OFF THE SITE AT NO ADDITIONAL COST TO THE OWNER.
WATERING/IRRIGATION RESTRICTIONS MAY APPLY - REFER TO PROPERTY'S JURISDICTIONAL AUTHORITY.

G. FERTILIZER

CONTRACTOR SHALL PROVIDE FERTILIZER APPLICATION SCHEDULE TO OWNER, AS APPLICABLE TO SOIL TYPE, PLANT INSTALLATION TYPE, AND SITE'S PROPOSED USE. SUGGESTED FERTILIZER TYPES SHALL BE ORGANIC OR OTHERWISE NATURALLY-DERIVED. APPLICATION IS TO BE IN ACCORDANCE WITH FLORIDA GREEN INDUSTRIES BEST MANAGEMENT PRACTICES.
FERTILIZER RESTRICTIONS MAY APPLY - REFER TO PROPERTY'S JURISDICTIONAL AUTHORITY.

H. MULCH

MULCH MATERIAL SHALL BE MOISTENED AT THE TIME OF APPLICATION TO PREVENT WIND DISPLACEMENT, AND APPLIED AT A MINIMUM DEPTH OF 3 INCHES. CLEAR MULCH FROM EACH PLANT'S CROWN (BASE). SEE PLANT LIST FOR TYPE OF MATERIAL ("FLORIMULCH," EUCALYPTUS MULCH, OR PINE STRAW) AND GRADE.

I. DIGGING AND HANDLING

1. PROTECT ROOTS OR ROOT BALLS OF PLANTS AT ALL TIMES FROM SUN, DRYING WINDS, WATER AND FREEZING, AS NECESSARY UNTIL PLANTING. PLANT MATERIALS SHALL BE ADEQUATELY PACKED TO PREVENT DAMAGE DURING TRANSIT. TREES TRANSPORTED MORE THAN TEN (10) MILES OR WHICH ARE NOT PLANTED WITHIN THREE (3) DAYS OF DELIVERY TO SITE SHALL BE SPRAYED WITH AN ANTI-TRANSPIRANT PRODUCT ("WILTPRUF" OR EQUAL) TO MINIMIZE TRANSPIRATIONAL WATER LOSS.
2. BALLED AND BURLAPPED PLANTS (B&B) SHALL BE DUG WITH FIRM, NATURAL BALLS OF SOIL OF SUFFICIENT SIZE TO ENCOMPASS THE FIBROUS AND FEEDING ROOTS OF THE PLANTS. NO PLANTS MOVED WITH A ROOT BALL SHALL BE PLANTED IF THE BALL IS CRACKED OR BROKEN. PLANTS BALLED AND BURLAPPED OR CONTAINER GROWN SHALL NOT BE HANDLED BY STEMS.
3. PLANTS MARKED "BR" IN THE PLANT LIST SHALL BE DUG WITH BARE ROOTS, COMPLYING WITH FLORIDA GRADES AND STANDARDS FOR NURSERY PLANTS, CURRENT EDITION. CARE SHALL BE EXERCISED THAT THE ROOTS DO NOT DRY OUT DURING TRANSPORTATION AND PRIOR TO PLANTING.
4. PROTECTION OF PALMS (IF APPLICABLE): ONLY A MINIMUM OF FRONDS SHALL BE REMOVED FROM THE CROWN OF THE PALM TREES TO FACILITATE MOVING AND HANDLING. CLEAR TRUNK (CT) SHALL BE AS SPECIFIED AFTER THE MINIMUM OF FRONDS HAVE BEEN REMOVED. ALL PALMS SHALL BE BRACED PER PALM PLANTING DETAIL.
5. EXCAVATION OF TREE PITS SHALL BE PERFORMED USING EXTREME CARE TO AVOID DAMAGE TO SURFACE AND SUBSURFACE ELEMENTS SUCH AS UTILITIES OR HARDSCAPE ELEMENTS, FOOTERS AND PREPARED SUB-BASES.

J. CONTAINER GROWN STOCK

1. ALL CONTAINER GROWN MATERIAL SHALL BE HEALTHY, VIGOROUS, WELL-ROOTED PLANTS ESTABLISHED IN THE CONTAINER IN WHICH THEY ARE SOLD. THE PLANTS SHALL HAVE TOPS WHICH ARE OF GOOD QUALITY AND ARE IN A HEALTHY GROWING CONDITION, FLORIDA #1 OR BETTER.
2. AN ESTABLISHED CONTAINER GROWN PLANT SHALL BE TRANSPLANTED INTO A CONTAINER AND GROWN IN THAT CONTAINER SUFFICIENTLY LONG FOR THE NEW FIBROUS ROOTS TO HAVE DEVELOPED SO THAT THE ROOT MASS WILL RETAIN ITS SHAPE AND HOLD TOGETHER WHEN REMOVED FROM THE CONTAINER. CONTAINER GROWN STOCK SHALL NOT BE HANDLED BY THEIR STEMS.
3. PLANT ROOTS BOUND IN CONTAINERS ARE NOT ACCEPTABLE.
4. SUBSTITUTION OF NON-CONTAINER GROWN MATERIAL FOR MATERIAL EXPLICITLY SPECIFIED TO BE CONTAINER GROWN WILL NOT BE PERMITTED WITHOUT WRITTEN APPROVAL IS OBTAINED FROM THE OWNER OR OWNER'S REPRESENTATIVE.

K. COLLECTED STOCK

WHEN THE USE OF COLLECTED STOCK IS PERMITTED AS INDICATED BY THE OWNER OR OWNER'S REPRESENTATIVE, THE MINIMUM SIZES OF ROOTBALLS SHALL BE EQUAL TO THAT SPECIFIED FOR THE NEXT LARGER SIZE OF NURSERY GROWN STOCK OF THE SAME VARIETY.

L. NATIVE STOCK

PLANTS COLLECTED FROM WILD OR NATIVE STANDS SHALL BE CONSIDERED NURSERY GROWN WHEN THEY HAVE BEEN SUCCESSFULLY RE-ESTABLISHED IN A NURSERY ROW AND GROWN UNDER REGULAR NURSERY CULTURAL PRACTICES FOR A MINIMUM OF TWO (2) GROWING SEASONS AND HAVE ATTAINED ADEQUATE ROOT AND TOP GROWTH TO INDICATE FULL RECOVERY FROM TRANSPLANTING INTO THE NURSERY ROW.

M. MATERIALS LIST

QUANTITIES NECESSARY TO COMPLETE THE WORK ON THE DRAWINGS SHALL BE FURNISHED BY THE CONTRACTOR. QUANTITY ESTIMATES HAVE BEEN MADE CAREFULLY, BUT THE ENGINEER OR OWNER ASSUMES NO LIABILITY FOR OMISSIONS OR ERRORS. SHOULD A DISCREPANCY OCCUR BETWEEN THE PLANS AND THE PLANT LIST QUANTITY, THE ENGINEER SHALL BE NOTIFIED FOR CLARIFICATION PRIOR TO BIDDING OR INSTALLATION. ALL DIMENSIONS AND/OR SIZES SPECIFIED SHALL BE THE MINIMUM ACCEPTABLE SIZE

N. FINE GRADING

1. FINE GRADING UNDER THIS CONTRACT SHALL CONSIST OF FINAL FINISHED GRADING OF LAWN AND PLANTING AREAS THAT HAVE BEEN ROUGH GRADED BY OTHERS. BERMING AS SHOWN ON THE DRAWINGS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, UNLESS OTHERWISE NOTED.
2. THE CONTRACTOR SHALL FINE GRADE THE LAWN AND PLANTING AREAS TO BRING THE ROUGH GRADE UP TO FINAL FINISHED GRADE ALLOWING FOR THICKNESS OF SOD AND/OR MULCH DEPTH. THIS CONTRACTOR SHALL FINE GRADE BY HAND AND/OR WITH ALL EQUIPMENT NECESSARY INCLUDING A GRADING TRACTOR WITH FRONT-END LOADER FOR TRANSPORTING SOIL WITHIN THE SITE.
3. ALL PLANTING AREAS SHALL BE GRADED AND MAINTAINED FOR POSITIVE DRAINAGE TO SURFACE/SUBSURFACE STORM DRAIN SYSTEMS. AREAS ADJACENT TO BUILDINGS SHALL SLOPE AWAY FROM THE BUILDINGS. REFER TO CIVIL ENGINEER'S PLANS FOR FINAL GRADES.

O. PLANTING PROCEDURES

1. CLEANING UP BEFORE COMMENCING WORK: THE CONTRACTOR SHALL CLEAN WORK AND SURROUNDING AREAS OF ALL RUBBISH OR OBJECTIONABLE MATTER. ALL MORTAR, CEMENT, AND TOXIC MATERIAL SHALL BE REMOVED FROM THE SURFACE OF ALL PLANT BEDS. THESE MATERIALS SHALL NOT BE MIXED WITH THE SOIL. SHOULD THE CONTRACTOR FIND SUCH SOIL CONDITIONS BENEATH THE SOIL WHICH WILL IN ANY WAY ADVERSELY AFFECT THE PLANT GROWTH, HE SHALL IMMEDIATELY CALL IT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE. FAILURE TO DO SO BEFORE PLANTING SHALL MAKE THE CORRECTIVE MEASURES THE RESPONSIBILITY OF THE CONTRACTOR.
2. VERIFY LOCATIONS OF ALL UTILITIES, CONDUITS, SUPPLY LINES AND CABLES, INCLUDING BUT NOT LIMITED TO: ELECTRIC, GAS (LINES AND TANKS), WATER, SANITARY SEWER, STORMWATER SYSTEMS, CABLE, AND TELEPHONE. PROPERLY MAINTAIN AND PROTECT EXISTING UTILITIES. CALL NATIONAL ONE CALL - 811 - TO LOCATE UTILITIES.
3. SUBGRADE EXCAVATION: CONTRACTOR IS RESPONSIBLE TO REMOVE ALL EXISTING AND IMPORTED LIMEROCK AND LIMEROCK SUB-BASE FROM ALL LANDSCAPE PLANTING AREAS TO A MINIMUM DEPTH OF 36". CONTRACTOR IS RESPONSIBLE TO BACKFILL THESE PLANTING AREAS TO ROUGH FINISHED GRADE WITH CLEAN TOPSOIL FROM AN ON-SITE SOURCE OR AN IMPORTED SOURCE. IF LIMEROCK OR OTHER ADVERSE CONDITIONS OCCUR IN PLANTED AREAS AFTER 36" DEEP EXCAVATION BY THE CONTRACTOR, AND POSITIVE DRAINAGE CAN NOT BE ACHIEVED, CONTRACTOR SHALL UTILIZE PLANTING DETAIL THAT ADDRESSES POOR DRAINAGE.
4. FURNISH NURSERY'S CERTIFICATE OF COMPLIANCE WITH ALL REQUIREMENTS AS HEREIN SPECIFIED AND REQUIRED. INSPECT AND SELECT PLANT MATERIALS BEFORE PLANTS ARE DUG AT NURSERY OR GROWING SITE.
5. GENERAL: COMPLY WITH APPLICABLE FEDERAL, STATE, COUNTY, AND LOCAL REGULATIONS GOVERNING LANDSCAPE MATERIALS AND WORK. CONFORM TO ACCEPTED HORTICULTURAL PRACTICES AS USED IN THE TRADE. UPON ARRIVAL AT THE SITE , PLANTS SHALL BE THOROUGHLY WATERED AND PROPERLY MAINTAINED UNTIL PLANTED. PLANTS STORED ON-SITE SHALL NOT REMAIN UNPLANTED FOR A PERIOD EXCEEDING TWENTY-FOUR (24) HOURS. AT ALL TIMES WORKMANLIKE METHODS CUSTOMARY IN GOOD HORTICULTURAL PRACTICES SHALL BE EXERCISED.
6. THE WORK SHALL BE COORDINATED WITH OTHER TRADES TO PREVENT CONFLICTS. COORDINATE PLANTING WITH IRRIGATION WORK TO ASSURE AVAILABILITY OF WATER AND PROPER LOCATION OF IRRIGATION APPURTENANCES AND PLANTS.
7. ALL PLANTING PITS SHALL BE EXCAVATED TO SIZE AND DEPTH IN ACCORDANCE WITH THE USA STANDARD FOR NURSERY STOCK 260.1, UNLESS SHOWN OTHERWISE ON THE DRAWINGS, AND BACKFILLED WITH THE PREPARED PLANTING SOIL MIXTURE AS SPECIFIED IN SECTION E. TEST ALL TREE PITS WITH WATER BEFORE PLANTING TO ASSURE PROPER DRAINAGE PERCOLATION IS AVAILABLE. NO ALLOWANCE WILL BE MADE FOR LOST PLANTS DUE TO IMPROPER DRAINAGE. IF POOR DRAINAGE EXISTS, UTILIZE "POOR DRAINAGE CONDITION" PLANTING DETAIL. TREES SHALL BE SET PLUMB AND HELD IN POSITION UNTIL THE PLANTING MIXTURE HAS BEEN FLUSHED INTO PLACE WITH A SLOW, FULL HOSE STREAM. ALL PLANTING SHALL BE PERFORMED BY PERSONNEL FAMILIAR WITH PLANTING PROCEDURES AND UNDER THE SUPERVISION OF A QUALIFIED LANDSCAPE FOREMAN. PROPER "JETTING IN" SHALL BE ASSURED TO ELIMINATE AIR POCKETS AROUND THE ROOTS. "JET STICK" OR EQUAL IS RECOMMENDED
8. TAKE ALL NECESSARY PRECAUTIONS TO AVOID DAMAGE TO BUILDINGS AND BUILDING STRUCTURES WHILE INSTALLING TREES.
9. SOIL MIXTURE SHALL BE AS SPECIFIED IN SECTION E OF THESE SPECIFICATIONS.
10. TREES AND SHRUBS SHALL BE SET STRAIGHT AT AN ELEVATION THAT, AFTER SETTLEMENT, THE PLANT CROWN WILL STAND ONE (1) TO TWO (2) INCHES ABOVE GRADE. EACH PLANT SHALL BE SET IN THE CENTER OF THE PIT. PLANTING SOIL MIXTURE SHALL BE BACKFILLED, THOROUGHLY TAMPED AROUND THE BALL, AND SETTLED BY WATER (AFTER TAMPING).
11. AMEND PINE AND OAK PLANT PITS WITH ECTOMYCORRHIZAL SOIL APPLICATION PER MANUFACTURER'S RECOMMENDATION. ALL OTHER PLANT PITS SHALL BE AMENDED WITH ENDOMYCORRHIZAL SOIL APPLICATION PER MANUFACTURER'S RECOMMENDATION. PROVIDE PRODUCT INFORMATION SUBMITTAL PRIOR TO INOCULATION.
12. FILL HOLE WITH SOIL MIXTURE, MAKING CERTAIN ALL SOIL IS SATURATED. TO DO THIS, FILL HOLE WITH WATER AND ALLOW TO SOAK MINIMUM TWENTY (20) MINUTES, STIRRING IF NECESSARY TO GET SOIL THOROUGHLY WET. PACK LIGHTLY WITH FEET. ADD MORE WET SOIL MIXTURE. DO NOT COVER TOP OF BALL WITH SOIL MIXTURE, ONLY WITH MULCH. ALL BURLAP, ROPE, WIRES, BASKETS, ETC., SHALL BE REMOVED FROM THE SIDES AND TOPS OF BALLS, BUT NO BURLAP SHALL BE PULLED FROM UNDERNEATH.
13. PRUNING: TREES SHALL BE PRUNED, AT THE DIRECTION OF THE OWNER OR OWNER'S REPRESENTATIVE, TO PRESERVE THE NATURAL CHARACTER OF THE PLANT. ALL SOFT WOOD OR SUCKER GROWTH AND ALL BROKEN OR BADLY DAMAGED BRANCHES SHALL BE REMOVED WITH A CLEAN CUT. ALL PRUNING TO BE PERFORMED BY LICENSED ARBORIST, IN ACCORDANCE WITH ANSI A-300.
14. SHRUBS AND GROUND COVER PLANTS SHALL BE EVENLY SPACED IN ACCORDANCE WITH THE DRAWINGS AND AS INDICATED ON THE PLANT LIST. CULTIVATE ALL PLANTING AREAS TO A MINIMUM DEPTH OF 6", REMOVE AND DISPOSE ALL DEBRIS. MIX TOP 4" THE PLANTING SOIL MIXTURE AS SPECIFIED IN SECTION E. THOROUGHLY WATER ALL PLANTS AFTER INSTALLATION.
15. TREE STAKING AND BRACING SHALL BE INSTALLED BY THE CONTRACTOR IN ACCORDANCE WITH THE PLANS TO INSURE STABILITY AND MAINTAIN TREES IN AN UPRIGHT POSITION. IF THE CONTRACTOR AND OWNER DECIDE TO WAIVE THE TREE GUYING AND BRACING, THE OWNER SHALL NOTIFY THE ENGINEER IN WRITING AND AGREE TO INDEMNIFY AND HOLD HARMLESS THE ENGINEER IN THE EVENT UNSUPPORTED TREES PLANTED UNDER THIS CONTRACT FALL AND DAMAGE PERSON OR PROPERTY.
16. MULCHING: PROVIDE A THREE INCH (MINIMUM) LAYER OF SPECIFIED MULCH OVER THE ENTIRE AREA OF EACH SHRUB BED, GROUND COVER, VINE BED, AND TREE PIT PLANTED UNDER THIS CONTRACT.
17. HERBICIDE WEED CONTROL: ALL PLANT BEDS SHALL BE KEPT FREE OF NOXIOUS WEEDS UNTIL FINAL ACCEPTANCE OF WORK. IF DIRECTED BY THE OWNER, "ROUND-UP" SHALL BE APPLIED FOR WEED CONTROL BY QUALIFIED PERSONNEL TO ALL PLANTING AREAS IN SPOT APPLICATIONS PER MANUFACTURER'S PRECAUTIONS AND SPECIFICATIONS. PRIOR TO FINAL INSPECTION, TREAT ALL PLANTING BEDS WITH AN APPROVED PRE-EMERGENT HERBICIDE AT AN APPLICATION RATE RECOMMENDED BY THE MANUFACTURER. (AS ALLOWED BY JURISDICTIONAL AUTHORITY).

P. LAWN SODDING

1. THE WORK CONSISTS OF LAWN BED PREPARATION, SOIL PREPARATION, AND SODDING COMPLETE, IN STRICT ACCORDANCE WITH THE SPECIFICATIONS AND THE APPLICABLE DRAWINGS TO PRODUCE A TURF GRASS LAWN ACCEPTABLE TO THE OWNER.
2. LAWN BED PREPARATION: ALL AREAS THAT ARE TO BE SODDED SHALL BE CLEARED OF ANY ROUGH GRASS, WEEDS, AND DEBRIS, AND THE GROUND BROUGHT TO AN EVEN GRADE. THE ENTIRE SURFACE SHALL BE ROLLED WITH A ROLLER WEIGHING NOT MORE THAN ONE-HUNDRED (100) POUNDS PER FOOT OF WIDTH. DURING THE ROLLING, ALL DEPRESSIONS CAUSED BY SETTLEMENT SHALL BE FILLED WITH ADDITIONAL SOIL, AND THE SURFACE SHALL BE REGRADED AND ROLLED UNTIL PRESENTING A SMOOTH AND EVEN FINISH TO THE REQUIRED GRADE.
3. SOIL PREPARATION: PREPARE LOOSE BED FOUR (4) INCHES DEEP. HAND RAKE UNTIL ALL BUMPS AND DEPRESSIONS ARE REMOVED. WET PREPARED AREA THOROUGHLY.
4. SODDING
   a. THE CONTRACTOR SHALL SOD ALL AREAS THAT ARE NOT PAVED OR PLANTED AS DESIGNATED ON THE DRAWINGS WITHIN THE CONTRACT LIMITS, UNLESS SPECIFICALLY NOTED OTHERWISE.
   b. THE SOD SHALL BE CERTIFIED TO MEET FLORIDA STATE PLANT BOARD SPECIFICATIONS, ABSOLUTELY TRUE TO VARIETY TYPE, AND FREE FROM WEEDS, FUNGI, INSECTS AND DISEASES OF ANY KIND.
   c. SOD PANELS SHALL BE LAID TIGHTLY TOGETHER SO AS TO MAKE A SOLID SODDED LAWN AREA. SOD SHALL BE LAID UNIFORMLY AGAINST THE EDGES OF ALL CURBS AND OTHER HARDSCAPE ELEMENTS, PAVED AND PLANTED AREAS. ADJACENT TO BUILDINGS, A 24 INCH STONE MULCH STRIP SHALL BE PROVIDED - REFER TO DETAILS. IMMEDIATELY FOLLOWING SOD LAYING, THE LAWN AREAS SHALL BE ROLLED WITH A LAWN ROLLER CUSTOMARILY USED FOR SUCH PURPOSES, AND THEN THOROUGHLY IRRIGATED. IF, IN THE OPINION OF THE OWNER, TOP-DRESSING IS NECESSARY AFTER ROLLING TO FILL THE VOIDS BETWEEN THE SOD PANELS AND TO EVEN OUT INCONSISTENCIES IN THE SOD, CLEAN SAND, AS APPROVED BY THE OWNER'S REPRESENTATIVE, SHALL BE UNIFORMLY SPREAD OVER THE ENTIRE SURFACE OF THE SOD AND THOROUGHLY WATERED IN. FERTILIZE INSTALLED SOD AS ALLOWED BY PROPERTY'S JURISDICTIONAL AUTHORITY.
5. DURING DELIVERY, PRIOR TO, AND DURING THE PLANTING OF THE LAWN AREAS, THE SOD PANELS SHALL AT ALL TIMES BE PROTECTED FROM EXCESSIVE DRYING AND UNNECESSARY EXPOSURE OF THE ROOTS TO THE SUN. ALL SOD SHALL BE STACKED SO AS NOT TO BE DAMAGED BY SWEATING OR EXCESSIVE HEAT AND MOISTURE.
6. LAWN MAINTENANCE:
   a. WITHIN THE CONTRACT LIMITS, THE CONTRACTOR SHALL PRODUCE A DENSE, WELL ESTABLISHED LAWN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR AND RE-SODDING OF ALL ERODED, SUNKEN OR BARE SPOTS (LARGER THAN 12"X12") UNTIL CERTIFICATION OF ACCEPTABILITY BY THE OWNER'S REPRESENTATIVE. REPAIRED SODDING SHALL BE ACCOMPLISHED AS IN THE ORIGINAL WORK (INCLUDING RE-GRADING IF NECESSARY).
   b. CONTRACTOR RESPONSIBLE FOR ESTABLISHING AND MAINTAINING SOD/LAWN UNTIL ACCEPTANCE BY THE OWNER'S REPRESENTATIVE. PRIOR TO AND UPON ACCEPTANCE, CONTRACTOR TO PROVIDE WATERING/IRRIGATION SCHEDULE TO OWNER. OBSERVE ALL APPLICABLE WATERING RESTRICTIONS AS SET FORTH BY THE PROPERTY'S JURISDICTIONAL AUTHORITY.

Q. CLEANUP

UPON COMPLETION OF ALL PLANTING WORK AND BEFORE FINAL ACCEPTANCE, THE CONTRACTOR SHALL REMOVE ALL MATERIAL, EQUIPMENT, AND DEBRIS RESULTING FROM HIS WORK. ALL PAVED AREAS SHALL BE BROOM-CLEANED AND THE SITE LEFT IN A NEAT AND ACCEPTABLE CONDITION AS APPROVED BY THE OWNER'S AUTHORIZED REPRESENTATIVE.

R. PLANT MATERIAL MAINTENANCE

ALL PLANTS AND PLANTING INCLUDED UNDER THIS CONTRACT SHALL BE MAINTAINED BY WATERING, CULTIVATING, SPRAYING, AND ALL OTHER OPERATIONS (SUCH AS RE-STAKING OR REPAIRING GUY SUPPORTS) NECESSARY TO INSURE A HEALTHY PLANT CONDITION BY THE CONTRACTOR UNTIL CERTIFICATION OF ACCEPTABILITY BY THE OWNER'S REPRESENTATIVE. MAINTENANCE AFTER THE CERTIFICATION OF ACCEPTABILITY SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS IN THIS SECTION. CONTRACTORS ARE REQUESTED TO PROVIDE A BID ESTIMATE TO COVER LANDSCAPE AND IRRIGATION MAINTENANCE FOR A PERIOD OF 90 CALENDAR DAYS COMMENCING AFTER ACCEPTANCE.

S. MAINTENANCE (ALTERNATE BID ITEM)

CONTRACTORS ARE REQUESTED TO PROVIDE A BID ESTIMATE FOR MAINTENANCE FOLLOWING THE INITIAL 90-DAY MAINTENANCE PERIOD ON A COST-PER-MONTH BASIS.

T. FINAL INSPECTION AND ACCEPTANCE OF WORK

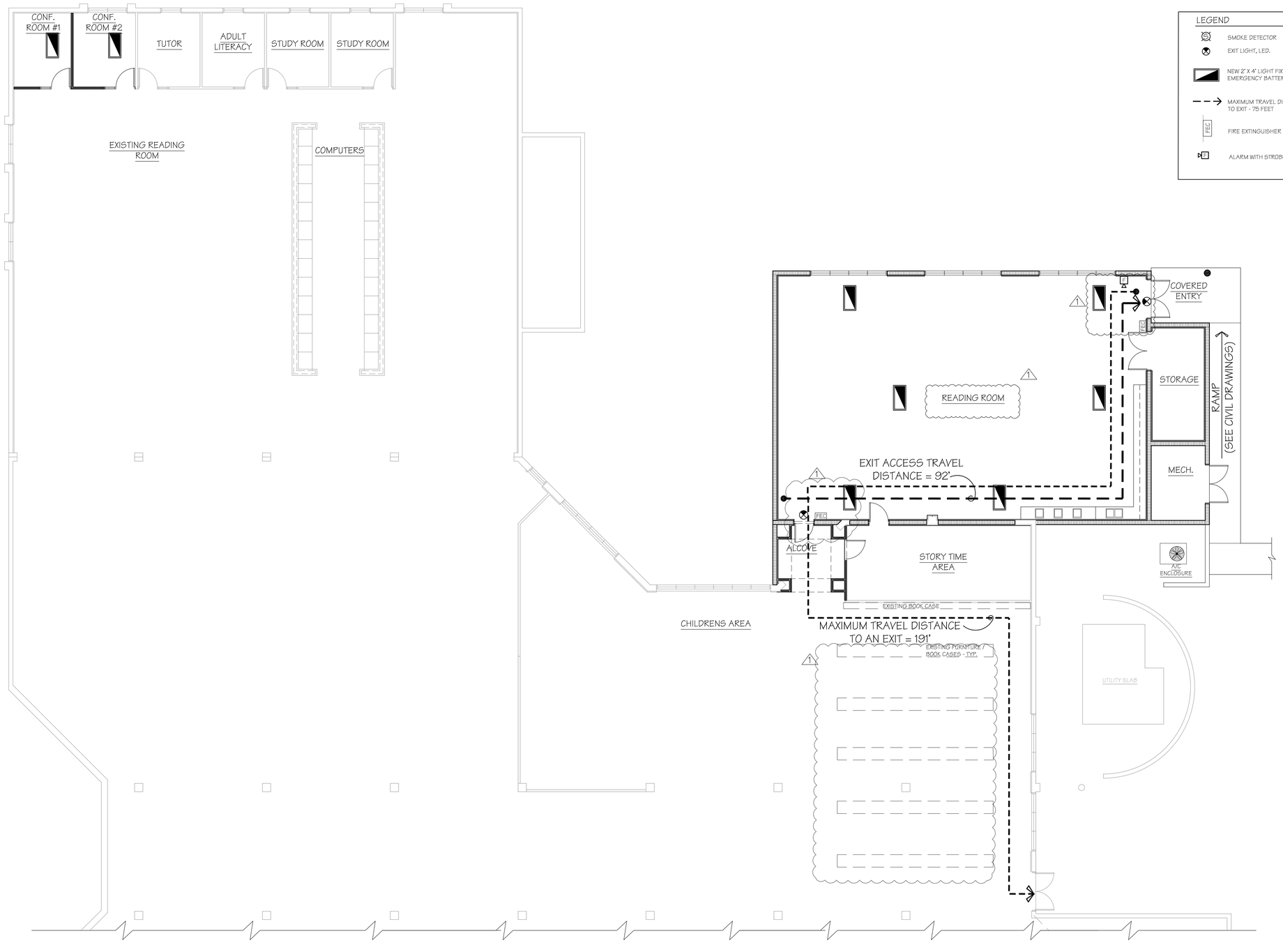
FINAL INSPECTION AT THE END OF THE WARRANTY PERIOD SHALL BE ON PLANTING, CONSTRUCTION AND ALL OTHER INCIDENTAL WORK PERTAINING TO THIS CONTRACT. ANY REPLACEMENT AT THIS TIME SHALL BE SUBJECT TO THE SAME ONE (1) YEAR WARRANTY (OR AS SPECIFIED BY THE ENGINEER OR OWNER IN WRITING) BEGINNING WITH THE TIME OF REPLACEMENT AND ENDING WITH THE SAME INSPECTION AND ACCEPTANCE HEREIN DESCRIBED.

U. WARRANTY

1. THE LIFE AND SATISFACTORY CONDITION OF ALL 7 GALLON AND LARGER PLANT MATERIAL INSTALLED BY THE LANDSCAPE CONTRACTOR SHALL BE WARRANTED BY THE CONTRACTOR FOR A MINIMUM OF ONE (1) CALENDAR YEAR COMMENCING AT THE TIME OF CERTIFICATION OF ACCEPTABILITY BY THE OWNER'S REPRESENTATIVE.
2. THE LIFE AND SATISFACTORY CONDITION OF ALL OTHER PLANT MATERIAL (INCLUDING SOD) INSTALLED BY THE LANDSCAPE CONTRACTOR SHALL BE WARRANTED BY THE CONTRACTOR FOR A MINIMUM OF ONE (1) CALENDAR YEAR COMMENCING AT THE TIME OF CERTIFICATION OF ACCEPTABILITY BY THE OWNER'S REPRESENTATIVE.
3. REPLACEMENT: ANY PLANT NOT FOUND IN A HEALTHY GROWING CONDITION AT THE END OF THE WARRANTY PERIOD SHALL BE REMOVED FROM THE SITE AND REPLACED AS SOON AS WEATHER CONDITIONS PERMIT. ALL REPLACEMENTS SHALL BE PLANTS OF THE SAME KIND AND SIZE AS SPECIFIED IN THE PLANT LIST. THEY SHALL BE FURNISHED PLANTED AND MULCHED AS SPECIFIED UNDER "PLANTING", AT NO ADDITIONAL COST TO THE OWNER. WARRANTY IS TO EXCLUDE DAMAGE CAUSED BY FLOODS, LIGHTING STRIKES, FREEZING, WINDS OVER 45 MPH, FIRE, VANDALISM, HERBIVORE ANIMALS, DISEASE, INSECTS, WATER RESTRICTIONS, GOVERNMENT ACTIONS OR ACTS OF NEGLIGENCE BY THE OWNER OR OTHERS.
4. IN THE EVENT THE OWNER DOES NOT CONTRACT WITH THE CONTRACTOR FOR LANDSCAPE (AND IRRIGATION) MAINTENANCE, THE CONTRACTOR IS ENCOURAGED TO VISIT THE PROJECT SITE PERIODICALLY DURING THE ONE YEAR WARRANTY PERIOD TO EVALUATE MAINTENANCE PROCEDURES BEING PERFORMED BY THE OWNER, AND SHALL NOTIFY THE OWNER IN WRITING OF MAINTENANCE PROCEDURES OR CONDITIONS WHICH THREATEN VIGOROUS AND HEALTHY PLANT GROWTH. IT IS SUGGESTED SUCH SITE VISITS SHALL BE CONDUCTED A MINIMUM OF ONCE PER MONTH FOR A PERIOD OF TWELVE (12) MONTHS FROM THE DATE OF ACCEPTANCE.

V. SUBMITTALS

1. FOR ALL LANDSCAPE INSTALLATIONS, THE CONTRACTOR SHALL SUBMIT PRODUCT DATA IN THE FORM OF MANUFACTURERS' CUT SHEETS AND CATALOG DATA FOR ALL PRODUCTS, MATERIAL AND EQUIPMENT CLEARLY INDICATING THE SPECIFIC PART OR PRODUCT CATALOG NUMBER(S) FOR APPROVAL AND SUBMIT A MATERIALS LIST INDICATING ALL PLANT SPECIES, QUALITY AND SIZE.
2. SUBMIT 6



LEGEND

- SMOKE DETECTOR
- EXIT LIGHT, LED.
- NEW 2' X 4' LIGHT FIXTURE WITH EMERGENCY BATTERY PACK
- MAXIMUM TRAVEL DISTANCE TO EXIT - 75 FEET
- FEC — FIRE EXTINGUISHER IN CABINET
- F — ALARM WITH STROBE

01 LIFE SAFETY PLAN

SCALE: 1/8" = 1'-0"

Project:

ADDITION FOR

NORTH COUNTY LIBRARY

INDIAN RIVER COUNTY, FLORIDA

Key Plan:

Issues:

No.:	Date:	Description:
A.	05/11/20	CLIENT REVIEW
B.	05/29/20	CLIENT REVIEW
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Consultant:

Drawing Title:

LIFE SAFETY PLAN

Reference North

Drn: MT
Chd: AJD
Project No.: 2019-44
Sheet No.:
Dwg. File: .
XREF File: .
Plot File: .

Cert. No.: 12456

Date Signed:

A1.10

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CODE REVIEW FOR A LIBRARY EXPANSION TO NORTH COUNTY LIBRARY, INDIAN RIVER COUNTY, SEBASTIAN, FLORIDA 32958

ARCHITECT'S PROJECT #2019-44/2

DATE: JULY 9, 2020

SCOPE OF WORK 1

North County Library is a Single-Story structure with an area of approximately 24,996 sq. ft. The existing construction consists of concrete foundations and concrete slab on grade load bearing CMU Walls, Pre-engineered Wood Roof Trusses finished with 5/8" CDX Plywood, 40 mil. peel and stick membrane and fiber glass/asphalt shingles. The proposed 2,823 sq. ft. Reading Room addition will be constructed as indicated above and will consist of a Reading Room, Storage Area, Mechanical Room, and a covered Entry. As part of this Project two (2) small Conference Rooms will be added in the existing Stack Area.

The existing Electrical, Plumbing, HVAC and Sprinkler systems will be modified as necessary to accommodate the addition.

2

Based on FBC 2017 existing Buildings, this Project is considered a Level 2 Alteration, with a Construction type of Type V-B; Sprinklered and an Occupancy classification "Assembly Group A-3. Based on NFPA 101, the addition is classified as "New Assembly Occupancy".

Note: The exiting Library and the proposed addition are single story structures surrounded on all sides with a minimum open space of 20 feet. See Site Plan sheet C6. Therefore, the allowable area of the building to be determined by calculations. See section 5.) vi) below.

REFERENCE CODES

Florida Building Code 2017 – Building
Florida Building Code 2017 – Existing Buildings
Florida Building Code 2017 – Accessibility
Florida Building Code 2017 – Plumbing
Florida Fire Prevention Code – 6th Edition

CODE REVIEW

1) ALTERATION LEVEL 1 COMPLIANCE
FBC 801.2; 801.3; NFPA 101; 4.6.7 (5)
All work associated with the Project will comply with Chapter 7 and Chapter 8 of FBC 2017 Existing Buildings and FBC 2017 – Building and NFPA 101 as applicable.

2) SPECIAL DETAILED REQUIREMENTS BASED ON USE AND OCCUPANCY
FBC 802.1; FBC 2017-Building CH.4; LSC 6.1.2; 12.1.2
N/A

3) BUILDING ELEMENTS AND MATERIALS
FBC 803

i) Interior Finish
FBC 803.4; FBC 2017 – Building; FBC 803.11; LSC 10.2; 12.3.3
All interior Wall and ceiling finishes to comply with the Table below:

ASSEMBLY OCCUPANCY A-3; SPRINKLERED		
Interior Exit Stairways & Ramps & Exit Passageways	Corridors and Enclosure for Exit Access Stairways & Ramps	Rooms and Enclosed Spaces
		C

Class C Interior Finish: Flame Spread Index 76-200
Smoke Developed Index 0-450

ii) Interior Floor Finish
FBC 2017-Building; FBC 804; 804.4.2; LSC 10.2; 12.3.3.5.2
The minimum critical radiant flux shall not be less than Class II for all new floor finishes.

iii) Fire-Resistance Ratings 1
FBC 803.6; FBC 2017 – Building; FBC 903.2.1 (1)
The existing Automatic Fire Sprinkler System will be extended to cover the proposed Reading Room addition. No Fire Separation is required.

4) FIRE PROTECTION
FBC 804

i) Automatic Sprinkler Systems
FBC 804.2; LSC 12.3.5
The existing Building is protected by an Automatic Fire Sprinkler System which will be extended to protect the addition.

ii) Fire Alarm and Detection
FBC 804.4; FBC 2017 – Building, 907; LSC 12.3.4
The existing Fire Alarm and Detection System will be extended to include the addition.

5) MEANS OF EGRESS
FBC 805; FBC 2017 – Building, CH.10; LSC CH.7; 12.2

I) Number of Exits 1
FBC 805.3; FBC 2017 – Building; FBC 1006; LSC 7.4; 12.2.4
Number of existing Exits from the Library = 11
Number of Exits proposed for Reading Room = 2
NOTE: All new and existing Exit Doors are 36" wide.

II) Main Entrance
FBC 805.3.3; FBC 2017 – Building; FBC 1029.2; LSC 12.2.3.6 (2)
Occupant Load; Building Addition Area 2,823 sq. ft. ÷ 50 = 57 Occupants
50% Exit capacity; 57 ÷ 2 = 29 x 0.2" = 5.8" < 72"
Exit capacity acceptable.

III) Occupant Load and Travel Distance 1
FBC 805.4.1.1; FBC 2017 – Building; FBC 1006.2.1; LSC 12.2.3.7
Occupant load of the Reading Room = 57 Occupants
Maximum Travel Distance to Exit permitted = 250' 2
Actual maximum Travel Distance to and Exit = 92'
Two Exits are provided from the Reading Room.

IV) Door Swing
FBC 805.4.2; FBC 2017 – Building; FBC 1010.1.2
The Exit Doors swing in the direction of Travel.

v) Illumination of Means of Egress
FBC 805.7; FBC 2017 – Building; FBC 1008; LSC 7.8; 12.2.8

i) Illumination Required
FBC 1008.2; 14.2.8; 12.2.10
The Means of Egress, including Exit Discharge, will be illuminated at all times during Building Occupancy.

ii) Illumination Level Under Normal Power
FBC 1008.2.1
The Means of Egress Illumination Level shall not be less than 1 Footcandle (11 LUX) at the walking surface.

iii) Emergency Power for Illumination
FBC 1008.3; LSC 12.2.9
An Emergency Power Supply will be provided to illuminate all Means of Egress components. The Emergency supply will provide power for a minimum of 90 minutes and will consist of storage batteries, Unit equipment or an on-site Generator.

vi) Exit Signs
FBC 805.8; FBC 2017 – Building; FBC 1013; LSC 12.4.8.7
The Means of Egress shall be marked clearly with Exit signs per FBC 2017 – Building.

VI) a.) Frontage Increase 1
FBC 2017 Building; FBC506.3; 506.3.2

$W = \frac{(L_1 \times W_1 + L_2 \times W_2 + L_3 \times W_3 + L_4 \times W_4}{F}$

$W = \frac{(190' \times 51' + 145' \times 93.5' + 190' \times 131.5' + 195' \times 140')}{720}$

$W = \frac{(9,690 + 13,557.5 + 24,985 + 27,300)}{720}$

$W = \frac{75,532.5}{720}$

W= 104.90

104.90 > 30
Use 30 for W to calculate the Building Area Increase

b.) Amount of Increase
FBC 506.3.3

I_f = [F/P – 0.25] W / 30
I_f = [720 / 720 - 0.25] 30 / 30
I_f = [0.75] x 1
I_f = 0.75

c.) Allowable Area Increase
FBC 506.2.1
$A_a = A_t + (NS \times I_f)$
$A_a = 24,000 + (6,000 \times 0.75)$
$A_a = 24,000 + 4,500$
$A_a = 28,500$ SF

Existing Building Area + Addition = 24,996 + 2,823 = 27,819 < 28,500 SF.

6) ACCESSIBILITY
FBC 806; FBC 2017 – ACCESSIBILITY; FBC 606.3
The height of the counter section with three (3) sinks to comply with ADA Accessibility i.e. Counter surface 34" A.FFL.

7) STRUCTURAL
FBC 807
All new Structural elements and systems will comply with the Florida Building Code, Building.

8) ELECTRICAL
FBC 808
All new wiring, Electrical equipment etc. in the work area to comply with NFPA 70.

9) MECHANICAL
FBC 809
All new Mechanical appliances and equipment to comply with the Florida Building Code, Mechanical.

10) PLUMBING
FBC 810
Occupant load for the existing Library:
Stacks = 6,353 sq. ft. ÷ 100 = 64
Reading = 18,643 sq. ft. ÷ 50 = 373
Existing Total = 24,996 sq. ft. **437** Occupants

Additional Building load based on proposed addition:
Building Addition 2,823 ÷ 50 = 57 Occupants
20% X 437 Occupants = 88 > 57
No additional Plumbing fixtures required.

Existing Restroom Facilities:

Male:	5 water closets	3 lavatories
Female:	4 water closets	3 lavatories
Unisex:	1 water closet	1 lavatory
Total	**10 water closets**	**7 lavatories**
2 Drinking Fountains		1 Service Sink

Project:

ADDITION FOR

NORTH COUNTY LIBRARY

INDIAN RIVER COUNTY, FLORIDA

Key Plan:

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Consultant:

Drawing Title:

CODE REVIEW

Reference North

Drn: MT
Chd: AJD
Project No.: 2019-44
Sheet No.: A1.11
Dwg. File:
XREF File:
Plot File:

Cert. No.: 12456
Date Signed:

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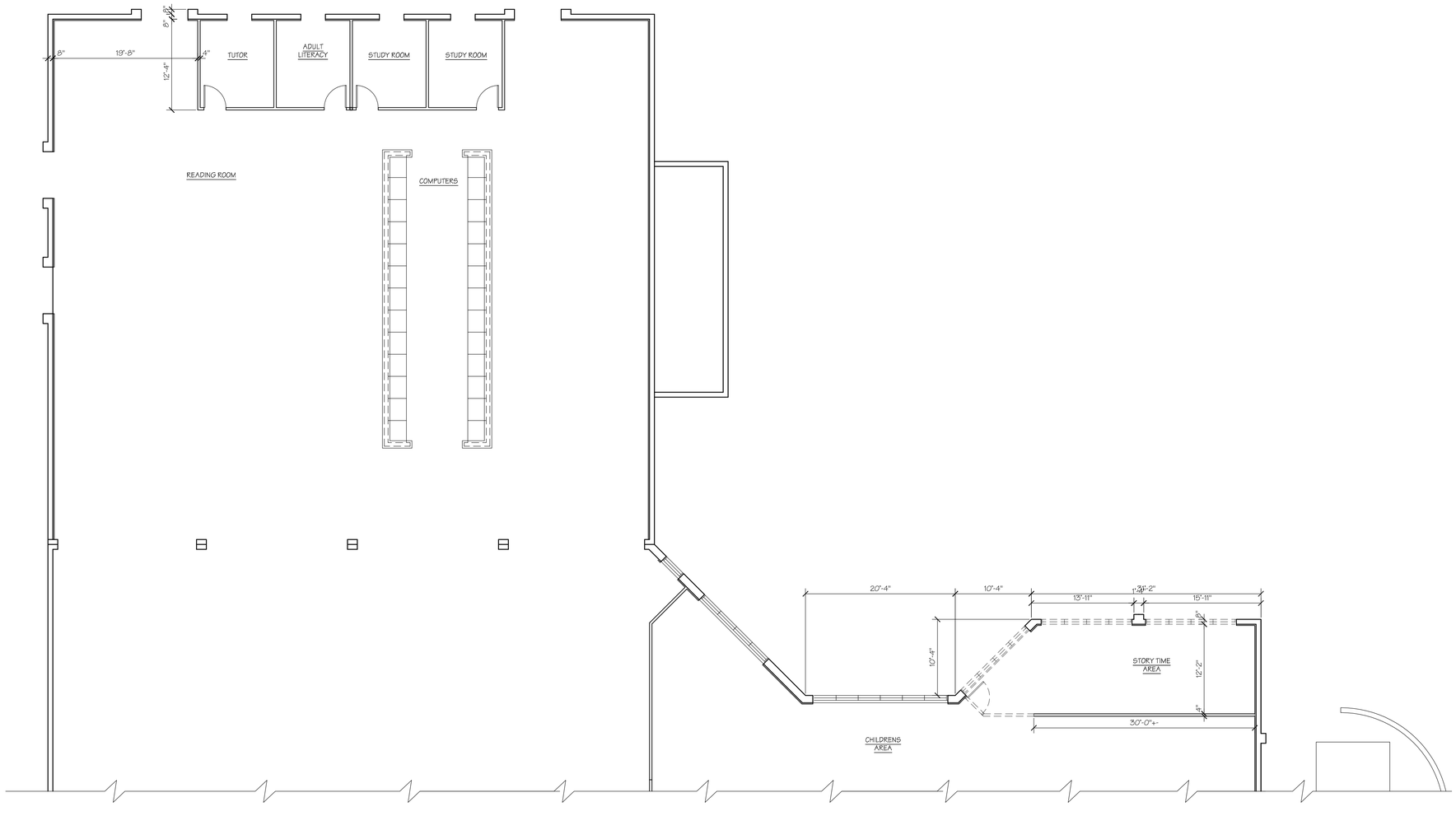

LEGEND

- EXISTING 8" SPLIT FACE BLOCK WALL EXPOSED ON EXTERIOR WITH 1/2" DRYWALL OVER 1-1/2" FURRING STRIPS ON INTERIOR.
- EXISTING 3-5/8" METAL STUD WALL WITH 1/2" DRYWALL BOTH SIDES.
- EXISTING TO BE REMOVED

01 PARTIAL FLOOR PLAN

SCALE: 1/8" = 1'-0"

Project:

ADDITION FOR

NORTH COUNTY LIBRARY

INDIAN RIVER COUNTY, FLORIDA

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Drawing Title:

EXISTING / DEMO FLOOR PLAN

Reference North

Drn: MT
Chd: AJD
Project No.: 2019-44
Sheet No.: A2.10
Dwg. File: .
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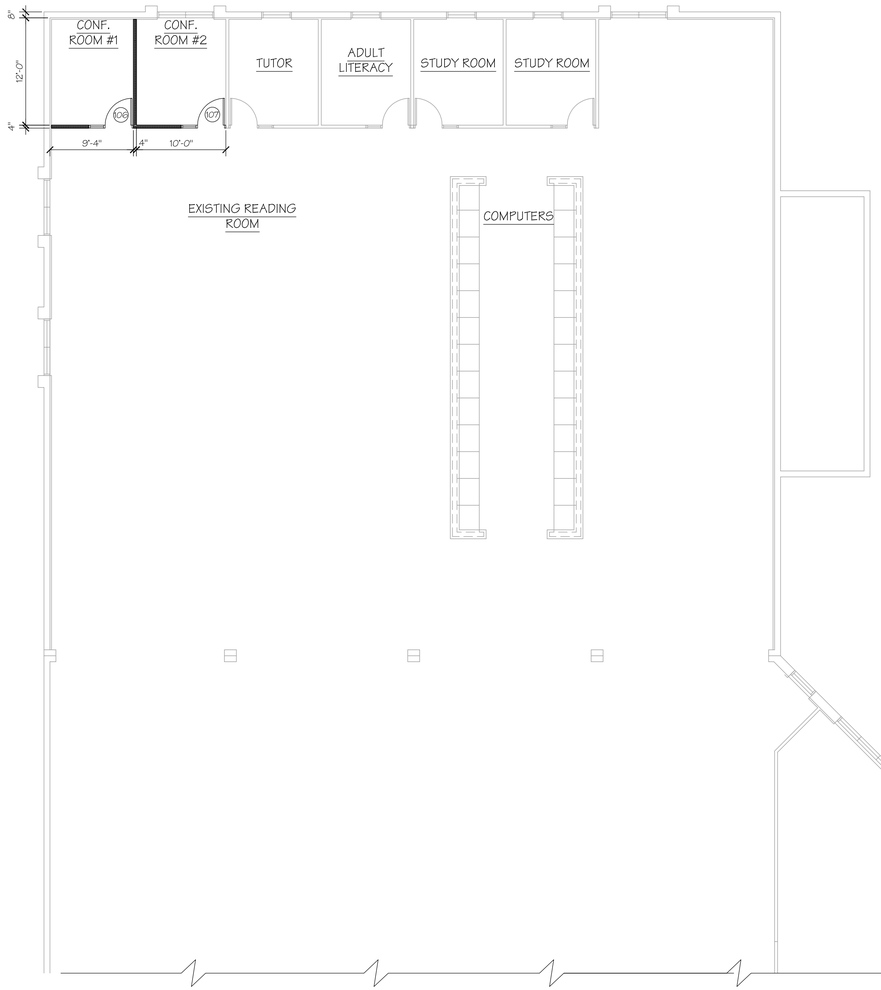
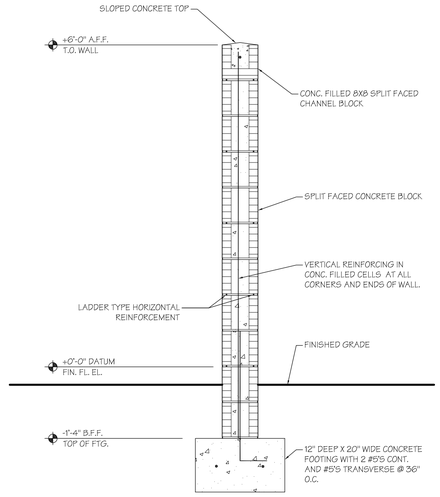
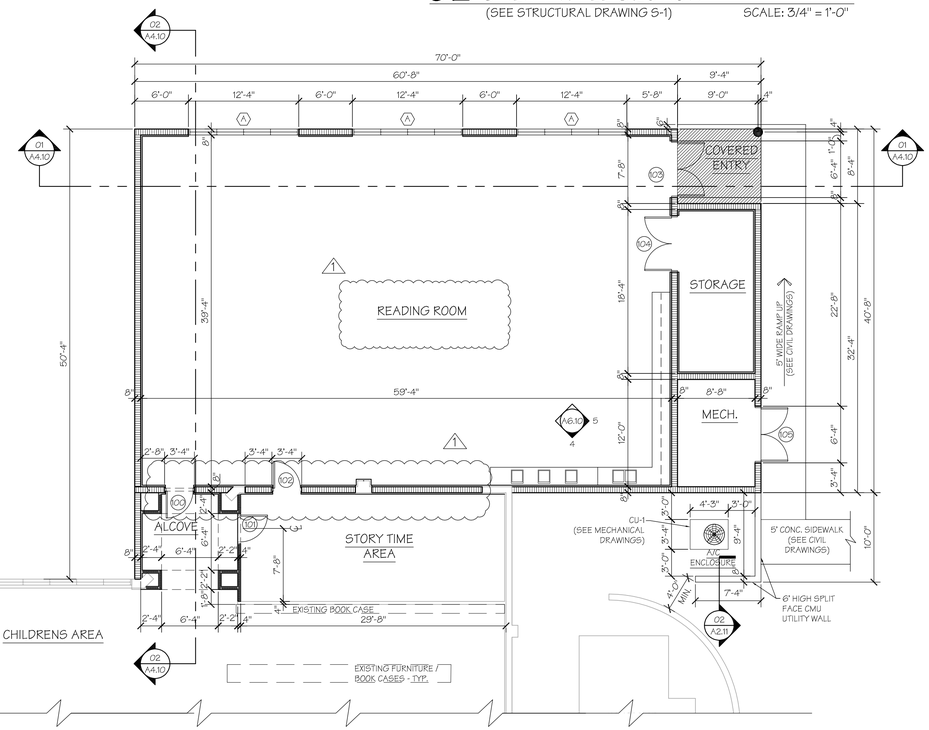




02 UTILITY WALL SECTION

(SEE STRUCTURAL DRAWING S-1) SCALE: 3/4" = 1'-0"



01 PARTIAL PROPOSED FLOOR PLAN

SCALE: 1/8" = 1'-0"

LEGEND

- NEW 8" SPLIT FACE BLOCK WITH 1-1/2" METAL FURRING STRIPS SPACED 16" O.C. AND 5/8" DRYWALL ON INTERIOR SIDE
- NEW CONCRETE BLOCK INFILL WITH 1-1/2" METAL FURRING STRIPS SPACED 16" O.C. AND 5/8" DRYWALL BOTH SIDES
- NEW 3-5/8" METAL STUDS SPACED 16" O.C. WITH 5/8" DRYWALL BOTH SIDES
- EXISTING 8" SPLIT FACE BLOCK WALL EXPOSED ON EXTERIOR WITH 1/2" DRYWALL OVER 1-1/2" FURRING STRIPS ON INTERIOR.
- EXISTING 3-5/8" METAL STUD WALL WITH 1/2" DRYWALL BOTH SIDES.

Project:

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NORTH COUNTY LIBRARY

INDIAN RIVER COUNTY, FLORIDA

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Drawing Title:

PROPOSED FLOOR PLAN

Reference North

Drn: MT
Dwg. File: .
Chk: AJD
XREF File: .
Project No.: 2019-44
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Date Signed:

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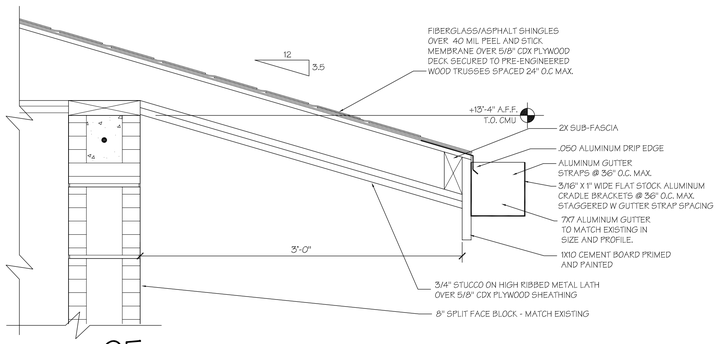
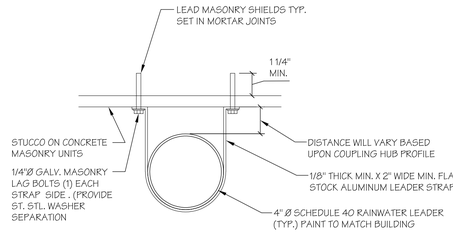


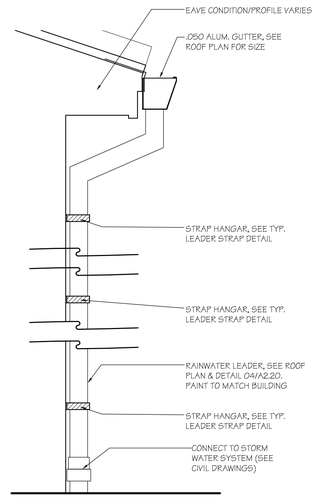
05 TYPICAL EAVE DETAIL

SCALE: 1-1/2" = 1'-0"



04 TYP. LEADER STRAP DETAIL

SCALE: 3" = 1'-0"



03 TYPICAL ROOF LEADER

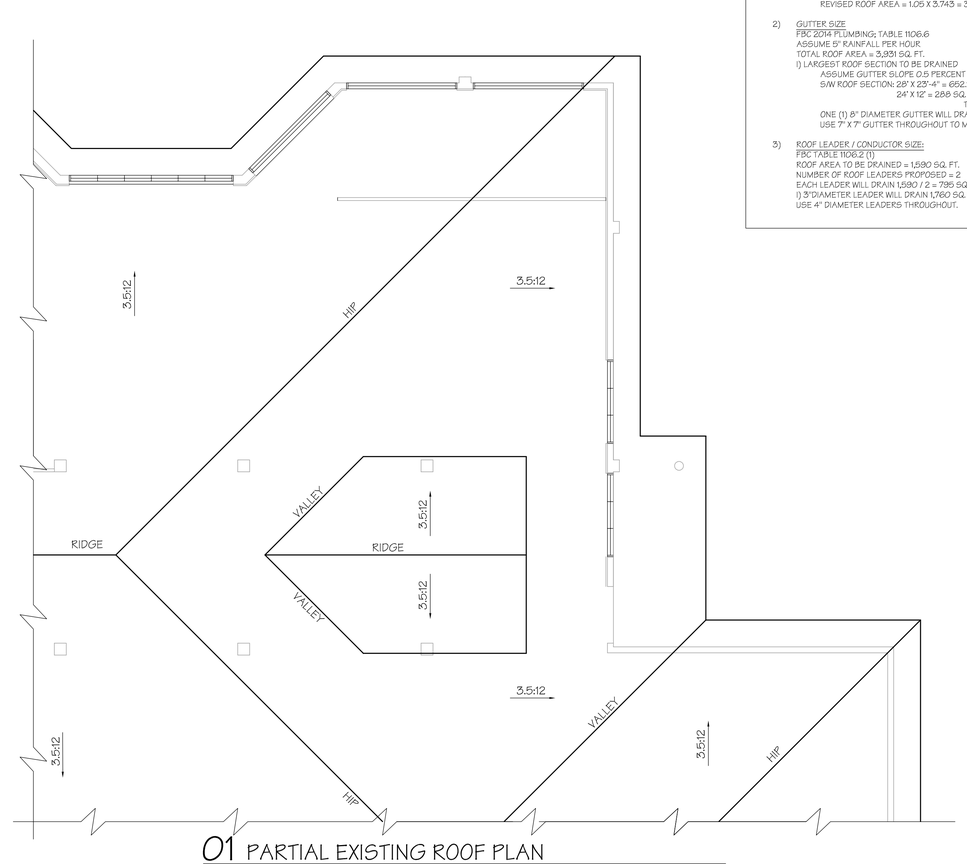
SCALE: 1" = 1'-0"

ROOF DRAINAGE CALULATIONS:

1) ROOF AREA
   LARGEST ROOF SECTION TO BE DRAINED = S/W SECTION
   I) ROOF SECTION AREA
      76' X 46'-8" = 3,546.92 SQ. FT.
      14' X 7' X 2 = 196 SQ. FT.
      TOTAL = 3,743 SQ. FT.
   II) ROOF PITCH FACTOR
      PITCH FACTOR = 1.05
      REVISED ROOF AREA = 1.05 X 3,743 = 3,931 SQ. FT.

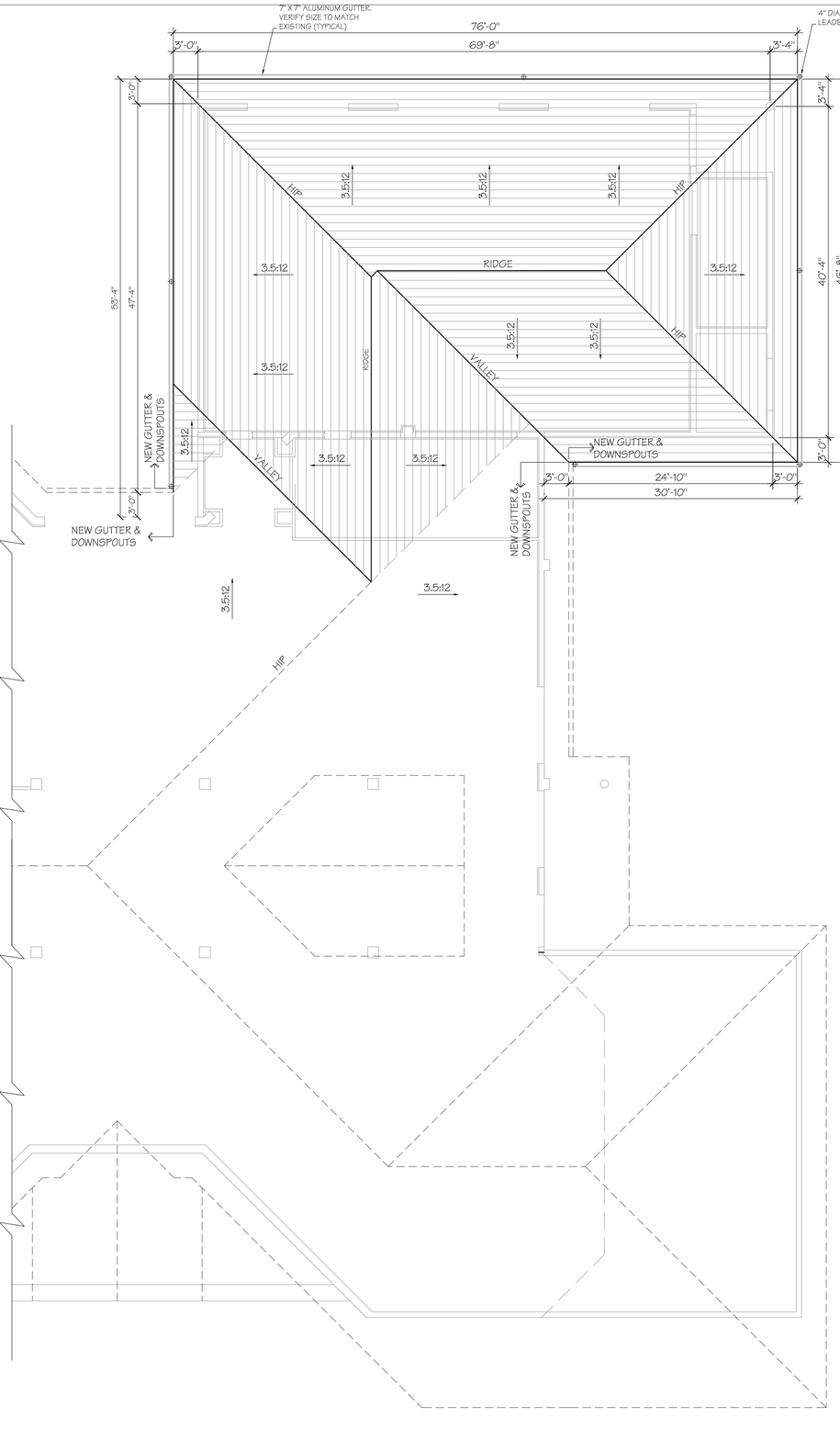
2) GUTTER SIZE
   FBC 2014 PLUMBING; TABLE 1106.6
   ASSUME 5" RAINFALL PER HOUR
   TOTAL ROOF AREA = 3,931 SQ. FT.
   I) LARGEST ROOF SECTION TO BE DRAINED
      ASSUME GUTTER SLOPE 0.5 PERCENT
      S/W ROOF SECTION: 28' X 23'-4" = 652.24 SQ. FT. = 653 SQ. FT.
      24' X 12' = 288 SQ. FT. X 2 = 576 SQ. FT.
      TOTAL = 1,223 SQ. FT.
      ONE (1) 8" DIAMETER GUTTER WILL DRAIN 1,590 SQ. FT.
      USE 7" X 7" GUTTER THROUGHOUT TO MATCH EXISTING.

3) ROOF LEADER / CONDUCTOR SIZE:
   FBC TABLE 1106.2 (1)
   ROOF AREA TO BE DRAINED = 1,590 SQ. FT.
   NUMBER OF ROOF LEADERS PROPOSED = 2
   EACH LEADER WILL DRAIN 1,590 / 2 = 795 SQ. FT.
   I) 3" DIAMETER LEADER WILL DRAIN 1,760 SQ. FT.
   USE 4" DIAMETER LEADERS THROUGHOUT.



01 PARTIAL EXISTING ROOF PLAN

SCALE: 1/8" = 1'-0"



02 PARTIAL PROPOSED ROOF PLAN

SCALE: 1/8" = 1'-0"

Project:

ADDITION FOR

NORTH COUNTY LIBRARY

INDIAN RIVER COUNTY, FLORIDA

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Consultant:

Drawing Title:

ROOF PLANS

Reference North

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Chd: AJD
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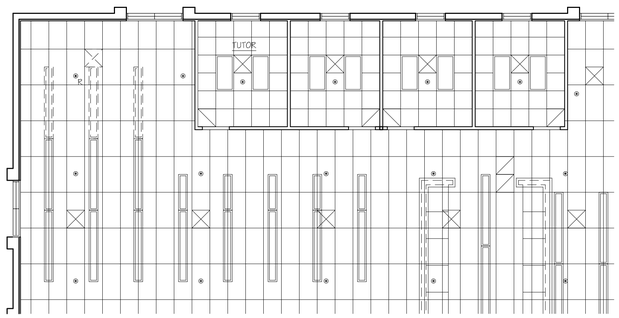
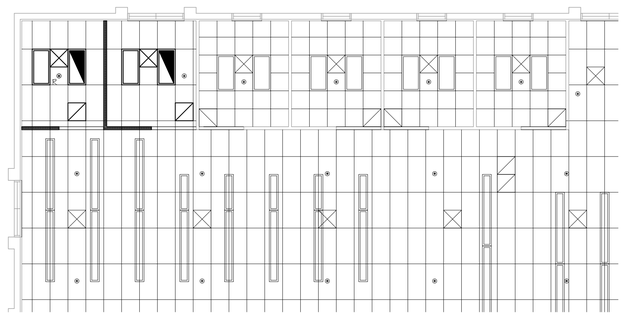


03 EXISTING REFLECTED CEILING PLAN
EAST CORNER OF READING ROOM

SCALE: 1/8" = 1'-0"



04 PROPOSED REFLECTED CEILING PLAN
EAST CORNER OF READING ROOM

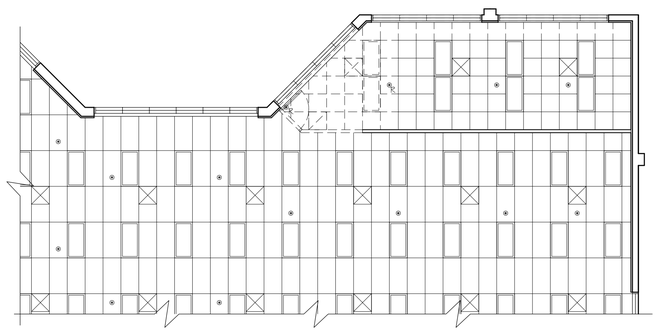
SCALE: 1/8" = 1'-0"

PROPOSED REFLECTED CEILING LEGEND

- NEW EXIT LIGHT
- STUCCO CEILING
- DRYWALL CEILING
- NEW 2X2 OR 2X4 ACOUSTICAL CEILING TILE & GRID
- EXISTING 2X2 OR 2X4 ACOUSTICAL CEILING TILE & GRID TO REMAIN
- NEW SURFACE MOUNTED LIGHT FIXTURE
- EXISTING 1' X 8' SURFACE MOUNTED LIGHT FIXTURE
- EXISTING 2' X 4' LIGHT FIXTURE
- NEW 2' X 4' LIGHT FIXTURE
- NEW 2' X 4' LIGHT FIXTURE WITH EMERGENCY BATTERY PACK
- NEW RECESSED LED FIXTURE
- NEW HVAC SUPPLY GRILLE
- NEW HVAC RETURN AIR GRILLE
- EXISTING HVAC SUPPLY GRILLE
- EXISTING HVAC RETURN AIR GRILLE
- EXISTING FIRE SPRINKLER HEAD
- EXISTING FIRE SPRINKLER HEAD RELOCATED
- NEW FIRE SPRINKLER HEAD

EXISTING/DEMO REFLECTED CEILING LEGEND

- EXISTING 2X2 OR 2X4 ACOUSTICAL CEILING TILE & GRID TO REMAIN
- EXISTING 2X2 ACOUSTICAL CEILING TILE & GRID TO BE REMOVED
- EXISTING 1' X 8' SURFACE MOUNTED LIGHT FIXTURE
- EXISTING 2' X 4' LIGHT FIXTURE
- 1' X 8' SURFACE MOUNTED FIXTURE TO BE REMOVED
- 2' X 4' LIGHT FIXTURE TO BE REMOVED
- EXISTING HVAC SUPPLY GRILLE
- EXISTING HVAC RETURN AIR GRILLE
- EXISTING FIRE SPRINKLER HEAD
- EXISTING FIRE SPRINKLER HEAD TO BE RELOCATED (SEE PROPOSED PLAN)



01 DEMOLITION REFLECTED CEILING PLAN
STORY TIME AREA

SCALE: 1/8" = 1'-0"

02 PROPOSED REFLECTED CEILING PLAN
STORY TIME AND NEW READING ROOM

SCALE: 1/8" = 1'-0"

Project:

ADDITION FOR

NORTH COUNTY LIBRARY

INDIAN RIVER COUNTY, FLORIDA

Key Plan:

Issues:

No.:	Date:	Description:
A.	05/29/20	CLIENT REVIEW
B.	07/17/20	CLIENT REVIEW
C.	12/17/20	PERMIT SET
D.	05/14/21	BLD. DEPT. COMMENTS/1
E.	09/17/21	BIDDING SET

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Consultant:

Drawing Title:

REFLECTED CEILING PLAN

Reference North

Drn: MT
Chd: AJD
Project No.: 2019-44
Sheet No.:
Dwg. File:
XREF File:
Plot File: -

Cert. No.: 12456

Date Signed:

A2.40

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EXTERIOR CMU NOTES:

1. ALL EXTERIOR CMU SHALL BE MANUFACTURED WITH AN INTEGRAL WATER REPELLENT ADMIXTURE, APPLIED AT THE DOSAGE RECOMMENDED BY THE ADMIXTURE MANUFACTURER.

2. ALL EXTERIOR MORTAR SHALL BE TYPE "S", MEETING THE REQUIREMENTS OF ASTM C 270, AND SHALL BE MANUFACTURED WITH AN INTEGRAL WATER REPELLENT ADMIXTURE, APPLIED AT THE DOSAGE RECOMMENDED BY THE ADMIXTURE MANUFACTURER.

3. ALL EXTERIOR MASONRY MORTAR JOINTS SHALL BE TOOLED CONCAVE FOR WATER TIGHTNESS USING A NON-STAINING TOOL.

4. ALL EXTERIOR MASONRY SHALL HAVE 9 GAGE HORIZONTAL MASONRY WALL REINFORCING AT 16" O.C. VERTICALLY.

5. ALL EXTERIOR MASONRY SHALL HAVE A MORTAR NET, FLASHING AND WEEP HOLES AT THE BASE OF THE WALLS AT ALL UN-GROUTED CELLS. PROVIDE "BLOCKFLASH" BY MORTAR NET SOLUTIONS OR APPROVED EQUAL. (SEE SPEC'S BELOW, & DETAIL "C" ON DWG. A4.15.)

6. ALL EXTERIOR SPLIT FACE MASONRY WALLS SHALL RECEIVE 1 COAT OF CHEM-TRETE PB V0E WATER REPELLENT AND 2 COATS OF 100% ACRYLIC LATEX COATING. FOLLOW MANUFACTURERS SPECIFICATIONS FOR SURAFACE PREPARATION PRIOR TO INSTALLATION OF THE WATER REPELLENT AND ARCYLIC COATING. FIRST COAT OF WATER REPELLENT SHALL BE APPLIED AS PER MANUFACTURERS SPECIFICATIONS AT A SPREAD RATE OF 75 SQ FT/GAL. FIRST COAT OF 100% ACRYLIC LATEX COATING SHALL BE SPRA YED AND BACK ROLLED. PRIOR TO APPL YING THE SECOND COAT, THE EXTERIOR SPLIT FACE MASONRY SHALL BE FIELD EXAMINED FOR ANY VOIDS OR CRACKS AND IF FOUND, VOIDS AND CRACKS SHALL BE PATCHED WITH BOTH A MASONRY AND ELASTOMERIC PACTHING COMPOUND, COMPATABLIE WITH THE 100% ACRYLIC LATEX COATING. SECOND COAT SHALL BE SPRAYED AND BACK ROLLIED. BOTH COATS OF 100% ACRYLIC LATEX SHALL BE APPLIED IN STRICT ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS FOR A PROPER SPREAD RATE OF 50-70 SQ FT /GAL/COAT FOR A 2 COAT 100% ACRYLIC LATEX COATING. PROVIDE CHEM-TRETE PB V0V SEALIER AS MANUFACTURER BY PROTECTOSIL®-EVONIK DEGUSSA A&S DIVISION 1-800-828-0919 AND MODAC SMOOTH ACRYLIC TEXTURE COATING AS MANUFACTURED BY MAB PAINTS/SHERWIN WILLIAMS.

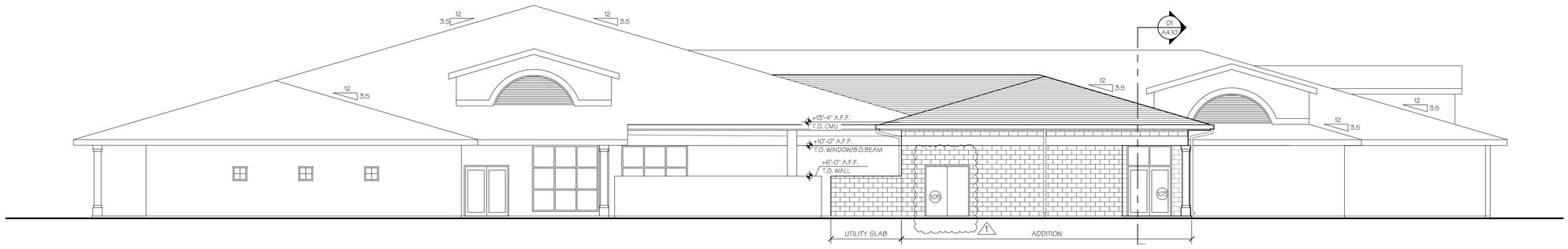
7. THE MASON SHALL TAKE CARE NOT TO PLACE INTO THE WALL ANY BLOCK INHIBITING CRACKS THROUGH THE OUTSIDE FACE SHELL.

LOCKFLASH® SHORT FORM SPECIFICATIONS

SINGLE WYTHE CONCRETE MASONRY UNIT DRAINAGE SYSTEM: BLOCKFLASH@ INSTALL CMU CELL FLASHING PANS WITH BUILT IN ADJOINING BRIDGE MADE FROM RECYCLED POLYPROPYLENE WITH CHEMICAL STABUZERS THAT PREVENT UV DEGRADA LLON. FLASHING PANS HAVE A SLOPED DESIGN TO DIRECT MOISTURE TO THE INTEGRATED WEEP SPOUT. DESIGNED TO BE BUILT INTO MORTAR BED JOINTS TO EXPEL MOISTURE (UNIMPEDED BY MORTAR DROPPINGS) TO THE EXTERIOR OF CMU WALLS. DRAINAGE MATTES AND BUG GUARDS INCLUDED.

PRODUCT: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE "BLOCKFLASH@" AS MANUFACTURED BY MORTAR NET SOLUTIONS®.

MANUFACTURER
MORTAR NET SOLUTIONS®
326 MELTON ROAD, BURNS HARBOR, IN 46304
TELEPHONE: (800)664-6638
FAX: (219)787-5088
EMAIL: INFO@MORTARNET.COM
WEBSITE: WWW.MORTARNET.COM



02 SOUTHWEST ELEVATION

SCALE: 1/8" = 1'-0"

01 SOUTHEAST ELEVATION

SCALE: 1/8" = 1'-0"

Project:

ADDITION FOR

NORTH COUNTY LIBRARY

INDIAN RIVER COUNTY, FLORIDA

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E.	05/14/21	REVISED SW ELEVATION 1
F.	09/17/21	BIDDING SET

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Consultant:

Drawing Title:

ELEVATIONS

Reference North

Drn: MT
Chd: AJD
Project No.: 2019-44
Sheet No.:
Dwg. File:
XREF File:
Plot File: .

Cert. No.: 12456

Date Signed:

A3.10

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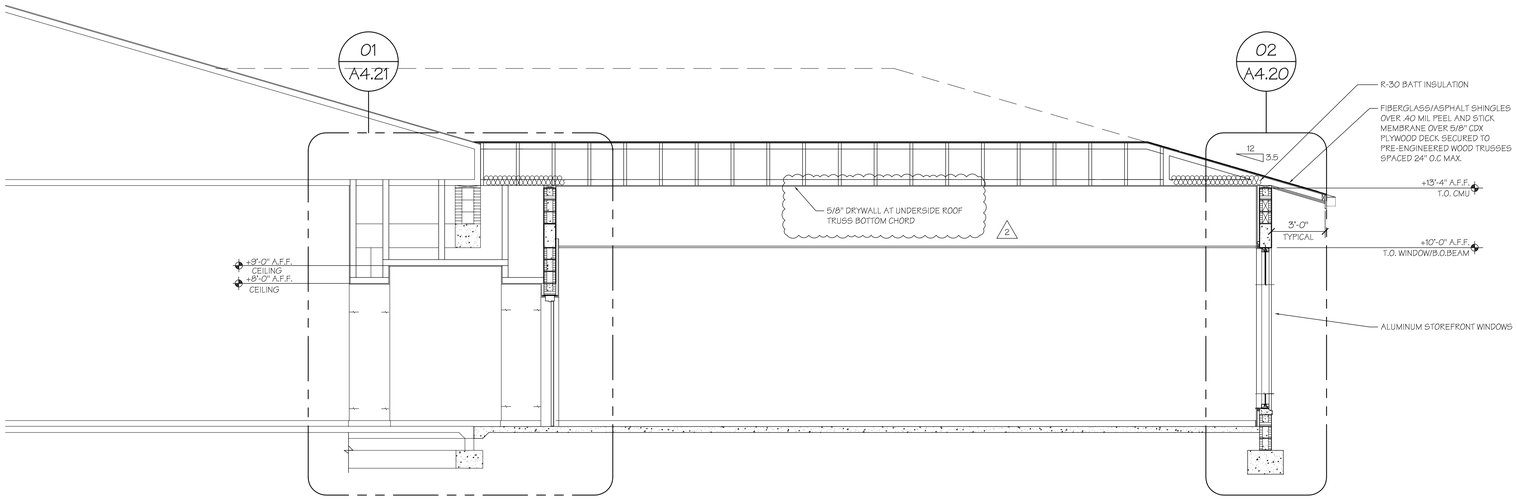
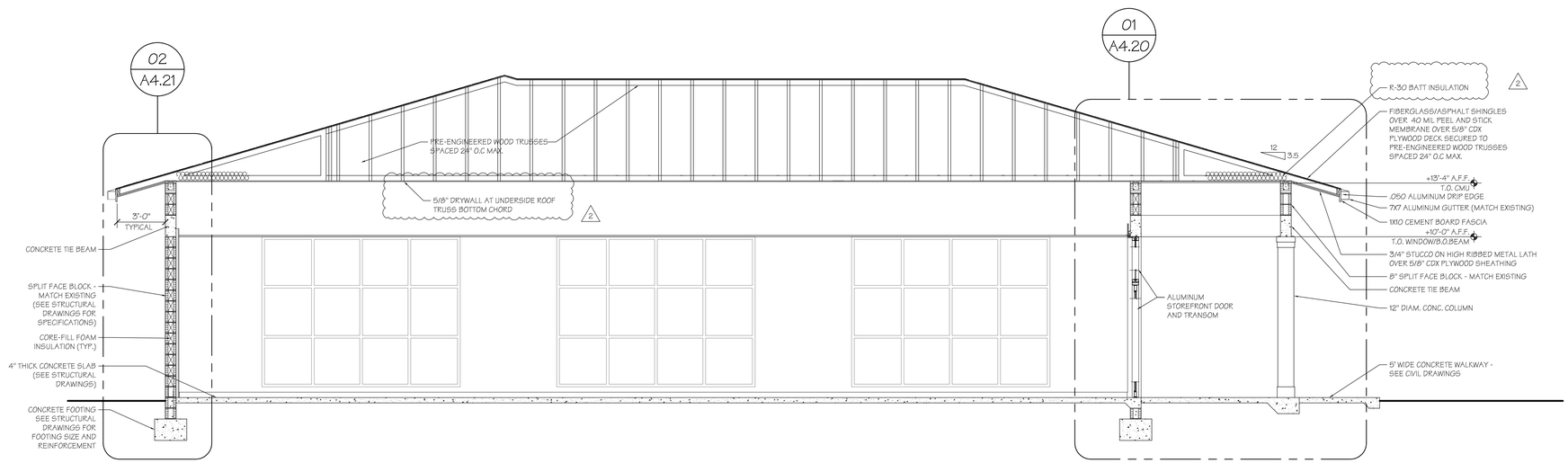


02 BUILDING SECTION

SCALE: 1/4" = 1'-0"



01 BUILDING SECTION

SCALE: 1/4" = 1'-0"

Project:

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NORTH COUNTY LIBRARY

INDIAN RIVER COUNTY, FLORIDA

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D.	08/06/21	BLD. DEPT. COMMENTS 2
E.	09/17/21	BIDDING SET

Architect:

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Consultant:

Drawing Title:

BUILDING SECTIONS

Reference North

Drn: MT
Dwg. File: .
Chd: AJD
XREF File: .
Project No.: 2019-44
Plot File: .
Sheet No.: A4.10

Cert. No.: 12456

Date Signed:

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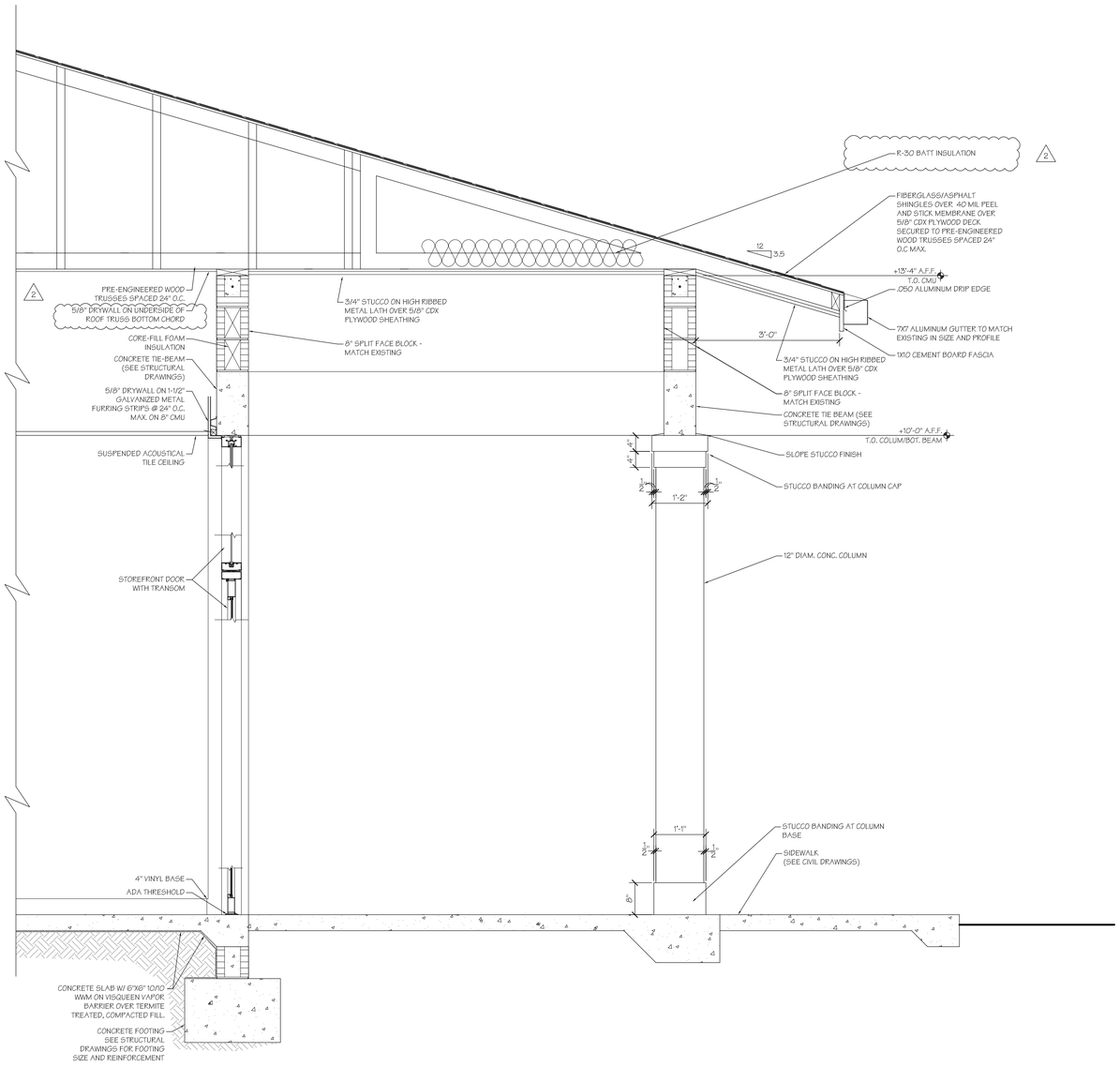
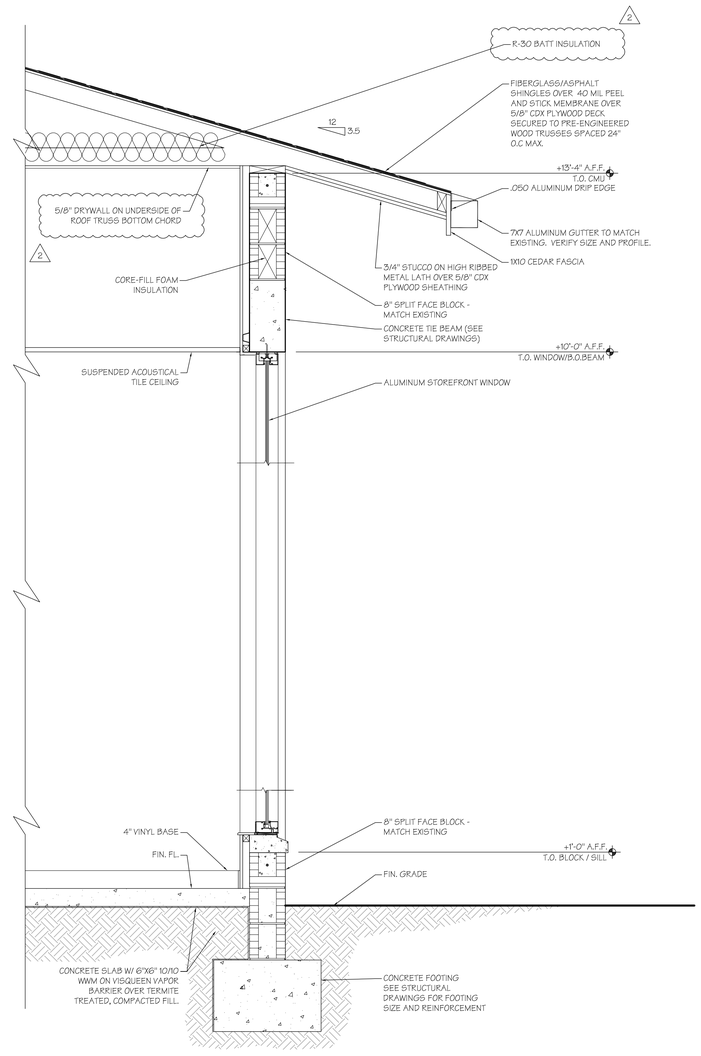


01 WALL SECTION

SCALE: 3/4" = 1'-0"



02 WALL SECTION

SCALE: 3/4" = 1'-0"

Project:

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Drawing Title:

WALL SECTIONS

Reference North

Drn: MT
Chd: AJD
Project No.: 2019-44
Sheet No.: A4.20

Dwg. File: -
XREF File: -
Plot File: -

Cert. No.: 12456

Date Signed:

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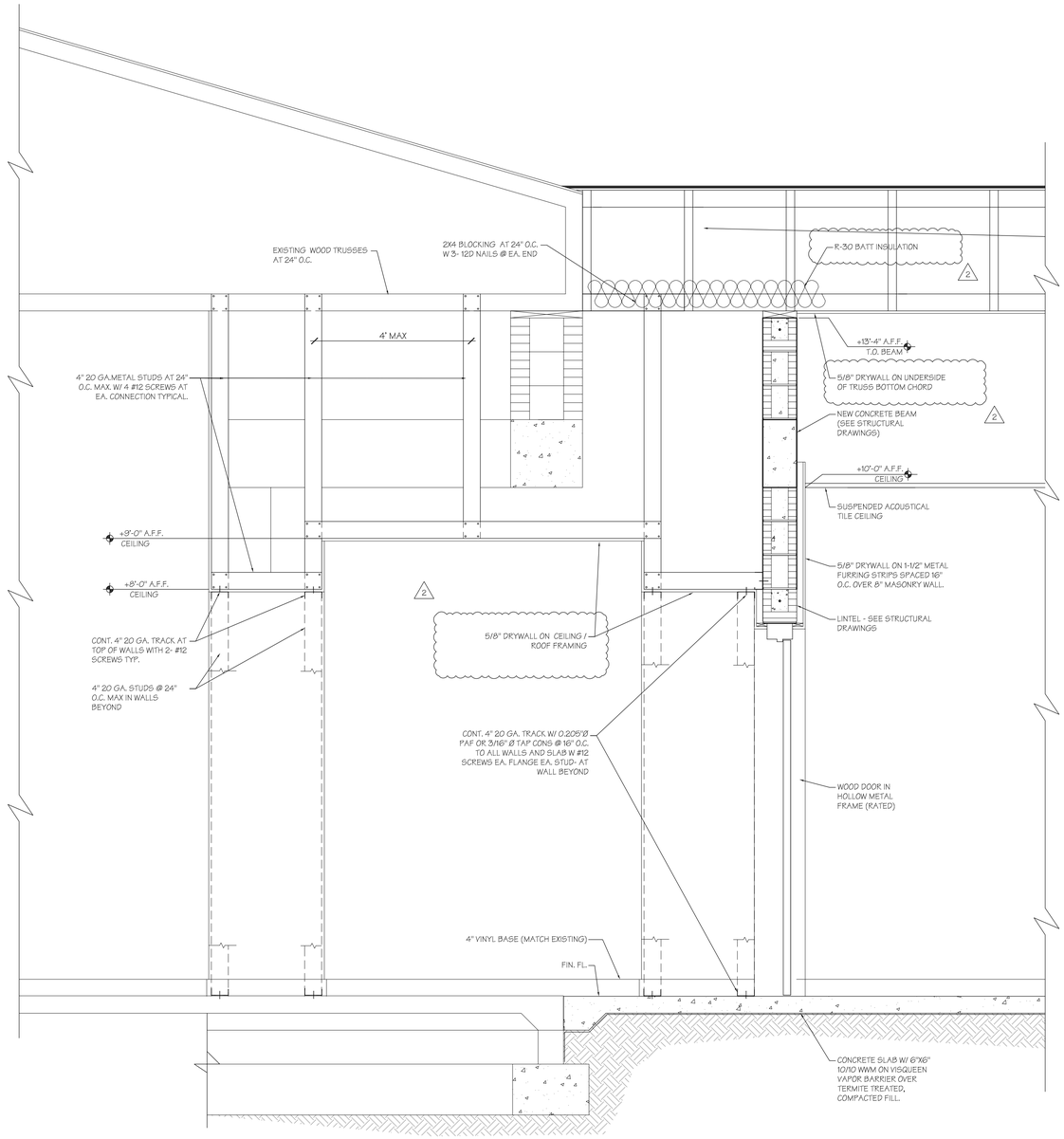

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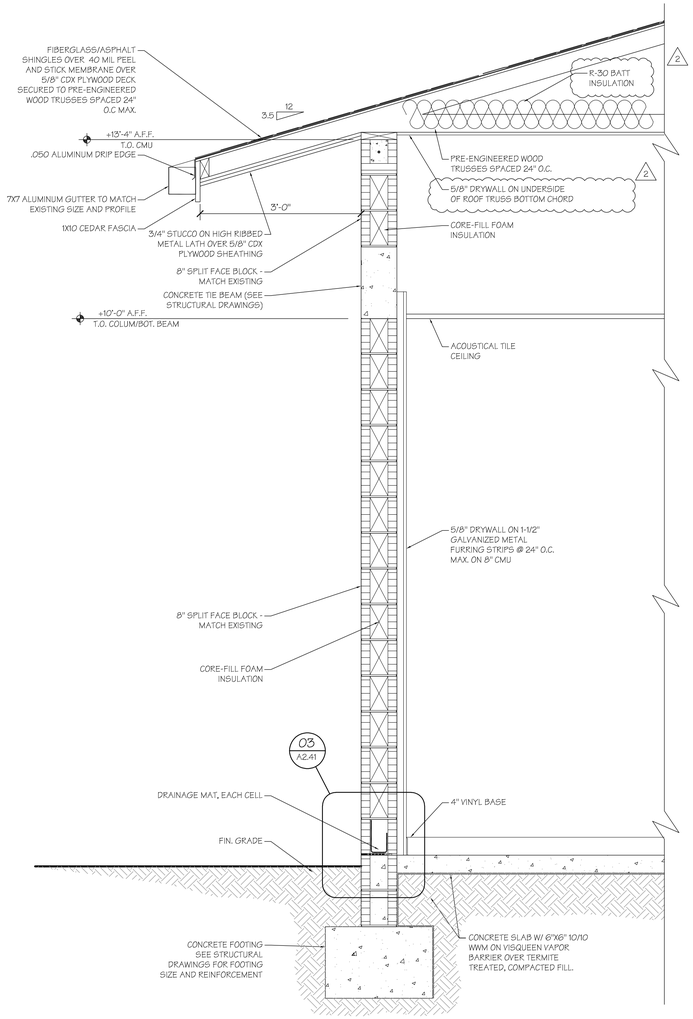
SCALE: 3/4" = 1'-0"



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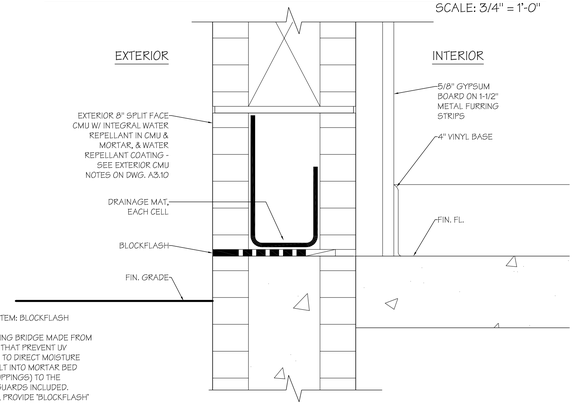
SCALE: 3/4" = 1'-0"



BLOCKFLASH SHORT FORM SPEC

SINGLE WYTHE CONCRETE MASONRY UNIT DRAINAGE SYSTEM: BLOCKFLASH

INSTALL CMU CELL FLASHING PANS WITH BUILT IN ADJOINING BRIDGE MADE FROM RECYCLED POLYPROPYLENE WITH CHEMICAL STABILIZERS THAT PREVENT UV DEGRADATION. FLASHING PANS HAVE A SLOPED DESIGN TO DIRECT MOISTURE TO THE INTERGRATED WEEP SPOUT. DESIGNED TO BE BUILT INTO MORTAR BED JOINTS TO EXPEL MOISTURE (UNIMPEDED BY MORTAR DROPPINGS) TO THE EXTERIOR OF CMU WALLS. DRAINAGE MATTES AND BUG GUARDS INCLUDED. PRODUCT: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE 'BLOCKFLASH' AS MANUFACTURED BY MORTAR NET SOLUTIONS.

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TEL: 800-664-6638
FAX: 219-787-5088
EMAIL: INFO@MORTARNET.COM
WEB: WWW.MORTARNET.COM

03 WALL BASE DETAIL

BLOCKFLASH 8" SINGLE-WYTHE BASE DETAIL — SCALE: 3" = 1'-0"

Project:

ADDITION FOR

NORTH COUNTY LIBRARY

INDIAN RIVER COUNTY, FLORIDA

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E.	09/17/21	BIDDING SET

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Reference North

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Chd:	XREF File:
AJD	.
Project No.:	Plot File:
2019-44	.
Sheet No.:	

Cert. No.: 12456

Date Signed:

A4.21

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DOOR SCHEDULE

DOOR NUMBER	DOOR SIZE		DOOR				FRAME							THRESHOLD	FIRE RATING (IN MINUTES)	HARDWARE GROUP	REMARKS	DOOR NUMBER
										DETAILS (SEE REMARKS)								
	WIDTH X HEIGHT	THICKNESS	DOOR TYPE	MATERIAL	GLASS	FINISH	FRAME TYPE	MATERIAL	FINISH	SILL	JAMB	TRANSOM	HEAD					
100	3'-0" X 7'-0"	1 3/4"	A	SCW	-	P	1	HM	P	S1/A6.11	J1/A6.11	-	H1/A6.11	ADA	-	05A	1	100
101	3'-0" X 7'-0"	1 3/4"	B	ALG	TP	F	2	AL	F	S2/A6.11	J2/A6.11	-	H2/A6.11	-	-	03		101
102	3'-0" X 7'-0"	1 3/4"	A	SCW	-	P	1	HM	P	S1/A6.11	J1/A6.11	-	H1/A6.11	ADA	-	05		102
103	(2)3'-0" X 7'-0"	1 3/4"	B	ALG	IG	F	4	AL	F	S3/A6.11	J3/A6.11	T1/A6.11	H3/A6.11	ADA	-	01		103
104	(2)3'-0" X 7'-0"	1 3/4"	A	SCW	-	P	3	HM	P	S1.1/A6.11	J1/A6.11	-	H1/A6.11	-	-	04		104
105	(2)3'-0" X 7'-0"	1 3/4"	A	HM	-	P	3	HM	P	S1/A6.11	J4/A6.11		H4/A6.11	ADA	-	02		105
106	3'-0" X 7'-0"	1 3/4"	B	ALG	TP	F	5	AL	F	S2/A6.11	J2/A6.11	-	H2/A6.11	-	-	03		106
107	3'-0" X 7'-0"	1 3/4"	B	ALG	TP	F	5	AL	F	S2/A6.11	J2/A6.11	-	H2/A6.11	-	-	03		107

LVR = FULLY LOUVERED
GS = GALVANIZED STEEL
FG = FIBERGLASS

HCW = HOLLOW CORE WOOD
SCW = SOLID CORE WOOD
WD = WOOD

WD = WOOD
MTL = METAL
TP = TEMPERED

GYP = GYPSUM BOARD
MRB = MOISTURE RESITANT GYP.
IG = GREY TINTED, INSULATED, IMPACT RESISTANT GLASS

AN = ANODIZED
PL = PLASTIC LAMINATE
BV = BIRCH VENEER

RG = RATED GLASS (FIRELITE PLUS)
F = FACTORY FINISH
P = PAINT

K = KYNAR

ROOM FINISH SCHEDULE

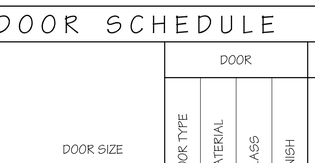
ROOM NUMBER	ROOM NAME / LOCATION	FLOOR	BASE	WALL								CEILING			REMARKS	ROOM NUMBER
				NORTHEAST		SOUTHEAST		SOUTHWEST		NORTHWEST						
		MATERIAL	MATERIAL	MATERIAL	FINISH	MATERIAL	FINISH	MATERIAL	FINISH	MATERIAL	FINISH	MATERIAL	FINISH	HEIGHT		
-	CHILDREN'S AREA	EX	EX	EX	EX	EX/GYP	EX/P	EX	EX	EX	EX	EX	EX	10'-0"		
-	STORY TIME AREA	EX	EX	GYP	P	GYP	P	EX	P	EX	P	EX	EX	10'-0"		
-	ALCOVE	CPT	VB	GYP	P	GYP	P	GYP	P	GYP	P	GYP	P	VARIES		
-	READING ROOM 1	CPT	VB	GYP	P	GYP	P	GYP	P	GYP	P	ACT	F	10'-0"		
-	MECH.	CS	VB	CMU	P	CMU	P	CMU	P	CMU	P	GYP	P	13'-4"		
-	STORAGE	VCT	VB	GYP	P	GYP	P	GYP	P	GYP	P	ACT	F	10'-0"		
-	COVERED ENTRY	CS	-	CMU	P	CMU	P	CMU	P	CMU	P	STC	P	13'-4"		
-	EXISTING READING ROOM	EF	EF	EX	EX	EX/GYP	EX/P	EX	EX	EX	EX	EX	EX	10'-0"		
-	CONFERENCE ROOM #1	CPT	VB	EX	P	EX	P	GYP	P	GYP	P	EX	EX	10'-0"		
-	CONFERENCE ROOM #2	CPT	VB	GYP	P	EX	P	GYP	P	EX	P	EX	EX	10'-0"		

FLOOR
WD -WOOD (LAMINATE)
CPT -CARPET TILE
CT -CERAMIC TILE
VCT -VINYL CUT TILE
PT -PORCELAIN TILE
RF -RUBBER FLOORING
LF -LINOLEUM FLOORING
EF -EPOXY FLOORING
CS -CONCRETE SEALER
ECC -EPOXY COATED CONCRETE
EX -EXISTING

BASE
WB -5-1/2" WOOD BASE
CTB -CERAMIC TILE BASE
EX -EXISTING BASE
PTB -PORCELIN TILE BASE
VB -6" VINYL BASE
EB -6" EPOXY BASE

WALL
GYP -GYPSUM BOARD
MRB -MOISTURE RESISTANT BOARD
CTW -CERAMIC TILE WAINSCOT
CB -CEMENT BOARD
CMU -CONC. MAS. UNIT (SPLIT BLOCK FINISH)
P -LATEX PAINT
EX -EXISTING
STC -STUCCO
P-1 -LATEX PAINT BASE COLOR
P-2 -LATEX PAINT ACCENT COLOR

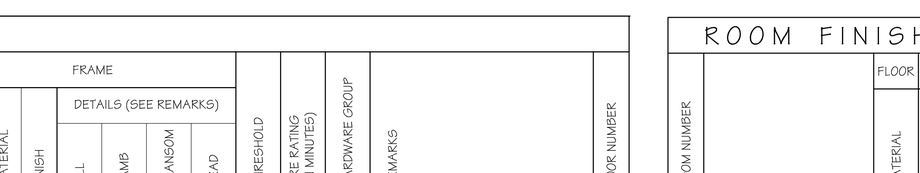
CEILING
ACT -24 X 24 ACCOUSTICAL TILE
GYP -GYPSUM BOARD
EX -EXISTING DRYWALL
EXP -EXPOSED STRUCTURE
F -FACTORY FINISH
STC -STUCCO
P -LATEX PAINT



DOOR TYPE 'A' DOOR TYPE 'B'

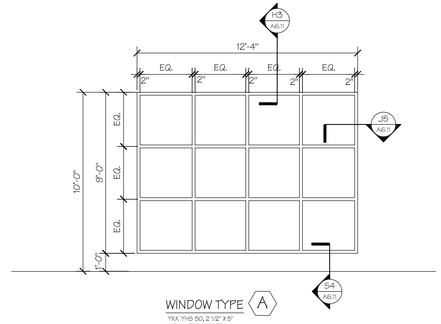
01 DOOR PROFILES

SCALE: 1/4" = 1'-0"



02 DOOR FRAME PROFILES

SCALE: 1/4" = 1'-0"



03 WINDOW PROFILE

SCALE: 1/4" = 1'-0"

HARDWARE GROUP NO. 01 - EXTERIOR STOREFRONT
103
Provide each PR door(s) with the following;

QTY	DESCRIPTION	CATALOG NUMBER	FINISH	MFR
6 EA	HINGE	5BB1 4.5 X 4.5 NRP	630	IVE
1 EA	PANIC HARDWARE	3347A-EO	626	VON
1 EA	PANIC HARDWARE	3347A-T-360T	626	VON
1 EA	MORTISE CYLINDER	20-001 118 OBV 36-083	626	SCH
2 EA	SURFACE CLOSER	4040XP SCUSH	689	LCN
2 EA	MOUNTING PLATE	4040XP-18	689	LCN
2 EA	CUSH SHOE SUPPORT	4040XP-30	689	LCN
1 EA	WALL STOP	WS406/407CVX	630	IVE

SEALS, THRESHOLD AND BALANCE OF HARDWARE BY STOREFRONT SUPPLIER

HARDWARE GROUP NO. 02 - EXTERIOR MECH - PAIR
105
Provide each PR door(s) with the following;

QTY	DESCRIPTION	CATALOG NUMBER	FINISH	MFR
6 EA	HINGE	5BB1 4.5 X 4.5 NRP	630	IVE
2 EA	SURFACE BOLT	SB360 12" T	604	IVE
1 EA	STOREROOM LOCK	ND80P6D RHO	626	SCH
2 EA	SURFACE CLOSER	4040XP SCUSH	689	LCN
1 EA	RAIN DRIP	142AA	AA	ZER
2 EA	GASKETING	8150SBK PSA	BK	ZER
2 EA	DOOR BOTTOM	FAS-SEAL		STE
1 EA	THRESHOLD	566A-223	A	ZER

FBC NOA FL10356 NON-IMPACT
ASTRAGAL BY DOOR SUPPLIER

HARDWARE GROUP NO. 03 - INTERIOR STOREFRONT
101 106 107
Provide each SGL door(s) with the following;

QTY	DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3 EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1 EA	MORTISE DEADBOLT MS1850 SERIES		628	ADA
1 EA	MORTISE CYLINDER	20-013 X L583-446 118 OBV 36-079-037	626	SCH
1 EA	MORTISE THUMBTURN 986T		626	FAL
1 EA	SURFACE CLOSER	4040XP REG OR PA AS REQ TBSRT	689	LCN
1 EA	MOUNTING PLATE	4040XP-18	689	LCN
1 EA	WALL STOP	WS406/407CVX	630	IVE

SEALS AND BALANCE OF HARDWARE BY STOREFRONT SUPPLIER

HARDWARE GROUP NO. 04 - INTERIOR STORAGE - PAIR
104
Provide each PR door(s) with the following;

QTY	DESCRIPTION	CATALOG NUMBER	FINISH	MFR
6 EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1 EA	MANUAL FLUSH BOLT	FB358	626	IVE
1 EA	DUST PROOF STRIKE	DP2	626	IVE
1 EA	STOREROOM LOCK	ND80P6D RHO	626	SCH
2 EA	OH STOP	450S	630	GLY
2 EA	SILENCER	SR64	GRY	IVE

ASTRAGAL BY DOOR SUPPLIER

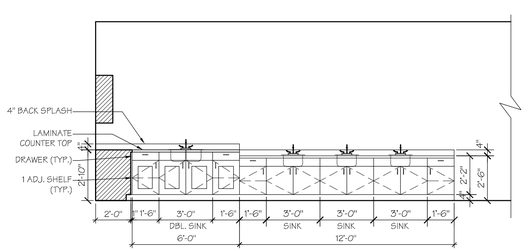
HARDWARE GROUP NO. 05 - INTERIOR READING ROOM
102
Provide each SGL door(s) with the following;

QTY	DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3 EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1 EA	CLASSROOM LOCK	ND70P6D RHO	626	SCH
1 EA	SURFACE CLOSER	4040XP REG OR PA AS REQ TBSRT	689	LCN
1 EA	KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
1 EA	WALL STOP	WS406/407CVX	630	IVE
1 EA	GASKETING	488SBK PSA	BK	ZER
1 EA	THRESHOLD	545A-223	A	ZER

HARDWARE GROUP NO. 05A - INTERIOR READING ROOM - EXIT
100
Provide each SGL door(s) with the following;

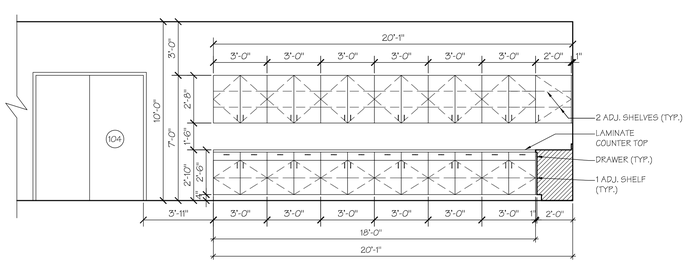
QTY	DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3 EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1 EA	FIRE EXIT HARDWARE	99-L-F-06-SNB	626	VON
1 EA	RIM CYLINDER	20-022	626	SCH
1 EA	SURFACE CLOSER	4040XP REG OR PA AS REQ TBSRT	689	LCN
1 EA	KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
1 EA	WALL STOP	WS406/407CVX	630	IVE
1 EA	GASKETING	488SBK PSA	BK	ZER
1 EA	THRESHOLD	545A-223	A	ZER

1



04 INTERIOR ELEVATION

SCALE: 1/4" = 1'-0"



05 INTERIOR ELEVATION

SCALE: 1/4" = 1'-0"

Project:

ADDITION FOR

NORTH COUNTY LIBRARY

INDIAN RIVER COUNTY, FLORIDA

Key Plan:

Issues:

No.:	Date:	Description:
A.	07/17/20	CLIENT REVIEW
B.	12/17/20	PERMIT SET
C.	05/14/21	BLD. DEPT. COMMENTS 1
D.	09/17/21	BIDDING SET

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Consultant:

Drawing Title:

SCHEDULES

Reference North

Drn: MT
Chk: AJD
Project No.: 2019-44
Sheet No.:
Dwg. File:
XREF File:
Plot File:

Cert. No.: 12456
Date Signed:

A6.10

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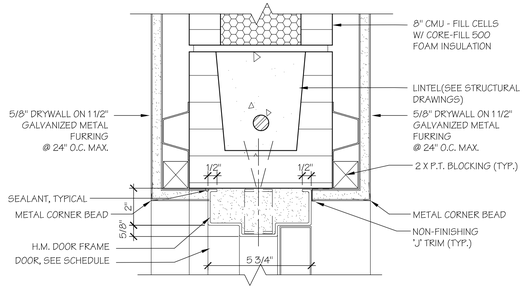
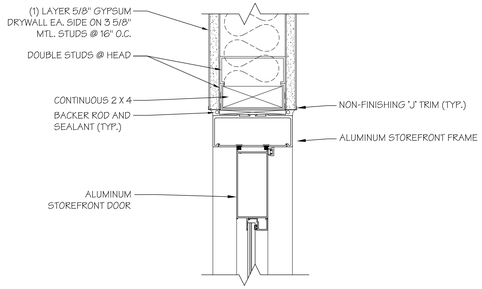


H1 HEAD DETAIL

Scale: 3"=1'-0"



H2 HEAD DETAIL

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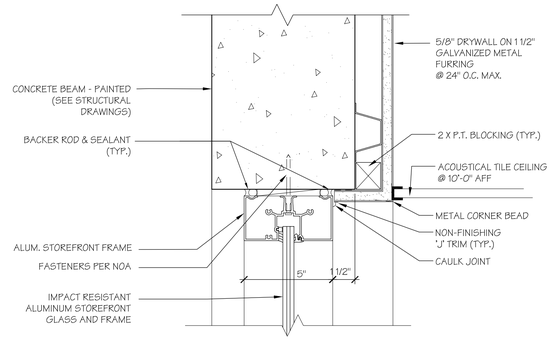

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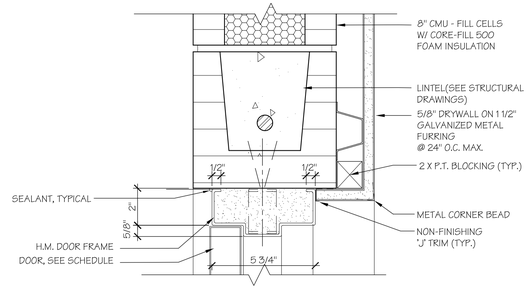

H4 HEAD DETAIL

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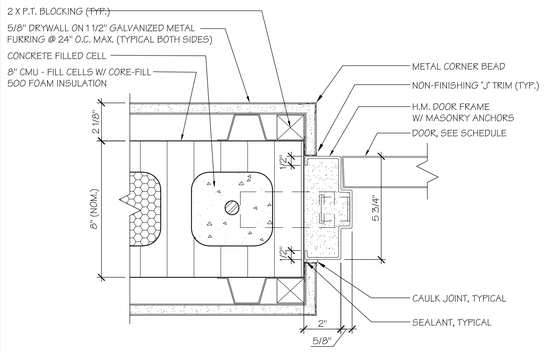
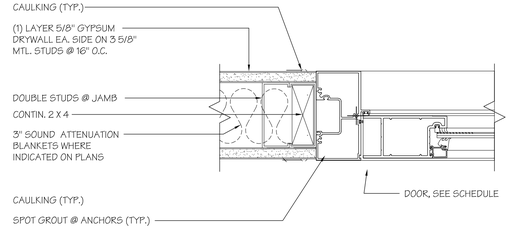


J1 JAMB DETAIL

Scale: 3"=1'-0"



J2 JAMB DETAIL (HEAD SIM.)

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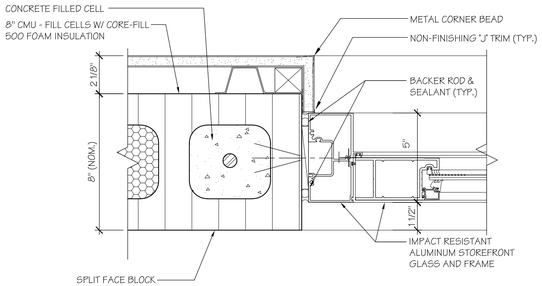

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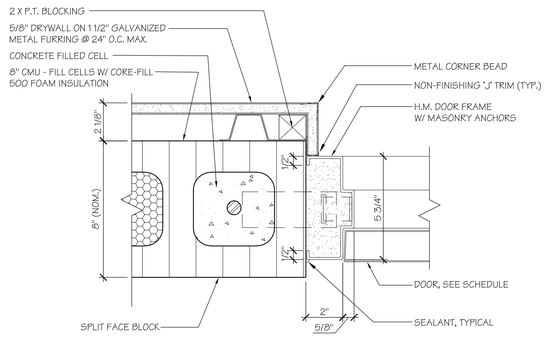

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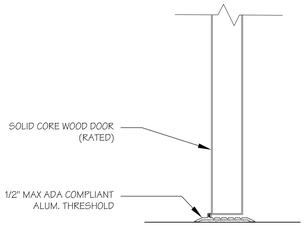
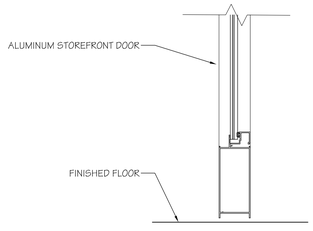


S1 SILL DETAIL

Scale: 3"=1'-0"



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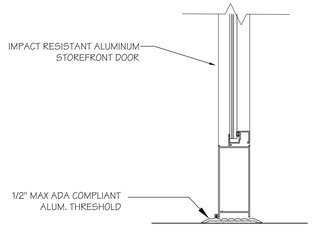

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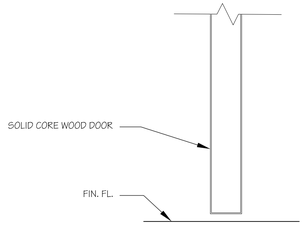
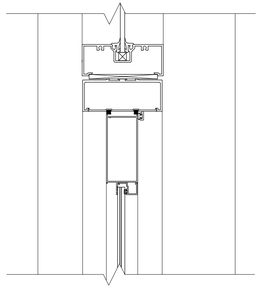


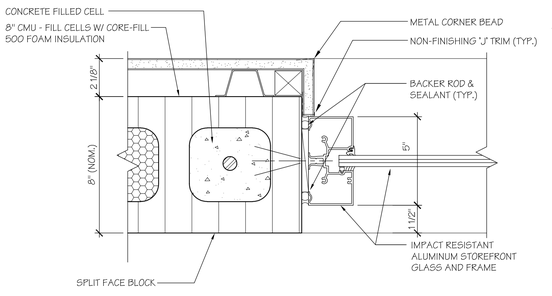
S1.1 SILL DETAIL

Scale: 3"=1'-0"

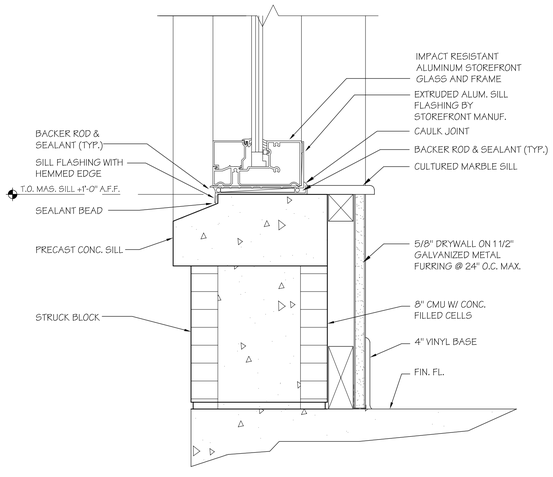


T1 TRANSOM DETAIL

Scale: 3"=1'-0"



J5 JAMB DETAIL



S4 SILL DETAIL

Scale: 3"=1'-0"

Project:

ADDITION FOR

NORTH COUNTY LIBRARY

INDIAN RIVER COUNTY, FLORIDA

Key Plan:

Issues:

No.:	Date:	Description:
A.	07/17/20	CLIENT REVIEW
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Architect:

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Consultant:

Drawing Title:

WINDOW AND DOOR DETAILS

Reference North

Drn:	Dwg. File:
MT	
Chd:	XREF File:
AJD	.
Project No.:	Plot File:
2019-44	.
Sheet No.:	

Cert. No.: 12456

Date Signed:

A6.11

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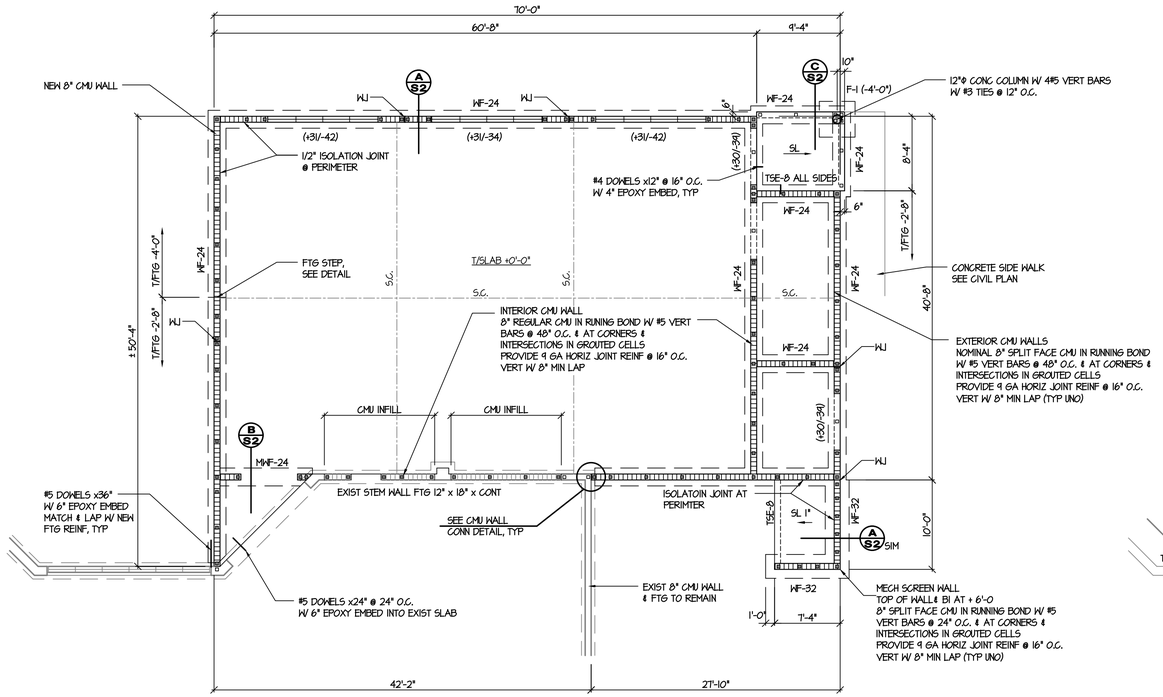


FOUNDATION PLAN

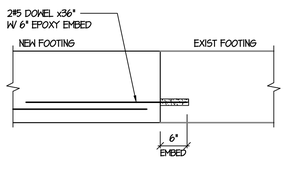
SCALE 1/8" = 1'-0"

NORTH

NOTES:
1. REFERENCED TOP OF SLAB @ + 0'-0", REFER TO SURVEY FOR ACTUAL ELEVATION.
2. ALL SLABS SHALL BE 4" THICK 3,000 PSI REINF. ON GRADE OVER 6 MIL VAPOR BARRIER W/ 6x6-W1.4xW1.4 WWF ON TREATED COMPACTED SOIL.
3. (+/-) DENOTES DESIGN WIND PRESSURES (psf).
   D - DOOR W - WINDOW SL - SIDE LIGHT
4. S.C. - 1/8"x1" DEEP SAW CUTS SHALL BE MADE AS SOON AS CONCRETE HAS HARDENED SUFFICIENTLY TO PREVENT FROM BEING DISLODGED BY SAW BLADE.
5. CONTRACTOR SHALL COORDINATE STRUCTURAL WORK WITH ARCHITECTURAL, MECHANICAL, PLUMBING & ELECTRICAL DRAWINGS FOR VERIFICATION OF LOCATIONS & DIMENSIONS OF ALL PROJECT REQUIREMENTS. ANY DISCREPANCIES SHALL BE CALLED TO THE ATTENTION OF THE ARCHITECT OR ENGINEER OF RECORD BEFORE PROCEEDING WITH WORK.
6. REFER TO ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS NOT SHOWN.

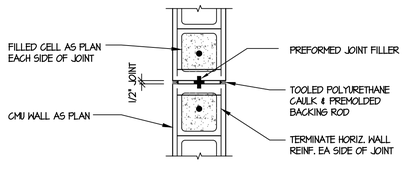
FOUNDATION SCHEDULE

MARK	SIZE (D x W x L)			REINFORCING	REMARKS
WF-24	12"	24"	CONT	3#5 LW BOT, #5 TRANS @ 32" O.C. BOT.	STEM WALL FTG.
WF-32	16"	32"	CONT	3#5 LW TOP & BOT, #5 TRANS @ 24" O.C. TOP & BOT.	STEM WALL FTG. AT MECH SCREEN WALLS
MWF-24	12"	24"	CONT	3#5 LW BOT, #5 TRANS @ 32" O.C. BOT.	MONOLITHIC FTG
F-1	12"	36"	36"	4#5 EW BOT	COLUMN FTG.
TSE-8	8"	8"	CONT	1#5 LW BOT	THICKENED SLAB EDGE
TSE-16	16"	16"	CONT	2#5 LW BOT	THICKENED SLAB EDGE



TYPICAL FTG. CONN. DETAIL

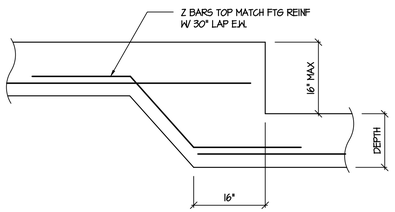
SCALE: 3/4" = 1'-0"



WALL JOINT DETAIL

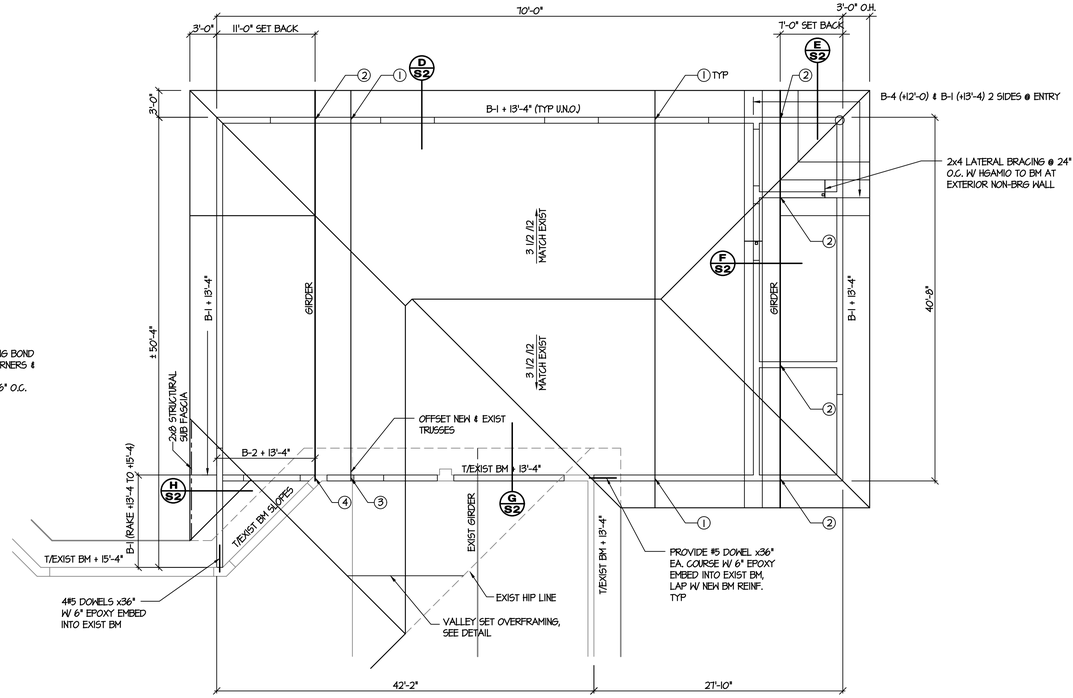
SCALE: 3/4" = 1'-0"

NOTES:
1. 1/2" CMU WALL JOINT AS PLAN & NOTED AS THUS: W.J.
2. DISCONTINUE HORIZONTAL JOINT REINFORCING EACH SIDE OF JOINT.
3. CONTINUE ALL HORIZONTAL BEAM REINFORCING THROUGH THE JOINT.
4. ALIGN MASONRY HEAD JOINTS IN BOND BEAM WITH WALL JOINT.
5. ALIGN STUCCO JOINTS WITH WALL JOINTS.



STEPPED FTG DETAIL

SCALE: 3/4" = 1'-0"



ROOF FRAMING PLAN

SCALE 1/8" = 1'-0"

NORTH

NOTES:
1. TOP OF BM @ TRUSS BRG + 13'-4" TYP U.N.O.
2. ROOF SHEATHING SHALL BE 5/8" MIN. CDX PLYWOOD ATTACHED AS PER SPECIFICATIONS.
3. TRUSSES SHALL BE PRE-ENGINEERED ROOF TRUSSES DESIGNED BY A TRUSS MANUF. & INSTALLED @ 24" O.C.
4. (#) TRUSS CONNECTOR, SEE SCHEDULE.
5. B-# CONCRETE BEAM, SEE SCHEDULE.
6. REFER TO ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS NOT SHOWN.

TRUSS CONNECTOR SCHEDULE

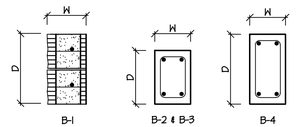
MARK	CONNECTOR	MAX UPLIFT (LBS)	CAPACITY (LBS)	REMARKS
(1)	HETA20	1700	1810	TYP. TRUSS TO MASONRY OR CONCRETE U.N.O.
(2)	(2) HETA20	2300	2500	GIRDER TO MASONRY OR CONCRETE
(3)	HTSM20	1100	1110	TYP. TRUSS TO EXIST MASONRY OR CONCRETE U.N.O.
(4)	(1) MGT	2500	3465	GIRDER TO EXIST MASONRY OR CONCRETE

NOTES:
1. PROVIDE TRUSS CONNECTOR AT ENDS OF ALL TRUSSES AS NOTED.
2. TRUSSES WITH MULTIPLE STRAPS OF CONNECTORS SHALL BE STAGGERED EA SIDE OF TRUSS TO AVOID SPLITTING MEMBER.
3. TRUSS CONNECTORS AND CLIPS NOTED ON THIS LAYOUT ARE MODEL #'S OF 'SIMPSON STRONG TIE'. CONTRACTOR MAY SUBSTITUTE EQUAL STRAPS FROM ANOTHER MANUF.
4. INSTALL CONNECTORS PER THE MANUFACTURER SPECIFICATIONS.

CONCRETE BEAM SCHEDULE

MARK	SIZE		REINFORCING				REMARKS
	WIDTH	DEPTH	TOP	INT.	BOTTOM	STIRRUPS	
B-1	8"	16"	1#7	-	1#7	-	(2) COURSE 8" NOMINAL SPLIT FACE BOND BLOCK
B-2	8"	12"	2#5	-	2#5	#3 @ 12" O.C.	POURED CONC BEAM
B-3	8"	12" MIN	2#5	-	2#5	#3 @ 24" O.C.	POURED CONC RAKE BEAM
B-4	8"	16"	2#5	-	2#5	#3 @ 12" O.C.	POURED CONC BEAM

NOTES:
1. PROVIDE 8" PRECAST CONCRETE LINTEL BY CAST CRETE OR EQUAL ABOVE ALL MASONRY OPENINGS W/ #5 BAR GROUTED SOLID POURED SOLID WITH THE MASONRY BOND BEAM ABOVE WITH A MIN. OF 8" BRG EACH END. TYPICAL U.N.O.



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JOB NAME: AN ADDITION FOR: NORTH COUNTY LIBRARY
1001 SEBASTIAN BLVD. SEBASTIAN, FLORIDA

TITLE: FOUNDATION & ROOF FRAMING PLANS

REVISIONS:	DATE:

ISSUE:	DATE:
PERMIT SET	12/17/20

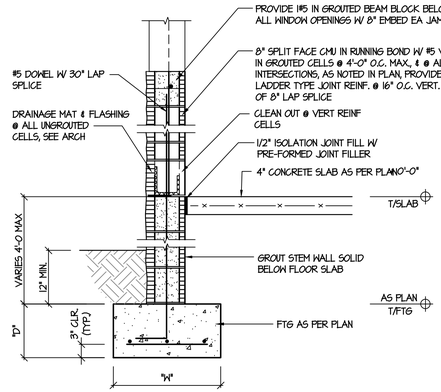
DATE:	8-24-20
DRAWN BY:	TR
CHECKED BY:	ML
JOB No.	20-138

SEAL:

MICHAEL A. LUE, P.E.
FLORIDA REG. #47520

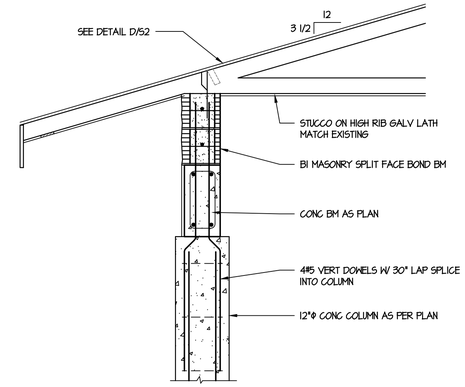
SHEET NO: S-1

OF 2 SHEET



A/S2 SECTION AT EXTERIOR WALLS

SCALE: 3/4" = 1'-0"



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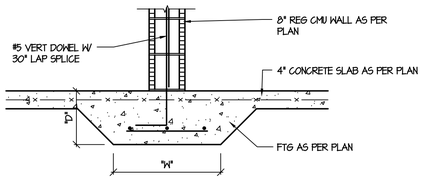

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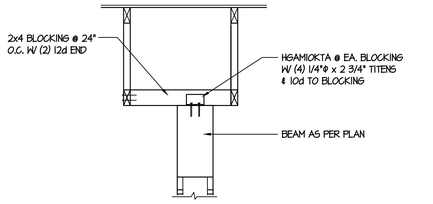

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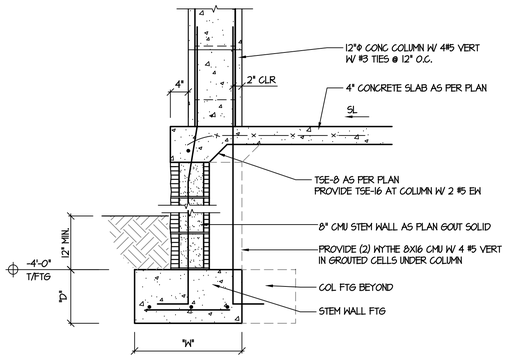

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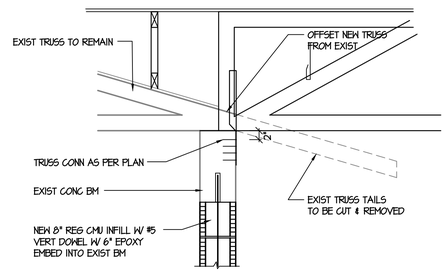

G/S2 SECTION

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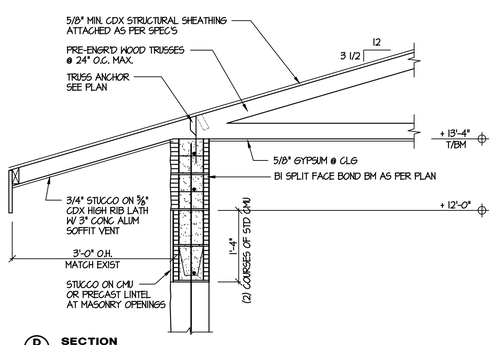

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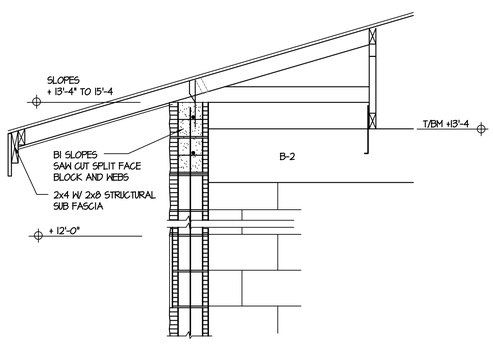

H/S2 SECTION

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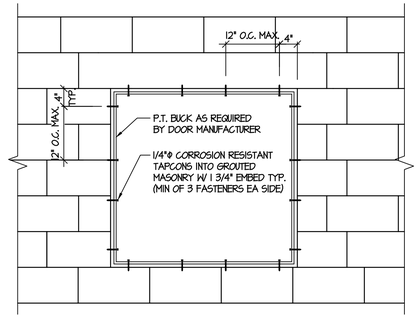
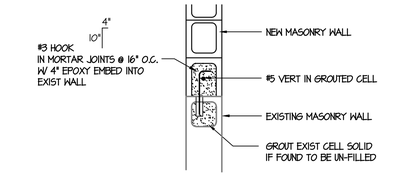


WINDOW/DOOR ATTACHMENT DETAIL (MASONRY)

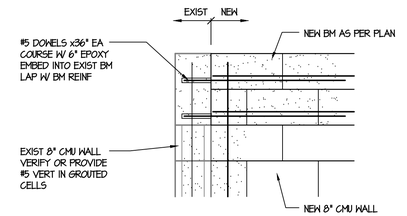
N.T.S.

NOTES:
1. ALL WINDOW & DOOR PERIMETERS SHALL BE WATERTIGHT. PROVIDE AN APPLICABLE APPROVED WATERPROOF SEALANT, (1) COAT BEFORE INSTALLING BUCKS & (1) COAT AFTER BUCK INSTALLATION. LIQUID WATERPROOFING SHALL COMPLY W/ AAMA 714.
2. USING STRUCTURAL WOOD BUCK:
   THE MINIMUM STRUCTURAL WOOD BUCK SHALL BE 1 1/2" THICK ATTACHED TO GROUTED MASONRY OR CONC W/ 1/4"ø CORROSION RESISTANT TAPCONS AS SHOWN. FASTEN DOOR & WINDOWS TO BUCK W/ MIN. 1/4"ø STAINLESS STEEL WOOD SCREWS AS PER NOA.
3. NO STRUCTURAL BUCK:
   THE WINDOW & DOORS SHALL BE FASTENED DIRECTLY TO THE GROUTED MASONRY OR CONC W/ 1/4"ø CORROSION RESISTANT TAPCONS AS SHOWN OR AS PER NOA.



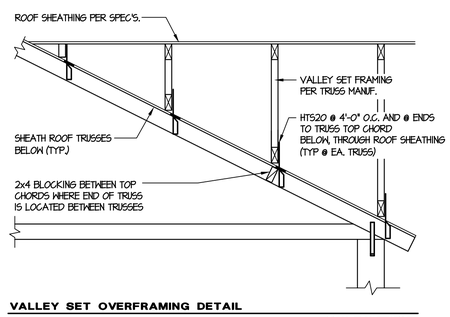
CMU WALL CONNECTION DETAIL

SCALE: 3/4" = 1'-0"



TYP BEAM CONN TO EXIST DETAIL

SCALE: 3/4" = 1'-0"



VALLEY SET OVERFRAMING DETAIL

SCALE: 3/4" = 1'-0"

DESIGN CRITERIA

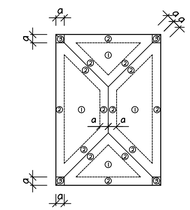
FLORIDA BUILDING CODE, 6TH EDITION (2017) - BUILDING

ROOF LOADS
- DEAD ..... 20 PSF
- LIVE
  - TRUSS TOP CHORD ..... 20 PSF
  - TRUSS BOTTOM CHORD W/ STORAGE ..... 20 PSF
  - TRUSS BOTTOM CHORD W/O STORAGE ..... 10 PSF

DESIGN CRITERIA PER ASCE 7-10
- ULTIMATE WIND SPEED REGION, V(ult) ..... 170 MPH
- NOMINAL WIND SPEED REGION, V(asd) ..... 132 MPH
- WIND BORNE DEBRIS REGION
- ENCLOSED STRUCTURE
- BUILDING HEIGHT < 20 FT
- ROOF PITCH 3 1/2 /12
- RISK CATEGORY III
- INTERNAL PRESSURE COEFF. ± 0.18
- EXPOSURE B
- HEIGHT & EXPOSURE COEFF. 1.0

NOMINAL COMPONENT & CLADDING PRESSURES PSF (ASD)

ZONE		EFFECTIVE AREA (SQ. FT)							
		0 < 10		11 < 20		21 < 50		51 < 100	
ROOF	1	+18	-29	+16	-28	+14	-27	+13	-26
	2	+18	-50	+16	-46	+14	-41	+13	-37
	3	+18	-74	+16	-69	+14	-63	+13	-58
WALL	4	+31	-34	+30	-33	+28	-31	+27	-29
	5	+31	-42	+30	-39	+28	-36	+27	-33
SOFFIT	4	-34		-33		-31		-29	
	5	-42		-39		-36		-33	


a
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a

LIGHTING FIXTURE SCHEDULE

SYMBOL	TYPE	DESCRIPTION	LAMPS NO.	LAMPS TYPE	LAMPS WATT	BALLAST TYPE	VOLTAGE	MOUNTING	REMARKS
	A	2'x4' LOW PROFILE RECESSED BASKET FIXTURE PHILIPS DAY-BRITE FLUXGRID SERIES.	1	LED 3500'K	48	– –	120	CEILING RECESSED	1
	A1	2'x4' LED FIXTURE SAME AS TYPE "A" EXCEPT WITH EMERGENCY LIGHTING BATTERY PACK (1400 LUMEN OUTPUT).	1	LED 3500'K	48	– –	120	CEILING RECESSED	1
	B	LED OPEN REFLECTOR DOWN LIGHT WITH 6" APERTURE HE WILLIAMS L60 SERIES. (DAMP RATED)	1	LED 3500'K	36	–	120	CEILING RECESSED	1
	C	4' LED STRIP FIXTURE HE WILLIAMS 75R SERIES.	1	LED 3500'K	32	–	120	SURFACE MOUNTED	1
		SINGLE FACE THERMOPLASTIC EXIT SIGN/LIGHT WITH WHITE HOUSING AND RED LETTERS. PROVIDE DIRECTIONAL ARROWS AS INDICATED. PACO "PX" SERIES. PROVIDE FIXTURE WITH A 90 MINUTE BATTERY BACK UP.	–	LED	–	– –	DUAL	UNIVERSAL	

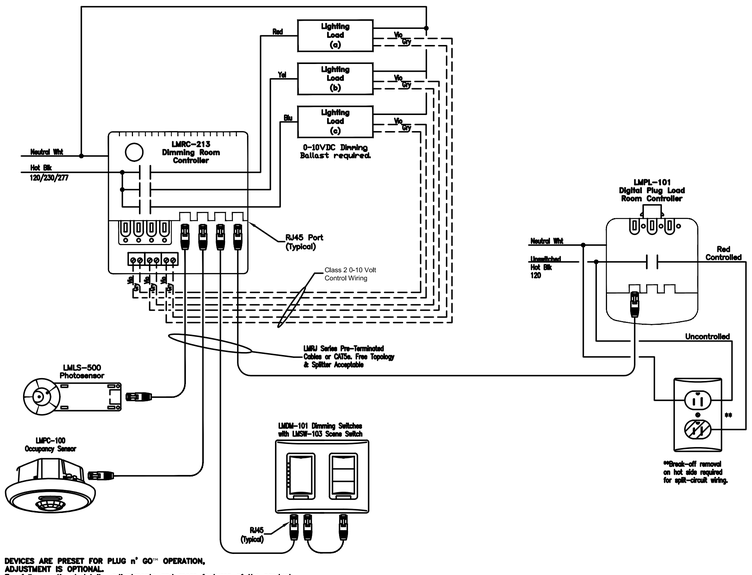
NOTES:
(1) VERIFY CEILING TYPES PRIOR TO ORDERING FIXTURES.

GENERAL NOTE:
NO SUBSTITUTIONS TO THE LIGHT FIXTURE SCHEDULE CONTAINED IN THESE DOCUMENTS WILL BE CONSIDERED WITHOUT PRIOR REVIEW AND/OR APPROVAL BY THE ARCHITECT AND ELECTRICAL ENGINEER.

LIGHTING CODE COMPLIANCE CALCULATIONS

	ROOM NAME	AREA (SQ.FT.)	NUMBER OF FIXTURES	FIXTURE TYPE	INPUT WATTS PER FIXTURE	TOTAL DESIGNED WATTS	ALLOWED LIGHTING POWER DENSITY	TOTAL ALLOWED WATTS
	OFFICE	2300	35	A	48	1808	0.9	2070
			4	B	32			
	TOTALS	2300	–			1808		2070

NOTES:
1. TOTAL DESIGNED WATTS ARE 2070 – 1808 = 262 WATTS BELOW THE MAXIMUM ALLOWED WATTS PER CODE.



CONTROL DETAIL
NTS

ELECTRICAL SPECIFICATIONS

PART 1 – GENERAL

A. THE CONTRACTOR SHALL SUPPLY AND INSTALL ALL NEW ELECTRICAL WORK INDICATED. CONSTRUCTION SHALL BE IN ACCORDANCE WITH DRAWINGS AND APPLICABLE SPECIFICATIONS. IF A PROBLEM IS ENCOUNTERED IN COMPLYING WITH THIS REQUIREMENT, CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER AS SOON AS POSSIBLE AFTER DISCOVERY OF THE PROBLEM AND SHALL NOT PROCEED WITH THAT PORTION OF THE WORK UNTIL ARCHITECT/ENGINEER HAS DIRECTED CORRECTIVE ACTION TO BE TAKEN.
B. THE CONTRACTOR SHALL VISIT THE JOB SITE PRIOR TO BID AND FAMILIARIZE HIMSELF WITH ALL CONDITIONS AFFECTING ELECTRICAL AND COMMUNICATIONS INSTALLATION AND MAKE PROVISIONS AS TO THE COST THEREOF.
C. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRIC CODE (AS ADOPTED BY THE AUTHORITY HAVING JURISDICTION) AND ALL CODES AND ORDINANCES OF THE AUTHORITY HAVING JURISDICTION. THE SPECIFICATION, CODES AND STANDARDS LISTED BELOW ARE UTILIZED IN THIS PROJECT.
   1. NATIONAL ELECTRICAL CODE (NFPA-70)
   2. CODE FOR SAFETY TO LIFE (NFPA_101)
   3. STANDARD FOR THE INSTALLATION, MAINTENANCE AND USE OF LOCAL PROTECTIVE SIGNALING SYSTEMS (NFPA-72)
   4. UNDERWRITERS' LABORATORIES (UL)
   5. NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA)
   6. AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)
   7. FEDERAL SPECIFICATION (FED. SPEC.)
   8. INSULATED POWER CABLE ENGINEERS ASSOCIATION (IPCEA)
   9. FLORIDA BUILDING CODE. FBC 2017 EDITION
   10. INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS (IEEE)
   11. CITY OF INDIAN RIVER COUNTY BUILDING CODE. (AMENDMENTS TO FLORIDA BUILDING CODE FBC 2017)
   12. ADDITIONALLY, DESIGNS, WORK PRACTICES AND CONDITIONS MUST CONFORM WITH THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970 (OSHA)
D. DO NOT SCALE THE ELECTRICAL DRAWINGS. REFER TO ARCHITECTURAL PLANS AND ELEVATIONS FOR EXACT LOCATION OF ALL EQUIPMENT. CONFIRM WITH OWNER'S REPRESENTATIVE.
E. IT IS NOT THE INTENT OF THESE PLANS TO SHOW EVERY MINOR DETAIL OF CONSTRUCTION. THE CONTRACTOR IS EXPECTED TO FURNISH AND INSTALL ALL ITEMS FOR A COMPLETE ELECTRICAL SYSTEM AND PROVIDE ALL REQUIREMENTS NECESSARY FOR EQUIPMENT TO BE PLACED IN PROPER WORKING ORDER.
F. CONTRACTOR SHALL GUARANTEE ALL MATERIALS AND WORKMANSHIP FREE FROM DEFECTS FROM A PERIOD OF NOT LESS THAN ONE YEAR FROM DATE OF ACCEPTANCE.
G. CORRECTION OF ANY DEFECTS SHALL BE COMPLETED WITHOUT ADDITIONAL CHARGE AND SHALL INCLUDE REPLACEMENT OR REPAIR OF ANY OTHER PHASE OF THE INSTALLATION WHICH MAY HAVE BEEN DAMAGED THERE BY.
H. ALL REQUIRED INSURANCE SHALL BE PROVIDED FOR PROTECTION AGAINST PUBLIC LIABILITY AND PROPERTY DAMAGE FOR THE DURATION OF THE WORK. CONTRACTOR SHALL PAY FOR ALL PERMITS, FEES, INSPECTIONS AND TESTING. CONTRACTOR TO OBTAIN PERMIT AND APPROVED SUBMITTALS PRIOR TO BEGINNING WORK OR ORDERING EQUIPMENT. THE TERM "PROVIDE" USED IN THE CONSTRUCTION DOCUMENTS AND SPECIFICATIONS SHALL MEAN THAT THE CONTRACTOR IS TO FURNISH, INSTALL AND CONNECT COMPLETE.

PART 2 – PRODUCTS

A. MINIMUM WIRE SIZE SHALL BE #12 A.W.G. (EXCEPT AS NOTED OTHERWISE FOR CONTROL WIRING). ALL CONDUCTORS SHALL BE 98% CONDUCTIVITY, COPPER WITH "THHN-THWN" INSULATION UNLESS OTHERWISE NOTED.
B. ELECTRICAL METALLIC TUBING (EMT) SHALL BE OF BEST QUALITY STEEL, SMOOTH INSIDE AND OUT AND SHALL BE HOT-DIPPED GALVANIZED.
C. OUTLET BOXES SHALL BE PRESSED STEEL IN DRY LOCATIONS, CAST ALLOY WITH THREADED HUBS
I. IN WET OR DAMP LOCATIONS AND SPECIAL ENCLOSURES FOR OTHER CLASSIFIED AREAS.
D. RIGID NONMETALIC CONDUIT SHALL BE SCHEDULE 40 PVC.
E. ALL MATERIALS SHALL BE NEW AND BEAR UNDERWRITERS' LABELS WHERE APPLICABLE.
F. PANELBOARDS:
   1. CURRENT CARRYING BUSES SHALL BE COPPER. GROUND BUS BARS SHALL BE COPPER.
   2. ALL CIRCUIT BREAKERS SHALL BE BOLT ON. PLUG-IN BREAKERS ARE NOT ACCEPTABLE.
   3. CIRCUIT BREAKERS USED AS SWITCHES IN FLUORESCENT OR HID LIGHTING CIRCUITS SHALL BE LISTED AND MARKED "SWD"
   4. ALL CIRCUIT BREAKERS FEEDING MECHANICAL EQUIPMENT SHALL BE HACR TYPE.
   5. A.I.C. RATINGS SHALL BE AS INDICATED ON PANELBOARD SCHEDULES.
   6. ALL PANELBOARDS SHALL BE FURNISHED WITH PLASTIC LAMINATE NAMEPLATES WITH 1/4" ENGRAVED LETTERING FOR PANEL IDENTIFICATION.
   7. ALL PANELBOARDS SHALL BE PROVIDED WITH TYPE-WRITTEN DIRECTORY OF BRANCH CIRCUIT DESIGNATIONS.
G. DISCONNECT SWITCHES SHALL BE H.P. RATED, HEAVY DUTY, QUICK-MAKE, QUICK-BREAK. ENCLOSURES SHALL BE NEMA-1 FOR INDOOR LOCATIONS, NEMA 3R FOR OUTDOOR LOCATIONSOR AS OTHERWISE NOTED.
H. MOTOR STARTERS SHALL BE MANUAL OR MAGNETIC AS INDICATED ON THE ELECTRICAL DRAWINGS, WITH OVERLOAD RELAYS IN EACH PHASE.
WIRING DEVICES (GENERAL PURPOSE RECEPTACLES AND WALL SWITCHES) COLOR SHALL BE COORDINATED WITH CLIENT.

PART 3 – EXECUTION

A. COLOR CODING OF CONDUCTORS SHALL BE AS FOLLOWS:
   1. 208/120 VOLTS, 3 PHASE, 4-WIRE SYSTEM: UNGROUNDED CONDUCTORS: 1 BLACK, 1 RED AND 1 BLUE. GROUNDED (NEUTRAL) CONDUCTOR; WHITE. GROUNDING CONDUCTORS SHALL BE GREEN.
   2. 480/277 VOLT, 3-PHASE, 4-WIRE SYSTEM: UNGROUNDED CONDUCTORS: 1 BROWN, 1 YELLOW, AND 1 PURPLE. GROUNDED (NEUTRAL) CONDUCTORS; GREY. GROUNDING CONDUCTORS SHALL BE GREEN.
   3. BRANCH CIRCUIT WIRING (#6 AND SMALLER) SHALL BE COLOR CODED BY CONTINUOUS INSULATION COLOR AND FEEDERS AND SERVICES (#4 AND LARGER) SHALL BE CODED AT ALL JUNCTION OR PULL POINTS (EXCEPT LB'S OR LBD'S) USING COLOR MARKERS OR PLASTIC TAPE MANUFACTURED FOR THE PURPOSE.
I.
B. WIRING METHODS
   1. ALL CONDUCTORS SHALL BE INSTALLED IN ELECTRICAL METALLIC TUBING (EMT) UNLESS OTHERWISE NOTED, SPECIFIED OR AS SPECIFICALLY PROHIBITED BY THE AUTHORITY HAVING JURISDICTION. ALL FITTINGS AND COUPLINGS FOR EMT CONDUIT SHALL BE ALL STEEL RAIN TIGHT COMPRESSION TYPE OR ALL STEEL CONCRETE TIGHT SET SCREW TYPE.
   2. SCHEDULE 40 PVC CONDUIT, WITH FITTINGS AND COUPLINGS APPROPRIATE FOR THE USE, SHALL BE INSTALLED UNDERGROUND OR BELOW SLABS ON GRADE.
   3. TYPE MC CABLE WITH ALUMINUM ARMOR AND INTERNAL GROUND IS ACCEPTABLE FOR USE AS GENERAL BRANCH CIRCUIT WIRING FOR CIRCUITS 20 AMPERES OR LESS AND CONCEALED IN WALLS OR ABOVE SUSPENDED CEILING AND AS APPROVED BY THE AUTHORITY HAVING JURISDICTION.
C. ELECTRICAL SYSTEM SHALL BE COMPLETE AND EFFECTIVELY GROUNDED AS REQUIRED BY THE LATEST EDITION OF THE N.E.C. AND LOCAL CODES.
D. ALL WORK SHALL BE PERFORMED BY A LICENSED ELECTRICAL CONTRACTOR IN A FIRST CLASS WORKMANLIKE MANNER. THE COMPLETED SYSTEM SHALL BE FULLY OPERATIVE AND ACCEPTED BY ENGINEER/ARCHITECT.
E. ALL WORK SHALL BE COORDINATED WITH OTHER TRADES TO AVOID INTERFERENCE WITH THE PROGRESS OF CONSTRUCTION.
F. THE ELECTRICAL INSTALLATION SHALL MEET ALL STANDARD REQUIREMENTS OF POWER AND TELEPHONE COMPANIES, AND SHALL BE FULLY COORDINATED WITH THEM PRIOR TO COMMENCEMENT OF WORK.
G. PROVIDE AND INSTALL CONDUIT, CONDUCTORS, PULL WIRES, BOXES, COVER PLATES, AND WIRING DEVICES, FOR ALL OUTLETS AS INDICATED.
H. MATERIALS, PRODUCTS, AND EQUIPMENT, INCLUDING ALL COMPONENTS THEREOF, SHALL BE NEW AND SUCH AS APPEAR ON THE UL LIST OF APPROVED ITEMS AND SHALL MEET OR EXCEED THE REQUIREMENTS OF NEC, NEMA, AND IECE.
CONTRACTOR SHALL SUBMIT AT LEAST FIVE (5) SETS OF SHOP DRAWINGS OR CUT SHEETS OF LIGHTING FIXTURES, SWITCHES, AND OTHER ELECTRICAL ITEMS FOR APPROVAL BY ENGINEER/ARCHITECT. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING AND PATCHING REQUIRED OF HIS WORK.
K. ALL LAY-IN LIGHTING FIXTURES SHALL BE SECURED TO THE SUSPENDED CEILING GRID AT EACH CORNER.
L. CONTRACTOR SHALL COORDINATE WITH MECHANICAL DRAWINGS AND PROVIDE ALL NECESSARY CONTROL WIRING.
M. ALL ELECTRICAL POWER WIRING FOR THE HVAC SYSTEM INCLUDING WIRING THRU LINE VOLTAGE CONTROL DEVICES SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.

N. THE CONTRACTOR SHALL CONFIRM WITH THE ELECTRICAL UTILITY COMPANY ANY AND ALL REQUIREMENTS SUCH AS: METERING EQUIPMENT REQUIREMENTS AND METERING EQUIPMENT LOCATION, TRANSFORMER SIZE AND LOCATION OR SERVICE POINT, CONDUIT ENTRY AND LUG SIZE RESTRICTIONS. THE CONTRACTOR SHALL SCHEDULE ALL REQUIRED DOWN TIME FOR THE OWNERS CONFIRMATION.
ANY CONFLICTS AND DESCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE
O. PROCEEDING WITH ANY WORK.
PER NEC 210.8(B)(2) ALL 15- AND 20-AMPERE, 125-VOLT RECEPTACLES IN NONDWELLING-TYPE KITCHENS TO BE GFCI PROTECTED.

P. BRANCH CIRCUIT CONDUCTORS SHALL BE SIZED FOR A MAXIMUM VOLTAGE DROP OF 3% DESIGN LOAD. FBC 2017 FBC ENERGY CONSERVATION SECTION 405.7.3.

Q. FEEDER CONDUCTORS SHALL BE SIZED FOR A MAXIMUM OF 2% VOLTAGE DROP PER 405.7.3.

ELECTRICAL SHEET INDEX

E0.1	ELECTRICAL NOTES, LEGEND & INDEX
E2.1	LIGHTING PLAN
E3.1	POWER PLAN
E5.1	ELECTRICAL RISER DIAGRAM

ELECTRICAL LEGEND

▽	TELEPHONE OUTLET WITH 3/4" CONDUIT STUBBED OUT FROM WALL 6" ABOVE CEILING. MOUNT 18" A.F.F. TO CENTER LINE OF OUTLET UNLESS OTHERWISE NOTED.
▼	DATA OUTLET WITH 3/4" CONDUIT STUBBED OUT FROM WALL 6" ABOVE CEILING. MOUNT 18" A.F.F. TO CENTER LINE OF OUTLET UNLESS OTHERWISE NOTED.
▽▼	TELEPHONE/DATA OUTLET WITH 3/4" CONDUIT STUBBED OUT FROM WALL 6" ABOVE CEILING. MOUNTED ABOVE COUNTER, SEE ARCHITECTURAL DRAWING FOR SPECIFIC REQUIREMENTS.
▼	TELEPHONE/DATA OUTLET WITH 3/4" CONDUIT STUBBED OUT FROM WALL 6" ABOVE CEILING. MOUNT 18" A.F.F. TO CENTER LINE OF OUTLET UNLESS OTHERWISE NOTED.
▽	TELEPHONE/DATA OUTLET WITH 3/4" CONDUIT RUN TO THE NEAREST STUD WALL AND STUBBED OUT FROM WALL 6" ABOVE CEILING. PROVIDE BRASS COVER PLATE AND CARPET FLANGE.
TV	TELEVISION OUTLET WITH 1-1/4" CONDUIT STUBBED OUT FROM WALL 6" ABOVE CEILING. MOUNT AT 18" A.F.F. TO CENTER LINE OF OUTLET UNLESS OTHERWISE NOTED.
	20 AMP SINGLE RECEPTACLE (NEMA 5-20R) MOUNTED AT 18" A.F.F. TO CENTER LINE OF OUTLET UNLESS NOTED OTHERWISE.
	20 AMP DUPLEX RECEPTACLE (NEMA 5-20R) MOUNTED AT 18" A.F.F. TO CENTER LINE OF OUTLET UNLESS NOTED OTHERWISE.
	20 AMP QUADRUPLEX RECEPTACLE (NEMA 5-20R) MOUNTED AT 18" A.F.F. TO CENTER LINE OF OUTLET UNLESS NOTED OTHERWISE.
GFI	20 AMP DUPLEX RECEPTACLE (NEMA 5-20R) WITH GROUND FAULT CIRCUIT INTERRUPTER, MOUNT AT 18" A.F.F. TO CENTER LINE OF OUTLET. UNLESS NOTED OTHERWISE.
	20 AMP DUPLEX RECEPTACLE (NEMA 5-20R) MOUNTED ABOVE COUNTER SEE ARCHITECTURAL DRAWINGS FOR SPECIFIC REQUIREMENTS.
	20 AMP DUPLEX RECEPTACLE (NEMA 5-20R) WITH ISOLATED GROUND, MOUNT AT 18" A.F.F. TO CENTERLINE OF OUTLET UNLESS OTHERWISE NOTED.
	20 AMP QUADRUPLEX RECEPTACLE (NEMA 5-20R) WITH ISOLATED GROUND, MOUNT AT 18" A.F.F. TO CENTERLINE OF OUTLET UNLESS OTHERWISE NOTED.
	20 AMP DUPLEX RECEPTACLE (NEMA 5-20R), RECESS FLOOR MOUNTED. PROVIDE BRASS COVER PLATE AND CARPET FLANGE.
	20 AMP DUPLEX RECEPTACLE (NEMA 5-20R), CEILING MOUNTED.
	SPECIAL-PURPOSE RECEPTACLE
J	JUNCTION BOX
J_P	SINGLE GANG JUNCTION BOX FOR POWER CONNECTION TO MODULAR FURNITURE SYSTEM INSTALL IN EXACT MANNER AS DIRECTED BY FURNITURE SUPPLIER.
$J_{T/D}$	DOUBLE GANG JUNCTION BOX FOR TELEPHONE/DATA CONNECTION TO MODULAR FURNITURE SYSTEM. INSTALL IN EXACT MANNER AND LOCATION AS DIRECTED BY FURNITURE SUPPLIER. EXTEND (2) 3/4" EMPTY CONDUITS FROM JUNCTION BOX TO ABOVE CEILING AND TERMINATE WITH INSULATING BUSHING 6" FROM WALL.
	TELE/POWER POLE FOR TELEPHONE/DATA/POWER CONNECTION TO MODULAR FURNITURE 8 WIRE SYSTEM (SEE DETAIL THIS SHEET). INSTALL IN EXACT MANNER AND LOCATION AS DIRECTED BY FURNITURE SUPPLIER, WIREMOLD CATALOG # 25DTP-4D W/IVORY FINISH.
	SPECIAL PURPOSE RECEPTACLE MOUNTED BELOW RAISE FLOOR.
EF	EXHAUST FAN. SEE MECHANICAL DRAWINGS FOR SPECIFICATIONS.
$	SINGLE POLE, 20 AMP, SWITCH. MOUNT 46" A.F.F. TO CENTERLINE OF SWITCH UNLESS OTHERWISE NOTED.
$3	3-WAY, 20 AMP, SWITCH. MOUNT 46" A.F.F. TO CENTERLINE OF SWITCH UNLESS OTHERWISE NOTED.
$D	SINGLE POLE, 20 AMP, SWITCH WITH DIMMER. MOUNT 46" A.F.F. TO CENTERLINE OF SWITCH UNLESS OTHERWISE NOTED.
$M	MOTOR RATED SWITCH
$VS	VACANCY SENSOR SWITCH, WATTSTOPPER, MOUNT 46" A.F.F. TO CENTERLINE OF SWITCH UNLESS OTHERWISE NOTED.
$	TWO POLE, 30 AMP SWITCH. MOUNT ADJACENT EQUIPMENT TO BE CONTROLLED.
	FACTORY MOUNTED DISCONNECT/STARTER (SEE MECHANICAL SCHEDULE)
A B C	FUSIBLE DISCONNECT SWITCH A = POLES, B= FRAME SIZE, C= FUSE RATING
A B C	FUSIBLE MOTOR STARTER DISCONNECT SWITCH A = POLES, B= NEMA SIZE, C= FUSE RATING
	GROUNDING ELECTRODE & CONDUCTOR SYSTEM
	TRANSFORMER
	ELECTRICAL PANELBOARD
	TELEPHONE WOOD BACKBOARD
WP	WEATHERPROOF
T/C	TIME CLOCK
RE	RELOCATED
E	EXISTING TO REMAIN
A.F.F.	ABOVE FINISH FLOOR
	CEILING MOUNTED DUAL TECHNOLOGY MOTION SENSOR BY WATTSTOPPER.
LV	CEILING MOUNTED LOW VOLTAGE DUAL TECHNOLOGY MOTION SENSOR BY WATTSTOPPER.
DS	CEILING MOUNTED DAY LIGHTING SENSOR. SENSOR TO CONTROL THE DIMMING OF ALL FIXTURES WITHIN 15' OF THE WINDOWS WITH IN ROOM.

ISSUED FOR PERMIT 12-17-20

KAMM CONSULTING PROJECT #: 2020-0276
PROJECT MANAGER: DUANE MILLAR
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Certification of Authorization #8189
PRINCIPAL
Bradly L Brown Florida License #58232
05-19-21 date
signed

Project:

ADDITION FOR

NORTH COUNTY LIBRARY

INDIAN RIVER COUNTY, FLORIDA

Key Plan:

Issues:

No.:	Date:	Description:
A.	05/11/20	CLIENT REVIEW
B.	12/17/20	PERMIT SET
C.	05/14/21	PERMIT COMMENTS
D.	09/16/21	BID SET

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Consultant:

Drawing Title:
ELECTRICAL NOTES

Reference North

Drn: MT
Chd: AJD
Project No.: 2019-54
Sheet No.:
Dwg. File: .
XREF File: .
Plot File: .

Cert. No.: 12456
Date Signed:

E0.1

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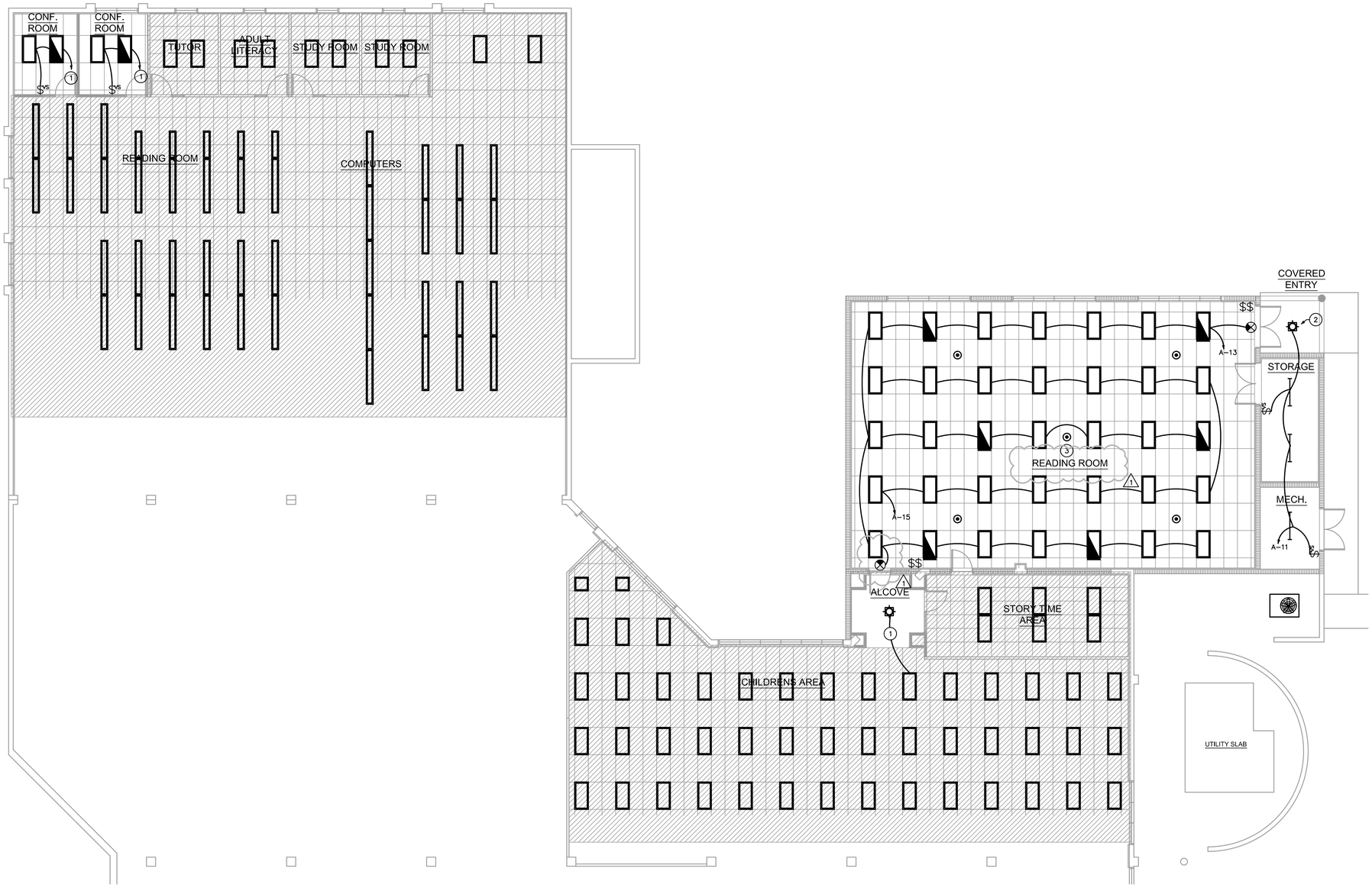

LIGHTING PLAN

1/8"=1'-0"

KEY NOTES

1. TIE TO EXISTING LIGHTING CIRCUIT IN AREA. NO NEW LOAD ADDED.
2. CIRCUIT THROUGH PHOTOCELL.
3. SEE CONTROLS DETAIL ON SHEET E0.1.

ISSUED FOR PERMIT	12-17-20
.	

KAMM CONSULTING PROJECT #: 2020-0276
PROJECT MANAGER: DUANE MILLAR

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Project:

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Consultant:

Drawing Title:

LIGHTING PLAN

Reference North

Drn: MT
Chd: AJD
Project No.: 2019-54
Sheet No.: E2.1

Dwg. File: .
XREF File: .
Plot File: .

Cert. No.: 12456
Date Signed:

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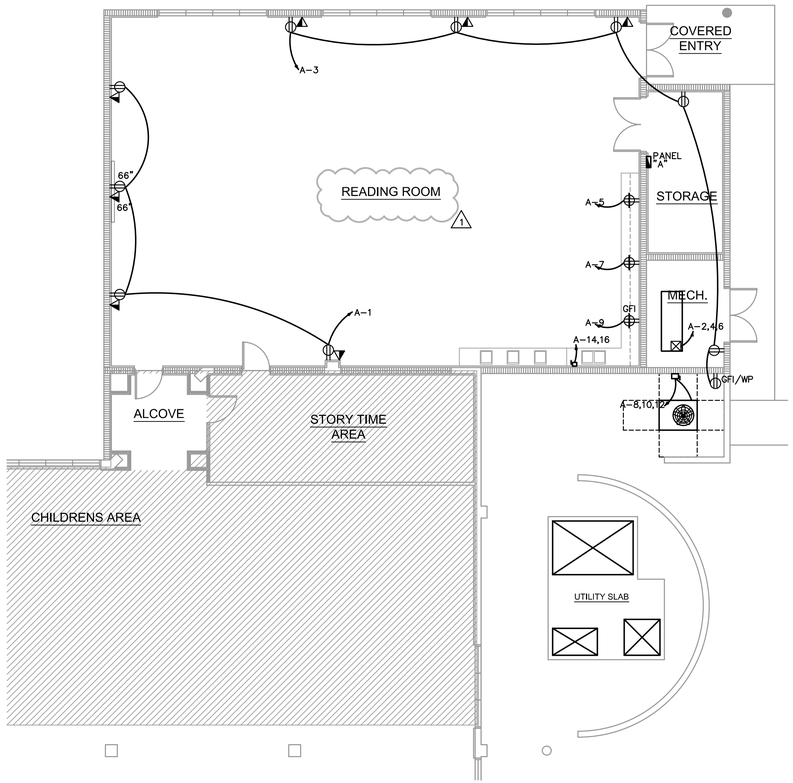

POWER PLAN

1/8"=1'-0"

Project:

ADDITION FOR

NORTH COUNTY LIBRARY

INDIAN RIVER COUNTY, FLORIDA

Key Plan:

Issues:

No.:	Date:	Description:
A.	05/11/20	CLIENT REVIEW
B.	12/17/20	PERMIT SET
C.	05/14/21	PERMIT COMMENTS
D.	09/16/21	BID SET

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Drawing Title:

POWER PLAN

Reference North

ISSUED FOR PERMIT 12-17-20

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Bradly L Brown Florida License #58232

05-19-21
date

signed

Drn: MT
Chd: AJD
Project No.: 2019-54
Sheet No.:

Dwg. File: .
XREF File: .
Plot File: .

Cert. No.: 12456

Date Signed:

E3.1

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SCHEDULE OF BRANCH CIRCUIT PANEL "A"

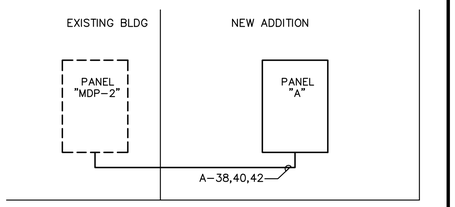
MAIN: 100 AMP / 3 POLE MAIN LUG ONLY — VOLTAGE: 208/120V, 3ø, 4 WIRE
SPEC: SQUARE D TYPE "NQ" OR APPROVED EQUIVALENT
MOUNTING: SURFACE — AIC SYMM: 22,000

DESCRIPTION	WIRE	GND.	COND.	TRIP	CKT.	A PHASE KVA	B PHASE KVA	C PHASE KVA	CKT.	TRIP	COND.	GND.	WIRE	DESCRIPTION
RECEPTACLES	#12	#12	1/2"	20	1	0.8 | 5.8			2	70	1"	1#8	3#4	AHU-1
RECEPTACLES	#12	#12	1/2"	20	3		0.8 | 5.8		4					
RECEPTACLES	#12	#12	1/2"	20	5			0.8 | 5.8	6	3				
RECEPTACLES	#12	#12	1/2"	20	7	0.8 | (*)			8	70	1"	1#8	3#4	CU-1
RECEPTACLES	#12	#12	1/2"	20	9		0.8 | (*)		10					
LIGHTING	#12	#12	1/2"	20	11			0.8 | (*)	12	3				
LIGHTING	#12	#12	1/2"	20	13	0.8 | 3.0			14	30	3/4"	1#10	2#10	IWH
LIGHTING	#12	#12	1/2"	20	15		0.8 | 3.0		16	2				
SPARE	–	–	–	20	17			– | –	18	20	–	–	–	SPARE
SPARE	–	–	–	20	19	– | –			20	20	–	–	–	SPARE
SPARE	–	–	–	20	21		– | –		22	20	–	–	–	SPARE
SPARE	–	–	–	20	23			– | –	24	20	–	–	–	SPARE
SPARE	–	–	–	20	25	– | –			26	20	–	–	–	SPARE
SPARE	–	–	–	20	27		– | –		28	20	–	–	–	SPARE
SPARE	–	–	–	20	29			– | –	30	20	–	–	–	SPARE
						11.2	11.2	7.4	KVA PER PHASE					
						–	–	–	AMPS PER PHASE					
						29.8			TOTAL KVA					

SCHEDULE OF EXISTING BRANCH CIRCUIT PANEL "MDP-2"

MAIN: 600 AMP / 3 POLE MAIN CIRCUIT BREAKER — VOLTAGE: 208/120V, 3ø, 4 WIRE
SPEC: EXISTING
MOUNTING: EXISTING — AIC SYMM: EXISTING

DESCRIPTION	WIRE	GND.	COND.	TRIP	CKT.	A PHASE KVA	B PHASE KVA	C PHASE KVA	CKT.	TRIP	COND.	GND.	WIRE	DESCRIPTION
SPACE	–	–	–	–	1	– | 11.2			2	100	1-1/4"	1#8	4#3	PANEL "A"
SPACE	–	–	–	–	3		– | 11.2		4					
SPACE	–	–	–	–	5			– | 7.4	6	3				
EXISTING CIRCUIT	–	–	–	100	7	9.6 | (*)			8	80	–	–	–	EXISTING CIRCUIT
					9		9.6 | (*)		10					
				3	11			9.6 | (*)	12	3				
EXISTING CIRCUIT	–	–	–	70	13	6.7 | (*)			14	60	–	–	–	EXISTING CIRCUIT
					15		6.7 | (*)		16				
				3	17			6.7 | (*)	18	3				
EXISTING CIRCUIT	–	–	–	50	19	4.8 | –			20	20	–	–	–	SPARE
					21		4.8 | –		22				
				3	23			4.8 | –	24	3				
EXISTING CIRCUIT	–	–	–	20	25	0.8 | –			26	20	–	–	–	SPARE
EXISTING CIRCUIT	–	–	–	20	27		0.8 | –		28	20	–	–	–	SPARE
EXISTING CIRCUIT	–	–	–	20	29			0.8 | –	30	20	–	–	–	SPARE
EXISTING CIRCUIT	–	–	–	20	31	0.8 | –			32	20	–	–	–	SPARE
EXISTING CIRCUIT	–	–	–	20	33		0.8 | –		34	20	–	–	–	SPARE
EXISTING CIRCUIT	–	–	–	20	35			0.8 | –	36	20	–	–	–	SPARE
EXISTING CIRCUIT	–	–	–	20	37	0.8 | –			38	20	–	–	–	SPARE
EXISTING CIRCUIT	–	–	–	20	39		0.8 | –		40	20	–	–	–	SPARE
EXISTING CIRCUIT	–	–	–	20	41			0.8 | –	42	20	–	–	–	SPARE
						23.5	23.5	23.5	KVA PER PHASE					
						–	–	–	AMPS PER PHASE					
						–			TOTAL KVA					



LEGEND
NEW ———
EXISTING – – – – – –

ELECTRICAL RISER DIAGRAM

ISSUED FOR PERMIT	12-17-20
-	

KAMM CONSULTING PROJECT #: 2020-0276
PROJECT MANAGER: DUANE MILLAR

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05-19-21
date

signed

Project:

ADDITION FOR

NORTH COUNTY LIBRARY

INDIAN RIVER COUNTY, FLORIDA

Key Plan:

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No.:	Date:	Description:
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Drawing Title:
RISER DIAGRAM

Reference North

Drn: MT
Chd: AJD
Project No.: 2019-54
Sheet No.:
Dwg. File: .
XREF File:
Plot File: .

Cert. No.: 12456
Date Signed:

E5.1

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MECHANICAL NOTES

1. THE CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY FOR THE INSTALLATION OF A COMPLETE SYSTEM IN ACCORDANCE WITH THESE DRAWINGS, THE FLORIDA BUILDING CODE 2017 AND ALL OTHER APPLICABLE STATE, COUNTY AND LOCAL ORDINANCES AND THE LATEST ADDITION OF THE FOLLOWING PUBLICATIONS; SMACNA–85, 92, 95; ASHRAE 15–01, 34–01, 62–04; NFPA 70–02, 72–02, 90A–02, 90B–02, 91–99, 96–01; ANSI Z10.1–98, Z10.3–98, Z21.8–94, Z21.83–98.

2. THE CONTRACTOR SHALL PAY ALL COSTS OF PERMIT, INSPECTIONS AND ALL OTHER COSTS INCIDENTAL TO THE COMPLETION AND TESTING OF THIS WORK.

3. THE CONTRACTOR SHALL VISIT THE SITE AND COORDINATE WORK WITH OTHER TRADES.

4. THE CONTRACTOR SHALL SUPPLY THE ARCHITECT WITH "AS–BUILT" DRAWINGS.

5. CONTRACTOR SHALL SUBMIT, FOR APPROVAL FIVE [5] COPIES OF MANUFACTURER'S DRAWINGS FOR EACH PIECE OF EQUIPMENT AND CONTROLS INCLUDED IN CONTRACT.

6. ALL MATERIAL SHALL BE NEW OF U.S. MANUFACTURER OF GOOD QUALITY. ALL WORK SHALL BE PERFORMED AT INDUSTRY STANDARD QUALITY LEVEL BY CERTIFIED PROFESSIONALS.
   ALL EQUIPMENT SHALL BE UL OR ETL LISTED.
   ALL INSTALLATIONS SHALL COMPLY WITH FMC 2017, CH. 3, GENERAL REGULATIONS. BUILDINGS LOCATED WITHIN 3,000 FT FROM THE OCEAN SHALL UTILIZE NON–FERROUS MATERIALS FOR ALL OUTDOOR EXPOSED SUPPORTS, STANDS, FASTENERS, ETC.

7. DUCTWORK:
   A. ALL AIR CONDITIONING DUCT WORK SHALL BE OF 1–1/2" (R–6) HEAVY DUTY FOIL REINFORCED FIBERGLASS WITH MANUFACTURER'S LOGO PRINTED ON VAPOR BARRIER
   B. ALL FLEX DUCT SHALL BE RATED CLASS I, UL–181 LISTED WITH METALLIZED INNER AND OUTER FOIL LINERS, MIN. R–6 WITH A MAX. TOTAL LENGTH NOT TO EXCEED 15 FT.
   FLEXIBLE DUCTWORK ELBOW SUPPORTS AT EACH DIFFUSER, GRILLE, AND REGISTER EQUAL TO "FLEXFLOW ELBOW" AS MANUFACTURED BY "THERMAFLEX".
   C. ALL EXHAUST DUCTS AND OUTSIDE AIR DUCTS SHALL BE GALVANIZED SHEET METAL WITH SEALED SEAMS AND JOINTS. ALL OUTSIDE AIR DUCT SHALL BE INSULATED WITH EXTERNAL BLANKET INSULATION R–6 MIN.
   ALL METAL EXHAUST, MAKE–UP OR OTHERWISE DUCTS INSTALLED IN LOCATIONS WHERE DEWPOINT CONDITIONS CAN OCCUR INSIDE THE DUCT SHALL BE EXTERNALLY INSULATED WITH R–6 MIN.
   THE CONTRACTOR SHALL PROVIDE ALL SHEETMETAL DUCTWORK, HANGERS, AUX. SUPPORT STEEL, ETC.
   ALL METAL DUCTS SHALL BE FABRICATED IN ACCORDANCE WITH LATEST EDITION OF S.M.A.C.N.A.
   SPECIAL NOTE:
   SMACNA DUCT PRESSURE CLASSES BASED ON OPERATING PRESSURE ARE: 1/2", 1", 2", 3", 4", 6", AND 10". EACH DUCT SYSTEM SHALL BE CONSTRUCTED FOR THE SPECIFIC DUCT PRESSURE CLASS SHOWN ON PLANS.
   WHERE NO PRESSURE CLASS IS SPECIFIED FOR CONSTANT VOLUME SYSTEMS, 1" W.G. PRESSURE CLASS IS THE BASIS OF COMPLIANCE WITH THE SMACNA STANDARDS REGARDLESS OF VELOCITY.
   WHERE NO PRESSURE CLASS IS SPECIFIED FOR VARIABLE VOLUME SYSTEMS, 2" W.G. PRESSURE CLASS IS THE BASIS OF COMPLIANCE WITH THE SMACNA STANDARDS FOR DUCTWORK UPSTREAM OF VAV BOXES.
   ALL DUCTWORK SHALL BE SEALED TO SMACNA "HVAC DUCT CONSTRUCTION STANDARDS" FOR ITS PRESSURE CLASS SEALING METHODS.

9. OUTSIDE AIR INTAKES SHALL BE SCREENED WITH A CORROSION RESISTANT MATERIAL NOT LARGER THAN 1/2" MESH. O/A INTAKES SHALL NOT BE TAKEN FROM A LOCATION CLOSER THAN 10 FT. FROM ANY CHIMNEY, VENT OUTLET OR SANITARY SEWER VENT OUTLET, UNLESS SUCH VENT IS NOT LESS THAN 24 INCHES ABOVE THE OUTSIDE AIR VENT.
   OUTSIDE AIR INTAKE VENTS LOCATED ON ROOFS WILL BE PROPERLY MARKED WITH A UNIVERSAL MARKING "INTAKE", PERMANENTLY ATTACHED PER FMC 2017, SEC. 401.5

10. DUCT SIZES SHOWN ARE INSIDE DIMENSIONS.

11. ALL AIR DEVICES (DIFFUSERS, REGISTERS AND GRILLES) SHALL BE ALL ALUMINUM CONSTRUCTION WITH EXPOSED SURFACE OFF WHITE BAKED ENAMEL FINISH OR AS SPECIFIED BY ARCHITECT. DEVICES SHALL BE AS SPECIFIED OR EQUAL TO TITUS OR METALAIRE. PROVIDE OPPOSED BLADE DAMPERS AT ALL DIFFUSERS AND REGISTERS AS INDICATED ON PLANS. PROVIDE BALANCING DAMPERS FOR ALL SUPPLY AND RETURN DIFFUSERS AND REGISTERS TO ENSURE COMPLIANCE WITH FMC 2017, PAR. 601.5 AND PAR. 603.18 FOR BALANCED AIR FLOW.

12. TEMPERATURE CONTROLS/THERMOSTAT:
   A. SHALL BE COMBINATION COOLING/HEATING, WITH SYSTEM "COOL–AUTO–HEAT–OFF" AND FAN "ON–AUTO" SELECTOR SWITCHES. PROVIDE PROGRAMMABLE TYPE AS RECOMMENDED BY MANUFACTURER, HONEYWELL OR EQUAL. PROVIDE TAMPER PROOF COVERS.

13. THERMOSTAT LOCATION SHALL BE APPROVED BY OWNER AND ENGINEER BEFORE INSTALLATION. INSTALL THERMOSTAT 48" TO 54" A.F.F. PER A.D.A REQUIREMENTS WHERE APPLICABLE.
   MECHANICAL CONTRACTOR SHALL COORDINATE WITH ELECTRICAL CONTRACTOR ALL REQUIREMENTS FOR JUNCTION BOXES, CONDUITS, CONTROL WIRING, POWER, ETC. AND DEFINE RESPONSIBILITIES AND SCOPE OF WORK FOR EACH TRADE PRIOR TO ANY PURCHASING OR INSTALLATION.
   WHENEVER THERE ARE MORE THAN ONE SENSOR OR THERMOSTAT, SIDE BY SIDE, THEY SHALL BE GANGED TOGETHER WITHIN THE SAME COVER PLATE WHEREVER POSSIBLE.
   CONTRACTOR SHALL COORDINATE THIS ISSUE WITH ARCHITECT/OWNER PRIOR TO INSTALLATION AND SHALL BRING ANY DISCREPANCY TO THE ENGINEER'S ATTENTION.

14. REFRIGERANT LINES SHALL BE COPPER, TYPE "L" HARD DRAWN WITH WROUGHT COPPER BRAZING–JOINT TYPE FITTINGS, USE BRAZING MATERIALS FOR HIGH PRESSURE PIPING PER AWS A5.8: BCuP SERIES COPPER–PHOSPHORUS ALLOY OR BAg1 SILVER ALLOY.
   REFRIGERANT LINES SHALL BE SIZED PER MANUFACTURER'S RECOMMENDATIONS.
   SOFT COPPER TYPE "M" SHALL BE ALLOWED FOR RISER PIPING INSIDE CHASE TO LIMIT NUMBER OF JOINTS. COORDINATE WITH ENGINEER FOR PRIOR APPROVAL.
   ALL EXPOSED INSULATION SHALL BE PROTECTED WITH UV RESISTANT PAINT OR ALUMIN. SHIELD.

15. ARMAFLEX INSULATION SHALL BE USED FOR SUCTION LINES (1/2" FOR ABOVE 40° F AND 1" FOR BELOW 40° F) PER FLORIDA ENERGY CODE TABLE 4–11 FOR PIPING INSULATION. FILTER/DRYER AND SIGHT GLASS SHALL BE PROVIDED AT LIQUID LINES.

16. ALL BRANCH TAKE–OFFS TO BE PROVIDED W/ MANUAL VOLUME DAMPERS. PROVIDE RADIUS ELBOWS WHERE FEASIBLE, SQUARE ELBOWS AND TEE'S SHALL BE FURNISHED W/SINGLE FOIL TURNING VANES. PROVIDE MANUAL VOLUME DAMPERS WITH EXTRACTOR AT ALL FLEX TAKE–OFFS.
   PROVIDE REMOTE, CABLE OPERATED VOLUME DAMPERS IN INACCESIBLE AND HARD CEILING AREAS, "YOUNG REGULATOR" OR EQUAL.

17. PROVIDE NEW FILTERS FOR ALL AIR CONDITIONING EQUIPMENT BEFORE START–UP, REPLACE PRIOR TO FINAL ACCEPTANCE BY OWNER.

18. PROVIDE SMOKE DETECTORS WITH SERVICE ACCESS DOORS IN ALL SUPPLY AIR DUCTS FOR FANS AND AHU'S SERVING A COMMON PLENUM OF 2000 CFM OR ABOVE.
   FOR SMOKE DETECTORS NOT VISIBLE, IN CONCEALED SPACES, PROVIDE REMOTE ANNUNCIATION/TEST STATION AS REQUIRED BY AUTHORITY HAVING JURISDICTION, COORDINATE PRIOR TO INSTALLATION.
   DETECTORS SHALL BE BY ONE MANUFACTURER, COORDINATE VOLTAGE ETC. WITH ELECTRICAL CONTRACTOR AND FIRE ALARM SYSTEM BEFORE ORDERING. UPON DETECTION, SMOKE DETECTORS SHUT DOWN ASSOCIATED AIR MOVING EQUIPMENT AND ALL AIR MOVING EQUIPMENT SERVING THAT COMMON PLENUM.

19. PROVIDE TYPE "B" DYNAMIC FIRE DAMPERS WITH SERVICE ACCESS DOORS IN ALL DUCTS AND OPENINGS PENETRATING FIRE RATED WALLS, MECHANICAL AND ELECTRICAL EQUIPMENT ROOMS, TENANT SEPARATION, PARTITIONS, FLOOR OR ROOF SLABS AND AT OUTSIDE AIR INTAKES AS REQUIRED. PROVIDE RADIATION DAMPERS IN RATED CEILINGS FOR ALL CEILING OPENINGS, CEILING FANS, DIFFUSERS OR GRILLES RATED FOR USE IN THE CEILING ASSEMBLY.
   PROVIDE LOW–LEAKAGE CLASS DAMPERS FOR ALL SITUATIONS WHERE THE AIRFLOW CFM HAS TO BE CONTROLLED. VERIFY AND REPLACE AS REQUIRED FOR EXISTING SYSTEMS.

20. HVAC CONTRACTOR SHALL PROVIDE A T & B REPORT PER F.B.C. 2017, CH. C408.2.2 (THE T & B REPORT SHALL BE INDEPENDENT FOR SYSTEMS OVER 15 TONS)
   FOR ALL MECHANICAL EQUIPMENT, AIR DEVICES, DAMPERS, AHU'S AND FANS.
   THE TEST AND BALANCE REPORT SHALL BE IN ACCORDANCE WITH THE AIR BALANCE COUNCIL STANDARDS AND SHALL INCLUDE AIR QUANTITIES FOR ALL SUPPLY GRILLES, RETURN GRILLES AND EXHAUST GRILLES AND THE LEAVING AND ENTERING AIR TEMPERATURE (°F) FROM SUPPLY GRILLES AND EVAPORATORS.
   FOR (EXISTING) SMOKE EVACUATION SYSTEMS HVAC CONTRACTOR SHALL PROVIDE A T & B REPORT PRIOR TO ANY NEW WORK, PROVING THAT THE SMOKE EVACUATION SYSTEM PERFORMS PER ORIGINAL DESIGN DOCUMENTS AND IS COMPLIANT WITH LOCAL CODE REQUIREMENTS.

21. RUN INSULATED FIRE RATED CONDENSATE DRAINS AS REQUIRED.

22. ALL INSULATION WILL HAVE FIRE/SMOKE RATING LESS THAN 25/50.

23. MECHANICAL EQUIPMENT ON ROOF OR ELEVATED STRUCTURES SHALL COMPLY WITH FBC 2017 PAR. 306.5 IF INSTALLED HIGHER THAN 16 FEET A.F.F.
   MECHANICAL EQUIPMENT INSTALLED IN ATTICS SHALL MEET THE REQUIREMENTS OF FBC–ENERGY 2017 PAR. C403.2.7.6 IF THE EQUIPMENT CAN NOT BE SERVICED/REMOVED THROUGH REQUIRED OPENING.
   MECHANICAL EQUIPMENT SHALL BE PROTECTED WITH MECHANICAL BARRIERS IF EXPOSED TO MECH. DAMAGE. ALL EQUIPMENT SHALL BE INSTALLED ON 6" CONCRETE PAD AT GRADE LEVEL .
   NOTE: AIR HANDLING UNITS ARE NOT ALLOWED IN COMMERCIAL ATTICS.
   SPECIAL NOTE:
   ALL WIND LOAD AND OTHER COMPLIANCE CALCULATIONS AND/OR INSTALLATION DETAILS FOR ROOF MOUNTED EQUIPMENT AS REQUIRED BY FBC 2017, SEC. 1509, 1522 AND CHAPTER 16, SHALL BE PROVIDED BY STRUCTURAL ENGINEER/ARCHITECT.

24. PROVIDE A MIN. OF 36" CLEARANCE IN FRONT OF ALL 120–208 VOLT PANELS AND MIN. 42" CLEARANCE IN FRONT OF ANY 240–480 VOLT PANEL. PROVIDE ADEQUATE SIDE CLEARANCE PER NEC.

25. MECHANICAL PLANS IN GENERAL, ARE DIAGRAMMATIC IN NATURE, AND ARE TO BE READ IN CONJUNCTION WITH ARCHITECTURAL, PLUMBING, ELECTRICAL, FIRE SPRINKLER, AND STRUCTURAL PLANS AND SHALL BE CONSIDERED AS ONE SET OF DOCUMENTS.
   DUCT AND PIPING OFFSETS, BENDS AND TRANSITIONS SHALL BE REQUIRED TO PROVIDE AND INSTALL A COMPLETE FUNCTIONAL SYSTEM AND SHALL BE PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER. CHANGES IN DUCTWORK SIZE AND ROUTE WILL BE REQUIRED TO AVOID STRUCTURAL, PLUMBING, FIRE SPRINKLER AND ARCHITECTURAL BUILDING FEATURES. DUCTWORK CHANGES MAY BE MADE BY CONTRACTOR USING EQUIVALENT SIZED DUCT. CONTACT ENGINEER IF DUCT AREA WILL NOT FIT.

26. THE CONTRACTOR SHALL VERIFY EXISTING CONDITIONS PRIOR TO BIDDING, ORDERING, FABRICATION OR INSTALLATION OF MATERIALS OR EQUIPMENT, IN ORDER TO PROVIDE A FULLY INTEGRATED MECHANICAL AND CONTROLS SYSTEMS WITH THE EXISTING ONES. ANY DISCREPANCY BETWEEN EXISTING CONDITIONS AND PLANS, OR ADDITIONAL CLARIFICATION REQ'D SHALL BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO FINAL BIDDING AND WORK.

27. NO COMBUSTIBLE MATERIALS ARE ALLOWED IN RETURN AIR PLENUMS OR ABOVE CEILINGS USED AS RETURN AIR PLENUM. IF SPACE WITH RETURN AIR PLENUM HAS ANY DECK TO DECK PARTITIONS, AIR TRANSFER DUCTS MUST BE INSTALLED.
   WHEN CPVC PIPING IS USED FOR FIRE SPRINKLER SYSTEMS, THE R/A GRILLES LAYOUT SHALL BE (FIELD) COORDINATED WITH SUCH PIPING SO THAT NO PORTION OF THE GRILLES WILL BE DIRECTLY BELOW THE CPVC PIPING.

28. CONDENSATE DRAIN PIPING TO BE AS SPECIFIED PER PLUMBING PLANS, IF NOT SPECIFIED TO BE TYPE "L" COPPER OR PVC WHERE ALLOWED BY CODE WITH 1/2" ARMAFLEX INSULATION. PROVIDE APPROVED WATER LEVEL DETECTOR OR FLOAT SWITCH TO AUTOMATICALLY SHUT DOWN THE AIR COND. UNIT, AS A SECONDARY DRAIN SYSTEM TO COMPLY WITH FMC 2017, SEC. 307 SUPPLY CONDENSATE PUMP WHERE NECESSARY AS IMPOSED BY FIELD CONDITIONS OR INSTALLATION CHANGES AND PIPE TO CONDENSATE DRAIN PER PLUMBING PLANS.

29. MANUFACTURER'S WARRANTY: CONTRACTOR SHALL PROVIDE WARRANTY FOR A PERIOD OF (1) ONE YEAR AFTER BUILDING C.O. FOR ALL MECHANICAL SYSTEMS, DUCTWORK, CONTROLS ACCESSORIES AND ALL OTHER EQUIPMENT, PARTS AND LABOR UNDER THESE DRAWINGS AND AND SPECIFICATIONS. CONTRACTOR SHALL PROVIDE WARRANTY FOR COMPRESSORS FOR (5) FIVE YEARS. ANY REPAIRS REQUIRING SYSTEM SHUTDOWN WILL BE DONE DURING NON–OPERATIONAL PERIODS OR AS AGREED WITH OWNER.

30. ON PROJECT SPECIFIED WITH EQUIPMENT UTILIZING HOT GAS REHEAT AND/OR DEHUMIDIFICATION; CONTRACTOR SHALL PROVIDE FACTORY STARTUP OF EQUIPMENT WITHIN THEIR BID. STARTUP REPORT DOCUMENT TO BE PROVIDED TO ENGINEER FOR REVIEW.

MECHANICAL SHEET INDEX

SHEET#	DESCRIPTION
M0.1	MECHANICAL NOTES, LEGEND & INDEX
M2.1	MECHANICAL FLOOR PLAN
M6.1	MECHANICAL SCHEDULES

MECHANICAL LEGEND

- SUPPLY AIR CEILING DIFFUSER
- RETURN AIR CEILING GRILLE
- WALL LOUVER / WALL DIFFUSER.
- LINEAR DIFFUSER
- MANUAL VOLUME CONTROL DAMPER
- MD — MOTORIZED DAMPER
- FD — FIRE DAMPER
- REDUCER OR INCREASER
- FLEX DUCT
- EXISTING FLEX DUCT
- EXISTING DUCTWORK
- UP — SUPPLY & OUTSIDE AIR SECTION (UP)
- DN — SUPPLY & OUTSIDE AIR SECTION (DN)
- UP — RETURN OR EXHAUST DUCT SECTION (UP)
- DN — RETURN OR EXHAUST DUCT SECTION (DN)
- ROUND UP
- SHOE TAP DAMPER
- ROOFTOP UNIT
- SOLENOID VALVE.
- RE — RELOCATE
- EF — CEILING OR INLINE EXHAUST FAN
- STANDARD SINGLE DUCT VVT BOX (3'0" SERVICE CLEARANCE)
- T — THERMOSTAT
- H — HUMIDISTAT
- R — REFRIGERANT SENSOR
- SP — STATIC PRESSURE SENSOR
- DD — DUCT SMOKE DETECTOR
- AP — ACCESS PANEL
- AD — ACCESS DOOR
- VCD — VOLUME CONTROL DAMPER
- MOD — MANUALLY OPERATED DAMPER
- TAG CFM — SUPPLY AIR DIFFUSER OR GRILLE DESIGNATION
- TAG CFM — RETURN/EXHAUST AIR DIFFUSER OR GRILLE DESIGNATION
- VARIABLE FREQ. DRIVE CONTROL PANEL
- SUPPLY AIR
- RETURN AIR
- U/C — DOOR UNDER CUT
- TAG - # — EQUIPMENT TAG
  - OARTU– OUTSIDE AIR ROOF TOP UNIT
  - RTU– ROOF TOP UNIT
  - VAV– VARIABLE VOLUME BOX
  - EF – EXHAUST FAN

NOT ALL SYMBOLS MAY APPLY TO THESE PLANS

HVAC ABBREVIATION LEGEND

AC	AIR CONDITIONING
AFF	ABOVE FINISH FLOOR
BDD	BACK DRAFT DAMPER
CD	CONDENSATE DRAIN
COP	COEFFICIENT OF PERFORMANCE
DB	DRY BULB
DIA.	DIAMETER
E	EXISTING TO REMAIN
EER	ENERGY EFFICIENCY RATIO
EDH	ELECTRIC DUCT HEATER
EF	EXHAUST FAN
ESP	EXTERNAL STATIC PRESSURE
F	FILTER
FD	FIRE DAMPER
FLA	FULL LOAD AMPS.
FMS	FLOW MEASURING STATION
IPLV	INTEGRATED PART–LOAD VALUE.
MCA	MINIMUM CIRCUIT AMPS (FOR WIRE SIZING)
MOD	MANUALLY OPERATED DAMPER
MOCP	MAXIMUM OVERCURRENT PROTECTION DEVICE AMPS
NC	NOISE CRITERIA
O/A	OUTSIDE AIR
OBD	OPOSITE BLADE DAMPER
PD	PRESSURE DROP.
R	EXISTING TO BE RELOCATED
R/A	RETURN AIR
RLA	RATED LOAD AMPS.
SEER	STANDARD ENERGY EFFICIENCY RATIO
TSP	TOTAL STATIC PRESSURE
VD	VOLUME CONTROL DAMPER
VFD	VARIABLE FRECUENCY DRIVE
WB	WET BULB

NOTE: NOT ALL SYMBOLS MAY APPLY TO THESE PLAN.

ISSUED FOR PERMIT 12-17-20

KAMM CONSULTING PROJECT #: 2020-0276
PROJECT MANAGER: DUANE MILLAR

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Certification of Authorization #8189
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Bradly L Brown Florida License #58232
05-19-21 date
signed

Project:

ADDITION FOR

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INDIAN RIVER COUNTY, FLORIDA

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Consultant:

Drawing Title:

MECHANICAL NOTES

Reference North

Drn: MT
Chd: AJD
Project No.: 2019-54
Dwg. File: .
XREF File: .
Plot File: .
Sheet No.:

Cert. No.: 12456

Date Signed:

M0.1

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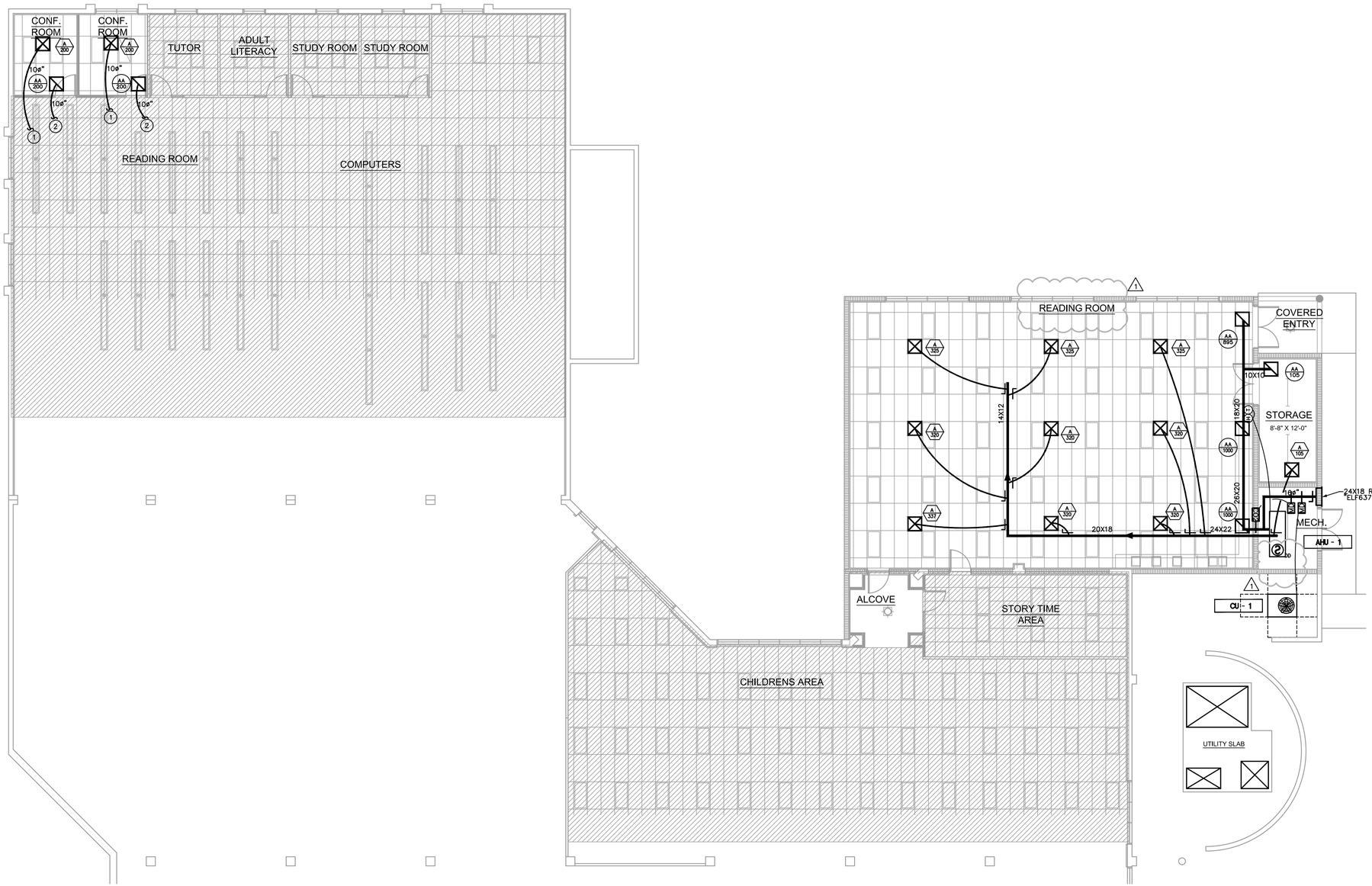

KEY NOTES

1. TIE TO EXISTING SUPPLY DUCT SERVING THIS AREA.
2. TIE TO EXISTING RETURN DUCT SERVING THIS AREA.

MECHANICAL PLAN

1/8"=1'-0"

Project:

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C.	05/14/21	PERMIT COMMENTS
D.	09/16/21	BID SET

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Drawing Title:

MECHANICAL PLAN

Reference North

ISSUED FOR PERMIT	12-17-20
.	

KAMM CONSULTING PROJECT #: 2020-0276
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05-19-21
date
signed

Drn: MT | Dwg. File: .
Chd: AJD | XREF File: .
Project No.: 2019-54 | Plot File: .
Sheet No.:

Cert. No.: 12456

Date Signed:

M2.1

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AIR CONDITIONING SPLIT SYSTEM EQUIPMENT SCHEDULE

CONDENSING UNIT

CU TAG	MANUFACTURER & MODEL	NOMINAL TONNAGE	CAP. STAGES	(S)EER/IPLV	REFRIG./LBS	LIQ./SUCT. LINES	NO. FANS	FAN FLA(EA)	NO. COMP.	COMP.RLA(EA)	VOLTAGE/PH	MCA/MOCP	WEIGHT (LBS)	L x W x H (IN)	NOTES
CU-1	TRANE/TTA150A3DAB	12.5	2	11.2/-	R410A/-	-	1	5.0	2	22.4/22.4	208/3/60	55/70	449	51X40X45	1-13

AIR HANDLING UNIT

AHU TAG	MANUFACTURER & MODEL	TOTAL MBH	SENSIBLE MBH	TOTAL CFM	O/A CFM	E.S.P.("W.G.)	ENT. DB/WB	LEAV. DB/WB	ROWS/FPI	FAN HP/FLA	HEATER KW	VOLTAGE/PH	MCA/MOCP	WEIGHT (LBS)	L x W x H (IN)	NOTES
AHU-1	TRANE/TWE150A3B	149	88	3017	SEE OA SCHED.	0.5	81.5°/70.1°	55.4°/54.7°	-	-	15 KW	208/3/60	67/70	930	26X64X92	1-14

NOTES:

1. UNITS RATED PER ARI 210, 240 AND 270, APPROVED EQUAL: CARRIER, YORK, ETC.
2. PROVIDE WITH ELECTRIC EXPANSION VALVES, LIQUID LINE FILTER DRYER AND MULTI-USE SERVICE VALVES
3. PROVIDE COMPRESSOR WITH CRANKCASE HEATER AND MIN. 5-YEAR WARRANTY
4. PROVIDE HIGH AND LOW PRESSURE CONTROL AND OVER TEMPERATURE PROTECTION.
5. PROVIDE WEATHERPROOF ELECTRIC CONTROLS AND SINGLE SIDE SERVICE ACCESS
6. PROVIDE DISCONNECT BY ELECTRICAL CONTRACTOR FOR C.U., COORDINATE PRIOR TO PURCHASING
7. PROVIDE REFRIGERANT LINES SIZE AS RECOMMENDED BY MANUFACTURER, NOT TO EXCEED 50 FT. EQUIV. LENGTH FOR LONGER RUNS COORDINATE WITH MANUFACTURER PRIOR TO PURCHASE OR ANY WORK.
8. PROVIDE FULLY MODULATING HOT GAS REHEAT.
9. PROVIDE MOTORIZED DAMPER. MOTORIZED DAMPER TO BE INTERLOCKED WITH COMPRESSOR AND CO2 SENSORS.
10. PROVIDE VIBRATION ISOLATORS.
11. ALL EQUIPMENT SHALL COMPLY WITH WIND LOAD REQUIREMENTS SET BY LOCAL CODES, ORDINANCES, OR AUTHORITIES. WIND LOAD RATING MAY BE REQUIRED; CONTRACTOR TO PROVIDE NOA RATING IF REQUIRED.
12. PROVIDE FACTORY STARTUP.
13. PROVIDE MINIMUM DUAL STAGE COMPRESSOR.
14. PROVIDE DUCT SMOKE DETECTOR.

COORDINATION NOTE:

MECHANICAL CONTRACTOR SHALL COORDINATE ALL ELECTRICAL REQUIREMENTS AND ACCESSORIES WITH ELECTRICAL CONTRACTOR PRIOR TO PURCHASING AND INSTALLATION AND SHALL BRING ANY DISCREPANCIES TO THE ATTENTION OF ENGINEER

OUTSIDE AIR CALCULATIONS

(PER TABLE 403.3, FLORIDA BUILDING CODE 6TH EDITION (2017) MECHANICAL

	AREA SERVED OR UNIT TAG	NET OCCUPIABLE AREA SQ.FT.	AREA OUTDOOR AIR RATE (RA) CFM/FT^2	TOTAL NO. OF PEOPLE	PEOPLE OUTDOOR AIR RATE (RP) CFM/PERSON	DEFAULT VALUES OCC. DENS. P/ 1000FT^2 FL. AR.	TOTAL NO. OF PEOPLE FROM DEFAULT VALUES	COMBINED OUTDOOR AIR RATE CFM/PERSON	TOTAL CFM O/A REQUIRED	TOTAL CFM O/A PROVIDED	NOTES
	AHU-1 -	2301	0.06	200	5	-	-	138+1000	1138	1155	SEE NOTES
	AHU-1 -	104	0.06	0	-	-	-	6+0	6	0	SEE NOTES
	AHU-1 -	150	0.06	0	-	-	-	9+0	9	0	SEE NOTES
	TOTAL	2555	-	-	-	-	-	-	1153.0	1155	-

NOTES:

1. CALCULATIONS ARE BASED ON ESTIMATED MAX. OCUPPANCY RATES PER ARCHITECTURAL PLANS AND TABLE 403.3 FLORIDA BUILDING CODE 6TH EDITION (2017) MECHANICAL.
2. FOR OFFICE AND OTHER SIMILAR AREAS CALCULATIONS ARE BASED ON CONTINUOUS OCCUPANCY.

SUPPLY AIR GRILLE SCHEDULE

TAG SAG

TAG	MANUF. & MODEL	FACE SIZE	NECK SIZE	MATERIAL	FRAME	FINISH	DAMPER	THROW	NC	CFM RANGE	NOTES
A	TITUS/ TDCA-AA	24X24	SEE SCH.	ALUM.	NOTE #3	OFF WHITE	-	4-WAY	MAX. 30	SEE SCH.	1-6

(*) EQUIVALENT MANUFACTURER: METALAIRE, PRICE, CARNES, T & B, NAILOR

GENERAL NOTES:

1. PROVIDE SPIN-IN COLLAR AT TRUNK TO FLEX DUCT CONNECTION.
2. PROVIDE TYPICAL 4-WAY DIFFUSION, 2-WAY OR 3-WAY ONLY WHERE INDICATED ON PLAN
3. REFER TO ARCHITECT PLANS FOR CEILING TYPE.

CONTRACTOR SHALL VERIFY WITH ARCHITECT AND TENANT/OWNER, PRIOR TO ANY PURCHASING OR INSTALLATION, IF A BULDING STANDARD HAS TO BE FOLLOWED REGARDING A SPECIFIC MODEL OR MANUFACTURER AND SHALL BRING ANY DISCREPANCY TO THE ATTENTION OF ENGINEER.

FLEX SCHEDULE	
6ø"	50-125 CFM
8ø"	130-200 CFM
10ø"	205-330 CFM
12ø"	335-450 CFM
14ø"	455-600 CFM
16ø"	605-700 CFM

RETURN AIR GRILLE SCHEDULE

TAG OAG

TAG	MANUF. & MODEL	FACE SIZE	NECK SIZE	MATERIAL	FRAME	FINISH	DAMPER	THROW	NC	CFM RANGE	NOTES
AA	50F	24X24	SEE SCH.	ALUM.	NOTE #1	OFF WHITE	-	-	MAX. 30	SEE SCH.	1-3

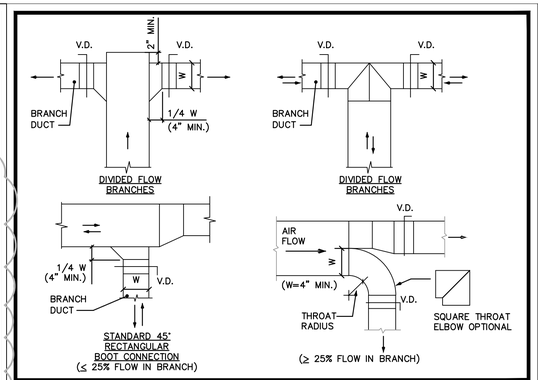
(*) EQUIVALENT MANUFACTURER: METALAIRE, PRICE, CARNES, T & B, NAILOR

GENERAL NOTES:

1. REFER TO ARCHITECT PLANS FOR CEILING TYPE.
2. CONTRACTOR TO COORDINATE FINAL SELECTION WITH ARCHITECT AND OWNER.

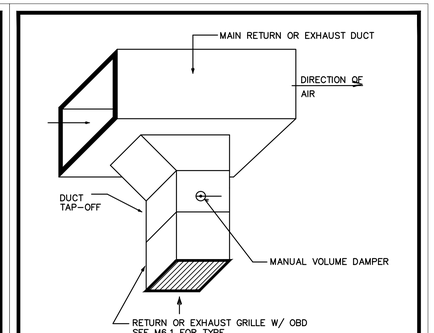
CONTRACTOR SHALL VERIFY WITH ARCHITECT AND TENANT OR OWNER, PRIOR TO ANY PURCHASING OR INSTALLATION, IF A BUILDING STANDARD HAS TO BE FOLLOWED REGARDING A SPECIFIC MODEL OR MANUFACTURER AND SHALL BRING ANY DISCREPANCY TO THE ATTENTION OF ENGINEER.

NECK SIZE	CFM RANGE	NECK SIZE	CFM RANGE
6X6	0-150 CFM	15X15	0-900 CFM
8X8	0-250 CFM	18X18	0-1350 CFM
10X10	0-400 CFM	22x22	0-2000 CFM
12X12	0-600 CFM		



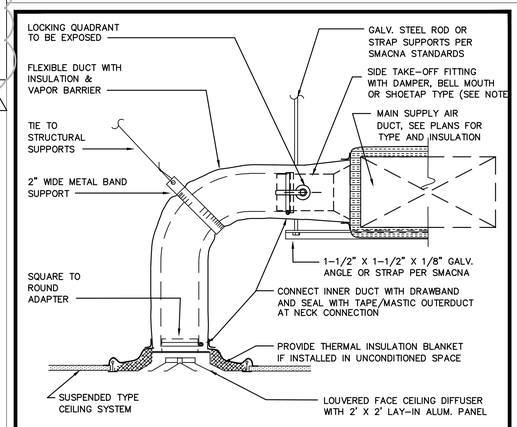
BRANCH TAKE-OFF AND DIVIDED FLOW

NOT TO SCALE



RETURN AND EXHAUST DUCT MOUNTED GRILLE DETAIL

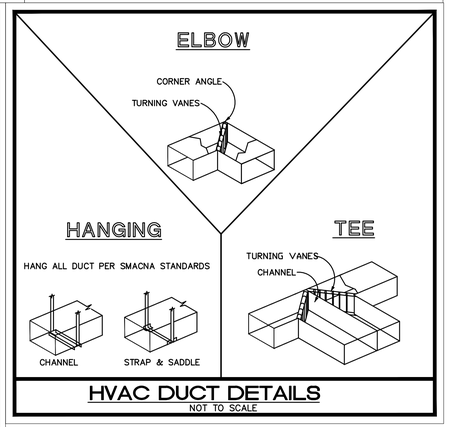
NOT TO SCALE



NOTE: PROVIDE CABLE CONTROL DAMPER FOR HARD CEILING AREAS.

TYPICAL DIFFUSER DETAIL

NOT TO SCALE



HVAC DUCT DETAILS

NOT TO SCALE

ISSUED FOR PERMIT 12-17-20

KAMM CONSULTING PROJECT #: 2020-0276
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05-19-21
date

signed

Project:

ADDITION FOR

NORTH COUNTY LIBRARY

INDIAN RIVER COUNTY, FLORIDA

Key Plan:

Issues:

No.:	Date:	Description:
A.	05/11/20	CLIENT REVIEW
B.	12/17/20	PERMIT SET
C. 1	05/14/21	PERMIT COMMENTS
D.	09/16/21	BID SET

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Consultant:

Drawing Title:

MECHANICAL SCHEDULES

Reference North

Drn: MT | Dwg. File: .
Chd: AJD | XREF File: .
Project No.: 2019-54 | Plot File: .
Sheet No.:

Cert. No.: 12456

Date Signed:

M6.1

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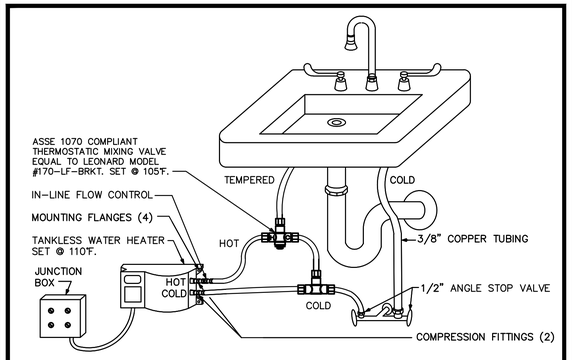


INSTANTANEOUS WATER HEATER CONNECTIONS DETAIL

NOT TO SCALE

KEY NOTES

1. TIE NEW SANITARY LINE TO EXISTING IN AREA. CONTRACTOR TO FIELD VERIFY LOCATION AND SIZE PRIOR TO CONSTRUCTION.
2. TIE NEW DOMESTIC LINE TO EXISTING IN AREA. CONTRACTOR TO FIELD VERIFY LOCATION AND SIZE PRIOR TO CONSTRUCTION.

PLUMBING FIXTURE SCHEDULE

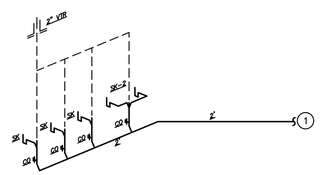
SK	BAR SINK: STAINLESS STEEL, 15 X 15 DAYTON MODEL KP2-11515-6 WITH T&S BRASS FAUCET MODEL #B-0199-01-N05 2-3/4" SPREAD GOOSENECK WITH 4" BLADE HANDLES.
SK-2	(2) COMPARTMENT SINK DAYTON BY ELKAY #D23322 S/S SINK, T&S BRASS FAUCET MODEL #B-0199-01-N05 WITH RETRACTABLE SPRAY.
IWH	TANKLESS WATER HEATER SHALL BE CRONOMITE MODEL # SR-30 208V, 1 PHASE, 6.2 KW.

GENERAL NOTES:

(1) - FIXTURES SHALL BE AS SHOWN OR EQUAL.
(2) - ALL FIXTURES SHALL COMPLY WITH TABLE 604.4 OF FBC 2017
(3) - ALL FIXTURE TRIM PACKAGES INCLUDING BUT NOT LIMITED TO TRAP, ANGLE STOP, FLUSH VALVE, SUPPLY TUBES, AND CLEANOUT COVER PLATES SHALL BE OF THE SAME FINISH AS THE ABOVE SPECIFIED FAUCET AND PER ARCHITECTURAL FINISH SCHEDULE.
(4) - ALL FIXTURES SHALL BE ROUGHED IN PER MANUFACTURER CUT SHEET TO MAINTAIN UNIFORMITY.

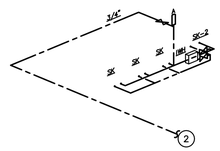
CONDENSATE DRAIN PIPE SIZING

HVAC EQUIPMENT CAPACITY	MINIMUM CONDENSATE PIPE DIAMETER
UP TO 20 TONS OF REFRIGERATION	1"
OVER 21 TONS TO 40 TONS OF REFRIGERATION	1-1/4"
OVER 41 TONS TO 60 TONS OF REFRIGERATION	1-1/2"
OVER 61 TONS TO 100 TONS OF REFRIGERATION	2"
OVER 101 TONS TO 250 TONS OF REFRIGERATION	3"
OVER 251 TONS & LARGER OF REFRIGERATION	4"



SANITARY ISOMETRIC

N.T.S.



DOM. WATER ISOMETRIC

N.T.S.

PLUMBING NOTES

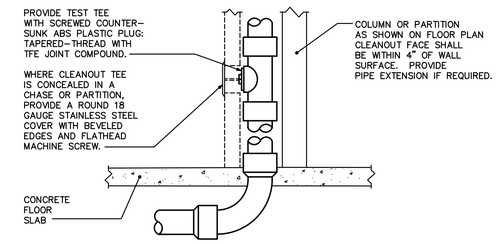
1. THE CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY FOR THE INSTALLATION OF A COMPLETE SCOPE OF WORK. ALL WORKMANSHIP AND MATERIALS SHALL BE IN STRICT ACCORDANCE WITH THE FLORIDA BUILDING CODE 6TH EDITION (2017) - PLUMBING, APPLICABLE LOCAL CODES, RULES, AND ORDINANCES.
2. PLUMBING CONTRACTOR SHALL VISIT THE JOB SITE AND THOROUGHLY FAMILIARIZE HIMSELF WITH ALL EXISTING CONDITIONS.
3. ALL MATERIALS SHALL BE NEW AND OF GOOD QUALITY.
4. ALL WORK SHALL BE PERFORMED BY A LICENSED PLUMBING CONTRACTOR IN A FIRST CLASS WORKMANLIKE MANNER. THE COMPLETED SYSTEM SHALL BE FULLY-OPERATIONAL. ALL EXCAVATION AND BACKFILL AS REQUIRED FOR THIS PHASE OF CONSTRUCTION SHALL BE A PART OF THIS CONTRACT.
5. REQUIRED INSURANCE SHALL BE PROVIDED BY THE PLUMBING CONTRACTOR FOR PROTECTION AGAINST PUBLIC LIABILITY AND PROPERTY DAMAGE FOR THE DURATION OF THE WORK.
6. PLUMBING CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS, FEES, INSPECTIONS AND TESTS. PLUMBING CONTRACTOR SHALL OBTAIN PERMIT AND APPROVED SUBMITTALS PRIOR TO BEGINNING WORK OR ORDERING EQUIPMENT. PLUMBING CONTRACTOR MUST BE PRESENT FOR ALL INSPECTIONS OF HIS WORK BY REGULATORY AUTHORITIES.
7. CONTRACTOR SHALL SUBMIT TO ARCHITECT/ENGINEER, FOR REVIEW & APPROVAL, FIVE (5) SETS OF MANUFACTURER'S CUT SHEETS FOR EACH FIXTURE, PIPING/FITTING MATERIAL AND EQUIPMENT ITEM WITH ASSOCIATED CONTROLS, THAT ARE INCLUDED IN THE CONTRACT.
8. DRAWINGS ARE DIAGRAMMATIC. DO NOT SCALE FOR THE EXACT LOCATION OF FIXTURES, PIPING, EQUIPMENT, ETC.
9. ALL WORK SHALL BE COORDINATED WITH OTHER TRADES TO AVOID INTERFERENCE WITH THE PROGRESS OF CONSTRUCTION. REPORT ANY DISCREPANCY TO ARCHITECT/ENGINEER PRIOR TO BEGINNING CONSTRUCTION.
10. VERIFY LOCATION, SIZE, DIRECTION OF FLOW AND INVERT ELEVATIONS OF ALL EXISTING UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION. ADVISE ARCHITECT/ENGINEER OF ANY DISCREPANCIES.
11. WATER DISTRIBUTION PIPING ABOVE AND BELOW GROUND SHALL BE TYPE "L" COPPER. ALTERNATE PIPING & FITTING MATERIALS MAY BE USED IN ACCORDANCE WITH FLORIDA BUILDING CODE 6TH EDITION (2017) - PLUMBING, TABLES 605.3, 605.4 & 605.5, WHEN APPROVED BY ENGINEER OF RECORD AND LOCAL AUTHORITY HAVING JURISDICTION. PROVIDE ALTERNATE FOR CPVC PIPING & FITTINGS EQUAL TO LUBRIZOL CORZAN OR FLOW-GUARD GOLD. PROVIDE ALTERNATE FOR PEX TYPE 'A' PIPING & FITTINGS EQUAL TO UPONOR. ALTERNATES ARE PERTINENT FOR WATER SERVICES KNOWN OR DETERMINED TO HAVE ACIDIC CHARACTERISTICS OR OTHER PARTICULAR CIRCUMSTANCES AS DEEMED APPROPRIATE BY DIRECTIVE FROM THE OWNER. CONTRACTOR SHALL PERFORM A WATER TEST TO DETERMINE WATER CHEMISTRY PRIOR TO ANY WORK OR PIPING INSTALLATION AND SHALL SUBMIT TEST RESULTS TO THE ARCHITECT/ENGINEER FOR REVIEW AND APPROVAL. DISINFECTION OF POTABLE WATER SYSTEM SHALL COMPLY WITH FLORIDA BUILDING CODE 6TH EDITION (2017) - PLUMBING, SECTION 610. ALL WATER PIPING & FITTINGS SHALL BE OF DOMESTIC MANUFACTURE; SPECIFICALLY IN THE UNITED STATES OF AMERICA.
12. SOIL, WASTE, VENT, AND RAINWATER (DWV) PIPING & FITTINGS SHALL BE CAST IRON OR PVC, WHERE CODE ALLOWS. PVC MAY NOT BE USED THRU RATED ASSEMBLIES OR IN PLENUMS. PVC PIPING SHALL BE SOLID-CORE ONLY; FOAM-CORE PIPING SHALL NOT BE ACCEPTED. CAST IRON PIPING & FITTINGS SHALL BEAR THE CISPI-301 MARK. ALL DWV PIPING & FITTINGS SHALL BE OF DOMESTIC MANUFACTURE; SPECIFICALLY IN THE UNITED STATES OF AMERICA.
13. ALL FIXTURES MUST BE PROVIDED WITH READILY ACCESSIBLE ANGLE STOPS AND APPROPRIATELY MARKED ACCESS PANELS (WHERE REQUIRED). COORDINATE LOCATIONS WITH GENERAL CONTRACTOR PRIOR TO INSTALLATION.
14. PROVIDE APPROVED WATER HAMMER ARRESTORS FOR ALL (GROUP) PLUMBING FIXTURES, SIZED & LOCATED PER MANUFACTURER'S INSTALLATION INSTRUCTIONS & PDI-WH201.
15. PROVIDE DIELECTRIC COUPLINGS OR FLANGES BETWEEN ALL DISSIMILAR METALS IN PIPING AND EQUIPMENT CONNECTIONS.
16. ISOLATE COPPER PIPING FROM METALLIC HANGERS OR SUPPORTS WITH ISOLATOR PADS OR NON-CONDUCTIVE MATERIAL.
17. ALL FIRE RATED FLOOR AND WALL PENETRATIONS SHALL BE PROPERLY PROTECTED FROM FIRE, SMOKE AND WATER PENETRATION BY FILLING ANNULAR SPACE BETWEEN PIPING AND SLEEVES WITH INTUMESCENT CAULK, TO ACHIEVE THE SAME RATING AS WALLS OR FLOORS, AS PART OF THE PLUMBING CONTRACTOR'S WORK.
18. PLUMBING CONTRACTOR SHALL GUARANTEE ALL MATERIALS AND WORKMANSHIP FREE FROM DEFECTS FOR A PERIOD OF NOT LESS THAN ONE (1) YEAR FROM DATE OF ACCEPTANCE BY OWNER. CORRECTION OF ANY DEFECTS SHALL BE COMPLETED WITHOUT ADDITIONAL CHARGE AND SHALL INCLUDE REPLACEMENT OR REPAIR OF ANY OTHER PHASE OF THE INSTALLATION WHICH MAY HAVE BEEN DAMAGED.
19. PROVIDE ACCESS PANELS FOR ALL CONCEALED VALVES. ACCESS PANELS IN RATED WALLS SHALL MAINTAIN THE SAME RATING AND SHALL MATCH THE FINISH OF THE WALL IN WHICH IT IS INSTALLED.
20. PROVIDE COMBINATION CLEANOUT PLUG AND COVER PLATE OR ACCESS PANEL FOR ALL WALL CLEANOUTS. FINISH TO MATCH NEARBY FIXTURE TRIM.
21. NO COMBUSTIBLE MATERIAL SHALL BE INSTALLED IN MECHANICAL ROOMS NOR IN CEILING SPACES WHERE USED AS RETURN AIR PLENUMS.
22. NO WATER, SANITARY OR DRAINAGE PIPING SHALL BE INSTALLED IN ELECTRICAL OR ELEVATOR EQUIPMENT ROOMS.
23. ALL CONTROL VALVES SHALL BE TAGGED AND MARKED. A REPRODUCIBLE DIAGRAM LOCATING ALL VALVES SHALL BE FURNISHED FOR OWNER/OPERATOR.
24. CONDENSATE DRAIN PIPING SHALL BE TYPE "L" COPPER WITH ARMAFLEX INSULATION AND A VAPOR-BARRIER JACKET PER FLORIDA BUILDING CODE 6TH EDITION (2017) - ENERGY CONSERVATION, TABLE C403.2.8. PVC WITHOUT INSULATION IS ACCEPTABLE FOR RISERS AND BELOW GRADE PIPING. WHEN USED IN A RETURN AIR PLENUM, PVC PIPING WITH INSULATION IS ACCEPTABLE IN LOCATIONS WHERE ALLOWED BY LOCAL CODES. CONDENSATE PIPING SHALL NOT DRAIN ONTO THE ROOFING SYSTEM NOR ANY OF ITS COMPONENTS. CONDENSATE PIPING ARRANGEMENT IS EXEMPT FROM MINIMUM EQUIPMENT CLEARANCE REQUIREMENTS PER FLORIDA BUILDING CODE 6TH EDITION (2017), SECTION 1522.3.5. ALL HORIZONTAL RAINWATER PIPING RUN ABOVE FINISHED FLOOR THAT RECEIVES CONDENSATE DISCHARGE SHALL BE INSULATED WITH ARMAFLEX AND A VAPOR-BARRIER JACKET.
25. HOT WATER PIPING INSULATION SHALL BE PROVIDED IN ACCORDANCE WITH FLORIDA BUILDING CODE 6TH EDITION (2017) - PLUMBING, TABLE 607.5 & FLORIDA BUILDING CODE 6TH EDITION (2017) - ENERGY CONSERVATION, TABLE C403.2.8. CONTRACTOR SHALL USE ARMAFLEX OR EQUAL WHERE APPLICABLE. WHERE DOMESTIC WATER TEMPERATURES CAN CAUSE SWEATING, ALL COLD WATER PIPING SHALL BE INSULATED WITH ARMAFLEX INSULATION AND A VAPOR-BARRIER JACKET, PER FLORIDA BUILDING CODE 6TH EDITION (2017) - ENERGY CONSERVATION, TABLE C403.2.8.
26. AIR ADMITTANCE VALVES MAY BE USED AS AN ALTERNATE TO VENT PIPING THRU ROOF WHERE ACCEPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION. INSTALLATION METHODS SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND REQUIREMENTS.
27. PROVIDE ANGLE STOPS ON ALL WATER SERVICE LINES TO FIXTURES FOR INDIVIDUAL SHUT-OFF.
28. STUDOR MINI/MAXI AIR ADMITTANCE VALVES MAY BE USED AS AN ALTERNATE TO VENT PIPING THRU ROOF WHERE ACCEPTABLE BY THE PLUMBING OFFICIAL AND LOCAL CODES. INSTALLATION SHALL BE AS PER MANUFACTURER'S RECOMMENDATIONS.
29. ALL HORIZONTAL RAINWATER PIPING THE RECEIVES CONDENSATE DISCHARGE FROM AIR CONDITIONING EQUIPMENT SHALL BE INSULATED WITH 1" THK. ARMAFLEX.
30. PLUMBING PLANS IN GENERAL, ARE DIAGRAMMATIC IN NATURE, AND ARE TO BE READ IN CONJUNCTION WITH ARCHITECTURAL, MECHANICAL, ELECTRICAL, FIRE SPRINKLER, STRUCTURAL AND CIVIL PLANS AND SHALL BE CONSIDERED AS ONE SET OF DOCUMENTS. PIPING MODIFICATIONS SUCH AS OFFSETS, BENDS, TRANSITIONS, AND SIZES SHALL BE REQUIRED TO PROVIDE AND INSTALL A COMPLETE FUNCTIONAL SYSTEM AND SHALL BE PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER. CHANGES IN PIPE SIZES AND ROUTING SHALL BE REQUIRED BY THE CONTRACTOR TO AVOID CONFLICTS AND TO ADAPT TO EXISTING FIELD CONDITIONS PROVIDED THAT INSTALLATION MEETS ALL APPLICABLE CODES.
31. SUPPLY TRAP PRIMER FOR ALL FLOOR DRAINS, FLOOR SINKS, HUB DRAINS, ETC. SHOWN ON PLANS.
32. CONTRACTOR TO FIELD VERIFY ALL SUPPLY PRESSURE REQUIREMENTS AND LIMITATIONS. PROVIDE PRESSURE REDUCING VALVE IF REQUIRED.
33. ANY REFERENCE OR APPLICATION OF DENTAL COMPRESSED AIR AS NOTED ON THIS PLAN IS NOT USED OR INTENDED FOR LIFE-SUPPORT PURPOSES SUCH AS RESPIRATORS, IPPB MACHINES, ANALGESIA, ANESTHESIA, ETC. THE ONLY USE IS AS INCIDENTAL AIR DISCHARGE INTO THE ORAL CAVITY AND NOT A PRIMARY OR SECONDARY SOURCE OF AIR TO SUSTAIN LIFE.

PLUMBING SHEET INDEX

SHEET#	DESCRIPTION
P0.1	PLUMBING NOTES, LEGENDS, AND DETAILS
P2.1	PLUMBING PLAN

PLUMBING LEGEND

CO	CLEAN OUT		SANITARY SEWER PIPING
S.O.V.	SHUT-OFF VALVE		VENT PIPING
COTC	CLEAN OUT TO GRADE		DOMESTIC COLD WATER PIPING
FS	FLOOR SINK		HOT WATER PIPING (110°)
CW	DOMESTIC COLD WATER		HOT WATER PIPING (140°)
HW	DOMESTIC HOT WATER		HOT WATER RECIRCULATING PIPING
HWR	DOMESTIC HOT WATER RECIRCULATING	CD	CONDENSATE PIPING
HB	HOSE BIBB	CA	COMPRESSED AIR PIPING
VTR	VENT THRU ROOF	T&P	TEMPERATURE AND PRESSURE RELIEF
	GATE VALVE	SD	STORM DRAIN PIPING
	GLOBE VALVE	G	GAS PIPING
	CHECK VALVE		PIPE RISE UP
	GAS SOLENOID VALVE		PIPE DOWN OR DROP
	GAS COCK		CAPPED END OF PIPE
#	WATER HAMMER ARRESTER (PDI No.)		POINT OF CONNECTION
FD	FLOOR DRAIN		P-TRAP



NOTE:
PROVIDE WCO WHERE SHOWN ON PLAN, AND ON SANITARY WASTE BRANCHES NOT SERVED WITH A FLOOR CLEANOUT: LOCATE ABOVE FIXTURE FLOOD RIM WITHIN 4' OF FLOOR. CONSULT LOCAL CODES FOR OTHER WCO REQUIREMENTS.

WALL CLEANOUT DETAIL

NOT TO SCALE

SHOCK ARRESTOR SCHEDULE

P.D.I. DESIGNATION	MANUF. & MODEL	FIXTURE UNITS	CONNECTION
A	SIOUX CHIEF 652-A	1-11	1/2"
B	SIOUX CHIEF 653-B	12-32	3/4"
C	SIOUX CHIEF 654-C	33-60	1"

SIOUX CHIEF SHOCK ARRESTORS APPROVED FOR INSTALLATION WITH NO ACCESS DOOR REQUIRED. CONFORMS TO ANSI/ASSE 1010 STANDARDS.

SLOPE OF HORIZ. DRAINAGE PIPE

SIZE (inches)	MINIMUM SLOPE (inch per foot)
2-1/2 or less	1/4
3 to 6	1/8
8 or larger	1/16

TABLE 704.1 OF THE FLORIDA PLUMBING CODE 2017

ISSUED FOR PERMIT 12-17-20

KAMM CONSULTING PROJECT #: 2020-0276
PROJECT MANAGER: DUANE MILLAR

KAMM Consulting
1408 Orange Avenue
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Phone 772.595.1744
bbrown@kammconsulting.com
Certification of Authorization #8189
PRINCIPAL
Bradly L Brown Florida License #58232
05-19-21 date
signed

Project:

ADDITION FOR

NORTH COUNTY LIBRARY

INDIAN RIVER COUNTY, FLORIDA

Key Plan:

Issues:

No.:	Date:	Description:
A.	05/11/20	CLIENT REVIEW
B.	12/17/20	PERMIT SET
C.	05/14/21	PERMIT COMMENTS
D.	09/16/21	BID SET

Architect:

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Consultant:

Drawing Title:

PLUMBING NOTES

Reference North

Drn: MT Dwg. File:
Chd: AJD XREF File:
Project No.: 2019-54 Plot File:
Sheet No.:

Cert. No.: 12456
Date Signed:

P0.1

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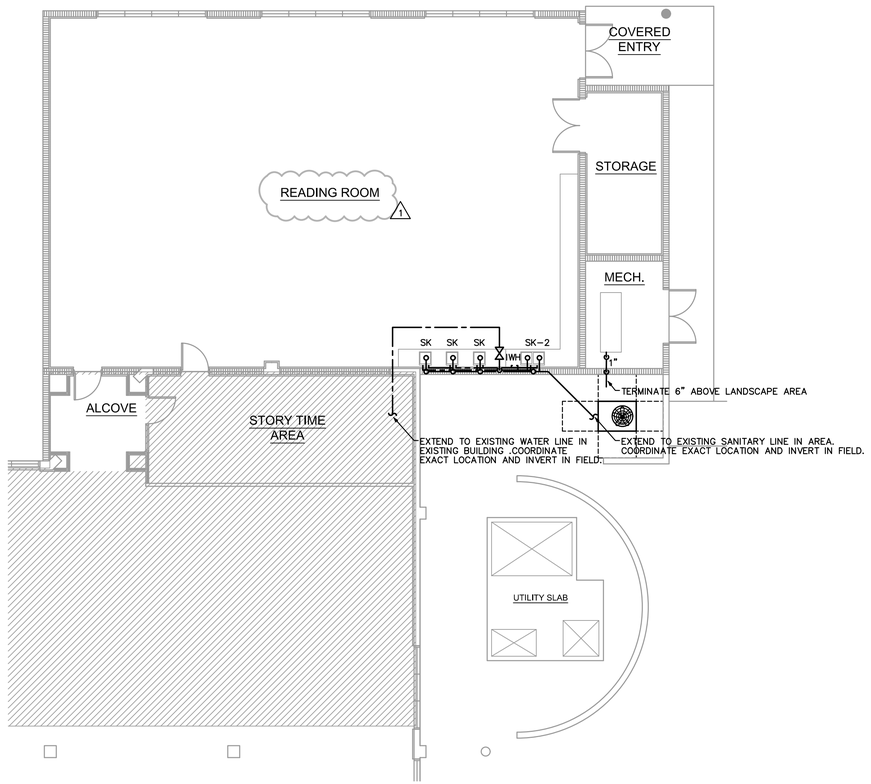

PLUMBING PLAN

1/8"=1'-0"

Project:

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NORTH COUNTY LIBRARY

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P2.1

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SPRINKLER NOTES: CODE SECTION 61G15-32.004

1. THE FOLLOWING NOTES SHALL SERVE AS MEETING THE REQUIREMENTS SET FORTH UNDER THE FLORIDA ADMINISTRATIVE CODE SECTION 61G15-32.004 FOR FIRE PROTECTION ENGINEERING DOCUMENTS.

2. THE CONTRACTOR SHALL PROVIDE A COMPLETE SET OF SHOP DRAWINGS FOR FIRE SPRINKLER INSTALLATION FOR THE PROJECT AS INDICATED IN THE ENGINEER OR RECORD DOCUMENTS. THE SYSTEM SHALL BE DESIGNED IN ACCORDANCE WITH THE 2017 FLORIDA BUILDING CODE, THE FLORIDA FIRE PREVENTION CODE-6th EDITION, NFPA 13 (2016 EDITION), NFPA 14, NFPA 20, NFPA 24 (2013 EDITIONS), THE OWNER'S INSURANCE COMPANY AND GUIDE LINES IF ANY, THE STATE AND/OR LOCAL FIRE MARSHAL, THE LOCAL BUILDING DEPARTMENT, AND OWNER GUIDE LINE AND STANDARDS IF EXISTING.

3. THE FIRE SPRINKLER SYSTEM SHALL BE DESIGNED AS OUTLINED BELOW:

LIGHT HAZARD: (DESIGNATED AS LH)
DESIGN DENSITY: 0.10 GPM/SQFT OVER THE MOST DEMANDING 1500 SQFT.
FIRE SPRINKLER SPACING: 225 SQFT. MAXIMUM.
AREAS/ROOMS: LOBBIES, OFFICES, RESTAURANT SEATING AREAS
HOSE REQUIREMENTS: 100 GPM (TOTAL COMBINED INSIDE/OUTSIDE).

ORDINARY HAZARD GROUP 1: (DESIGNATED AS OH1)
DESIGN DENSITY: 0.15 GPM/SQFT OVER THE MOST DEMANDING 1500 SQFT.
FIRE SPRINKLER SPACING: 130 SQFT. MAXIMUM.
AREAS/ROOMS: PARKING, RESTAURANT SERVICE AREAS, MECHANICAL ROOMS, ELEVATOR MACHINE ROOMS, ELECTRIC ROOMS, TELEPHONE ROOMS.
HOSE REQUIREMENTS: 250 GPM (TOTAL COMBINED INSIDE/OUTSIDE).

ORDINARY HAZARD GROUP 2: (DESIGNATED AS OH2)
DESIGN DENSITY: 0.20 GPM/SQFT OVER THE MOST DEMANDING 1500 SQFT.
FIRE SPRINKLER SPACING: 130 SQFT. MAXIMUM.
AREAS/ROOMS: RETAIL SPACES, TRASH ROOM, STORAGE SPACES.
HOSE REQUIREMENTS: 250 GPM (TOTAL COMBINED INSIDE/OUTSIDE).
NOTE: NO STORAGE OVER 12 FT SHALL BE ALLOWED. OWNER SHALL BE RESPONSIBLE TO ENFORCE SUCH CONDITION.

4. THE CONTRACTOR SHALL USE A FLOW TEST PERFORMED BY THE LOCAL AUTHORITY TO ASCERTAIN THE WATER SERVICE REQUIRED FOR THE FIRE SPRINKLER INSTALLATION; THE HYDRAULIC CALCULATIONS SHALL ALLOW FOR A 10% PRESSURE REDUCTION AS A FACTOR OF SAFETY AND COMPLY WITH THE AHJ REQUIREMENTS AND/OR USE PRESSURE AND FLOW CRITERIA PROVIDED BY THE AUTHORITY HAVING JURISDICTION.

5. THE CONTRACTOR SHALL SUBMIT THREE (3) SETS OF SHOP DRAWINGS AND, IF APPLICABLE, HYDRAULIC CALCULATIONS BEARING THE SIGNATURE AND SEAL OF A FLORIDA STATE LICENSED REGISTERED PROFESSIONAL ENGINEER FOR REVIEW BY THE ARCHITECT/OWNER PRIOR TO COMMENCING ANY FIELD WORK. AS WELL, THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AND, IF APPLICABLE, HYDRAULIC CALCULATIONS TO THE LOCAL BUILDING DEPARTMENT OR AUTHORITY HAVING JURISDICTION AND OBTAIN ALL NECESSARY APPROVALS AND PERMITS FOR THE PROJECT.

6. THE CONTRACTOR SHALL COORDINATE ALL FIRE SPRINKLER WORK WITH ALL OTHER CONSTRUCTION DISCIPLINES INCLUDING BUT NOT LIMITED TO HVAC, PLUMBING, ELECTRICAL, STRUCTURAL AND CIVIL.
THE CONTRACTOR SHALL ALSO COORDINATE ANY SPECIAL TESTING REQUIRED BY THE OWNER.

7. THE SHOP DRAWINGS, INCLUDING HYDRAULIC CALCULATIONS, SHALL SHOW THE SIZES, TYPES, AND DIMENSIONAL LOCATIONS FOR ALL FIRE SPRINKLERS, MAINS, BRANCHES, AND EXISTING PIPING FOR THE WATER SUPPLY TO THE CONNECTION OF THE SYSTEM.

8. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATION AND FINAL LOCATION OF THE FIRE SPRINKLER HEADS AND/OR PIPING FOR FINAL FIRE PROTECTION LAYOUT DOCUMENTS PREPARATION AND INSTALLATION.

9. THE ENGINEER OF RECORD (EOR) DOCUMENTS ARE NOT AND SHALL NOT BE CONSIDERED SHOP DRAWINGS NOR INSTALLATION DRAWINGS.

10. ALL INFORMATION CONTAINED IN THESE DRAWINGS IS ACCORDING TO THE ORIGINAL CONSTRUCTION DOCUMENTS PROVIDED BY THE OWNER AND LIMITED FIELD OBSERVATIONS. THE ENGINEER OR THE ARCHITECT MAKES NO REPRESENTATION FOR THE ACCURACY OF SUCH INFORMATION.
THE CONTRACTOR SHALL VISIT THE BUILDING AND FIELD VERIFY ALL EXISTING CONDITIONS MATERIALS, EQUIPMENT, DIMENSIONS, ETC. ONCE DEMOLITION TAKES PLACE PRIOR TO SUBMITTING A BID AND COMMERCING ANY WORK.

11. THE CONTRACTOR SHALL REMOVE EXISTING FIRE SPRINKLERS AND/OR FIRE SPRINKLER PIPING NOT REQUIRED FOR THE PERMANENT INSTALLATION AT THE END OF THE INSTALLATION PHASE.

12. ALL WORK BY THE CONTRACTOR SHALL BE DONE IN STRICT COORDINATION AND AS APPROVED BY THE OWNER. ALL INTERRUPTIONS IN THE FUNCTIONING OF THE FIRE SPRINKLER SYSTEM SHALL BE DONE DURING OFF-PEAK (UNOCCUPIED TIMES) OR STRICTLY AS APPROVED BY THE OWNER. NOTIFICATION OF A SHUTDOWN TO THE FIRE SPRINKLER SYSTEM, INCLUDING THE DURATION TIME, SHALL BE MADE TO THE OWNER A MINIMUM OF SEVEN (7) DAYS IN ADVANCE OF SUCH WORK AND COORDINATED ALSO WITH AHJ WHERE IN THE OPINION OF THE AHJ IF PARTIAL OR TOTAL DEMOLITION OF THE EXISTING FIRE SPRINKLER SYSTEM TAKES PLACE IN SITE AND SUCH DEMOLITION IS OF A HAZARDOUS NATURE, QUALIFIED PERSONNEL SHALL SERVE AS ON-SITE FIRE WATCH.

13. THE CONTRACTOR SHALL BEAR ALL COSTS OF
A. PREPARING SHOP DRAWINGS AND DOCUMENTS
B. SECURING PERMITS AND APPRDVALS
C. LABOR
D. MATERIALS
E. CLEAN UP/WASTE REMOVAL
F. FIRE WATCH IN COORDINATION OF AHJ IF REQUIRED.

14. PIPING INSTALLATION
WHEN A MODIFICATION TO AND EXISTING FIRE SPRINKLER SYSTEM TAKES PLACE, THE CONTRACTOR SHALL MATCH THE NEW COMPONENTS SUCH AS PIPE SCHEDULE MATERIALS, FITTINGS, SPRINKLERS, VALVES, ETC. WITH THE EXISTING COMPONENTS ALREADY INSTALLED IN THE JOB OR IF DISCONTINUED WITH TODAY EQUIVALENTS, OBSERVED WHEN FIELD VERIFICATION TAKES PLACE; THAT SHALL BE AS PER NFPA 13. AHJ AND OWNER GUIDE LINES AND STANDARDS IF ANY WHICH IS ALSO RESPONSIBILITY OF THE CONTRACTOR VERIFY PREVIOUSLY TO BIDDING, SUBMITTING, PERMITTING, COMMENCING AND INSTALLING ANY EXISTING PROJECT TO BE MODIFIED.

THE FOLLOWING MATERIALS ARE SPECIFICATIONS AS PER NFPA 13:
A. MAKE CHANGES IN SIZE OF PIPE WITH REDUCING FITTINGS; BUSHINGS ARE NOT PERMITTED.
B. CAP OPENINGS IN PIPING DURING CONSTRUCTION.
C. ESCUTCHEONS: FIT EXPOSED PIPES PASSING THROUGH FLOORS, WALL OR CEILING WITH ESCUTCHEONS. MANUFACTURE SPECIAL SIZES OF ESCUTCHEONS FROM STEEL AND PRIME COAT SAME. CUT IN ROUND, RECTANGULAR OR SQUARE SPACE TO PROVIDE A CLEAN APPEARANCE ACCEPTABLE TO THE CAP.
D. PENETRATIONS THROUGH FIRE RATED WALLS SHOULD BE FILLED WITH A UL LISTED FIRE SEALANT IN ACCORDANCE WITH THE MANUFACTURERS INSTRUCTIONS AND TO PROVIDE AT LEAST THE MINIMUM FIRE RATING OF THE WALL.
E. CPVC PIPING SHALL NOT BE INSTALLED OVER ANY PORTION OF THE OPENINGS(S) IN RETURN AIR PLENUMS.
F. ABOVEGROUND PIPE MATERIALS:
1. SCHEDULE 40, FOR PIPE SIZES 1" THROUGH 2".
2. SCHEDULE 10 FOR PIPE SIZES 2½" AND LARGER.
3. ALL EXPOSED PIPE AND FITTINGS TO OUTSIDE AIR, SALT, CHEMICALS, MOISTURE, AND/OR OTHER CORROSIVE VAPORS SUFFICIENT TO CAUSE CORROSION OF SUCH MATERIALS SHALL BE BLACK STEEL PIPE SCH. 40, CARBON STEEL GROOVED FITTINGS, HANG UP WITH CORROSION RESISTANT STEEL ROD AND HANGERS AND SHALL BE ALL RED PAINTED PER NFPA 13-2013-8.16.4.2.
4. SCHEDULE 80 FOR ½"OR ¾"NIPPLE. NIPPLES SHALL NOT EXCEED 4" IN LENGHT.

HANGER SCHEDULE

NFPA 13 TABLE 4-6.2.2.1 MAXIMUM DISTANCE BETWEEN HANGERD (FT - IN)

NOMINAL PIPE SIZE	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	3-1/2"	4"	5"	6"	8"
STEEL PIPE EXCEPT THREADED LIGHT-WALL	N/A	12-0	12-0	15-0	15-0	15-0	15-0	15-0	15-0	15-0	15-0	15-0
THREADED LIGHT-WALL STEEL PIPE	N/A	12-0	12-0	12-0	12-0	12-0	12-0	N/A	N/A	N/A	N/A	N/A

NOTES
1. THERE SHALL BE NOT LESS THAN ONE HANGER FOR EACH SECTION OF PIPE
2. SUPPORT SPACING DISTANCE FOR END LINE SPRINKLER DROP ELBOWS AND DROP TEES TO BE IN ACCORDANCE WITH NFPA 13 AND THE PRODUCT APPROVAL LISTING.

SYMBOL LEGEND

(0'-0")	CEILING HEIGHT
(NIC)	NOT IN CONTRACT
⊙	NEW CONCEALED PENDENT SPRINKLER
⊘	NEW PENDENT SPRINKLER
⊗	NEW UPRIGHT SPRINKLER

FIRE SPRINKLER SHEET INDEX

SHEET#	DESCRIPTION
FS0.1	FIRE SPRINKLER PERFORMANCE SPEC NOTES, LEGEND & INDEX
FS2.1	FIRE SPRINKLER PERFORMANCE SPEC ADDITION FLOOR PLAN
FS2.2	FIRE SPRINKLER PERFORMANCE SPEC ADDITION ROOF PLAN

FIRE SPRINKLER SCHEDULE-(REFER TO NOTES BELOW)

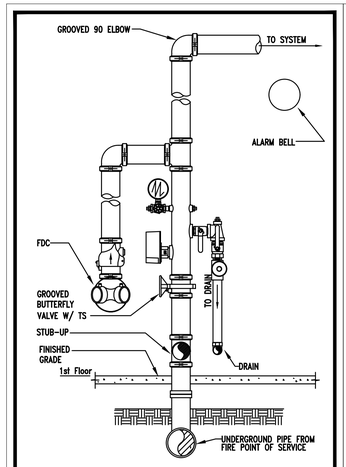
SYM	QNT	TYPE/DESCRIPTION	TEMP(°F) RATING	K FACTOR	RESPONSE	NPT	MFG.	MODEL	SIN	ESCUTCHEON FINISH	CONN.	NOTES/INTENDED USE
⊙	-	CONCEALED PENDENT	155	5.6	QUICK	1/2"	TYCO	RFII	TY3531	WHITE	Thread	OFFICES / COMMON AREAS
⊘	-	PENDENT	155	5.6	QUICK	1/2"	TYCO	TY-FRB	TY3231	BRASS	Thread	BELOW OBSTRUCTIONS
⊗	-	UPRIGHT	175	5.6	QUICK	1/2"	TYCO	TY-FRB	TY3131	BRASS	Thread	OPEN CEILIGS

NOTES:

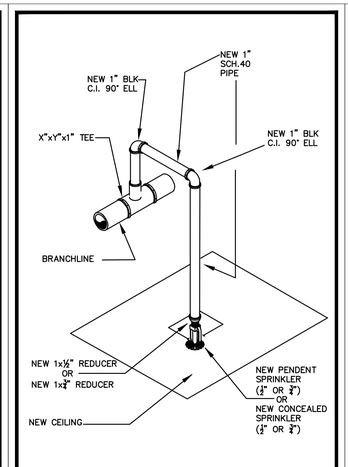
1. ALL FIRE SPRINKLERS SHALL HAVE A U.L. APPROVED CORROSION RESISTANT COATING WHERE EXPOSED TO OUTSIDE AIR, CHEMICALS, MOISTURE, OR OTHER CORROSIVE VAPORS SUFFICIENT TO CAUSE CORROSION OF SUCH DEVICES.
2. THE CONTRACTOR SHALL RECEIVE THE ARCHITECTS APPROVAL FOR ALL FIRE SPRINKLER/ESCUTCHEON FINISHES PRIOR TO ORDERING AND INSTALLING DESPITE WHAT IS SPECIFIED IN THIS SCHEDULE.
3. IF MODIFYING AN EXISTING PROJECT, THE CONTRACTOR SHALL BE RESPONSIBLE TO MATCH THE EXISTING FIRE SPRINKLERS IF STILL FABRICATED TODAY WITH THE NEW TO BE INSTALLED OR IF DISCONTINUED WITH THE NEW EQUIVALENTS FOR TODAY'S INSTALLATION REQUIREMENTS DESPITE WHAT IS SPECIFIED IN THIS SCHEDULE.

HAZARD CLASSIFICATIONS

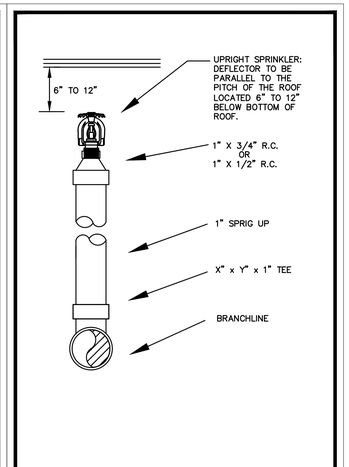
- LIGHT HAZARD
  DENSITY: =0.10 GPM/ft2.
  MAX. AREA PER HEAD: 225 ft2.
  TEMPERATURE 155° F.
  HOSE ALLOWANCE 100 GPM
- LIGHT HAZARD (ROOF)
  DENSITY: =0.10 GPM/ft2.
  MAX. AREA PER HEAD: 100 ft2
  TEMPERATURE 200° F.
  HOSE ALLOWANCE 100 GPM
- ORDINARY HAZARD GROUP I
  DENSITY: =0.15 GPM/ft2.
  MAX. AREA PER HEAD: 130 ft2.
  TEMPERATURE 200° F.
  HOSE ALLOWANCE 250 GPM
- ORDINARY HAZARD GROUP II
  DENSITY: =0.20 GPM/ft2.
  MAX. AREA PER HEAD: 130 ft2.
  TEMPERATURE 155° F.
  HOSE ALLOWANCE 250 GPM



EXISTING FIRE SPRINKLER RISER (NIC)
NOT TO SCALE



ARMOVER DETAIL
NOT TO SCALE



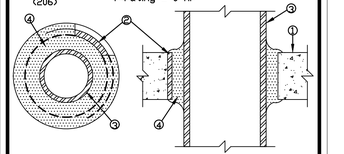
TYPICAL SPRINKLER ON SPRIG
NOT TO SCALE

2 and 3 Hour Fire Rated Through Penetration Firestop for Single Metal Pipe through Concrete Floors or walls using FYRE-SHIELD

TREMCO
3735 Green Rd.
Beachwood, OH, 44122
Drawing not to scale

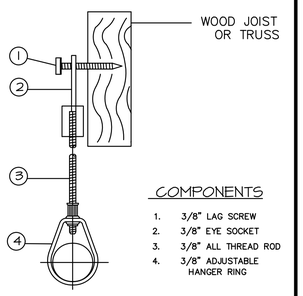
CAJ1028
(206)

F-rating = 2 and 3 Hr
T-rating = 0 Hr

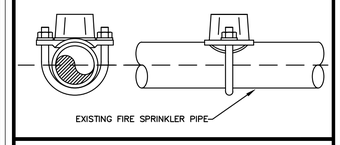


① Floor or Wall assembly = 2.5" thick concrete
② Steel Sleeve – optional – Sch 40(or heavier) steel pipe with length as same as floor/wall thickness
③ ·Steel Pipe : Max. 6" steel.
·EMT: 4" electrical metallic tubing.
·Annular space is ¾"
④ Completely fill annular space and thickness of floor or wall with FYRE-SHIELD. Fill material shall be domed on both sides of assembly to a 1/2" height in addition to thickness required for opening

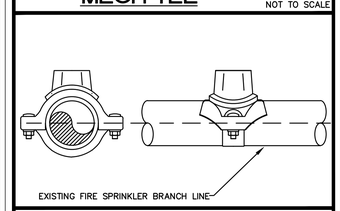
FIRE STOP DETAIL FOR FIRE WALL PENETRATIONS
NOT TO SCALE



HANGER DETAIL # 3
NOT TO SCALE



MECH TEE
NOT TO SCALE



FIRELOCK OUTLET-T
NOT TO SCALE

FIRE SPRINKLER PERFORMANCE SPEC-NOTES, LEGEND & INDEX

N.T.S.

ISSUED FOR PERMIT	12-17-20
-	

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Drawing Title:

FIRE SPRINKLER NOTES

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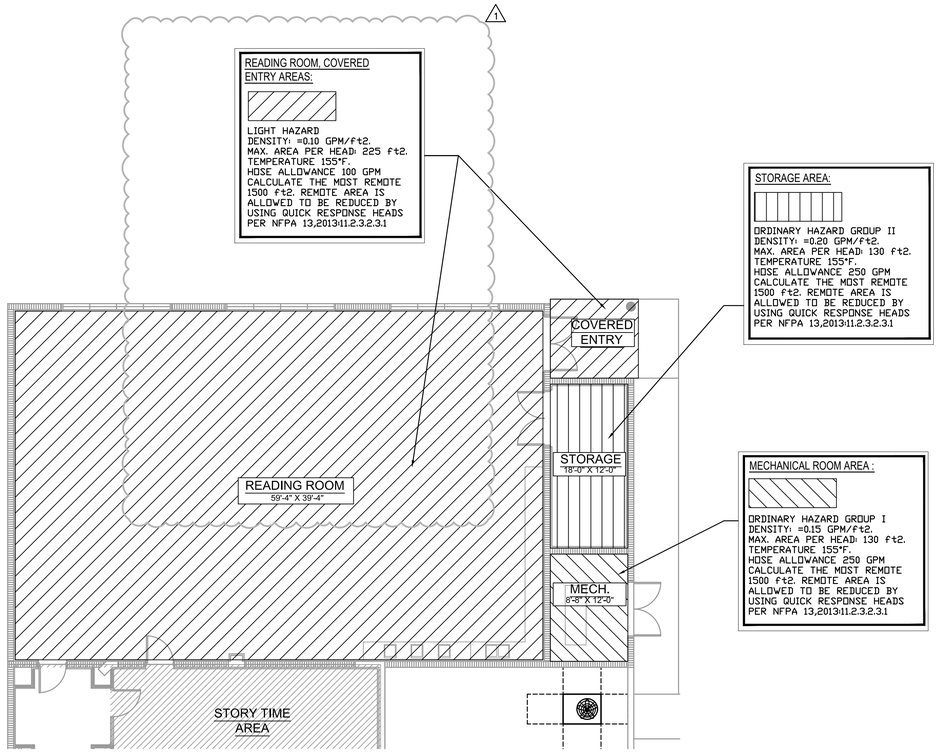


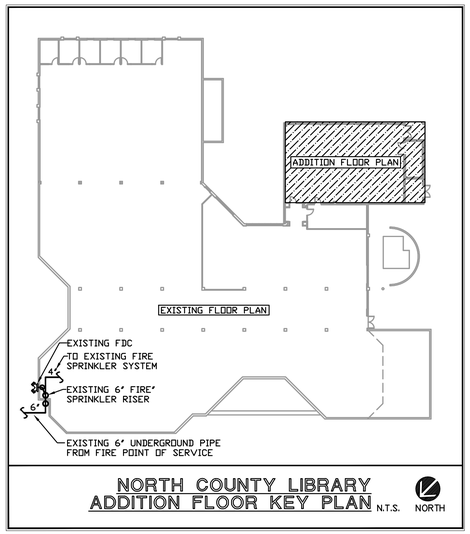
FIRE SPRINKLER CONTRACTOR SCOPE OF WORK:

A LICENSED AND CERTIFIED FIRE SPRINKLER CONTRACTOR SHALL BE RESPONSIBLE TO DESIGN, PERMIT AND INSTALL THE NEW FIRE SPRINKLER COMPONENTS AS REQUIRED CONNECTED FROM THE EXISTING SYSTEM FOR A COMPLETE FUNCTIONAL CODE COMPLIANT FIRE SPRINKLER SYSTEM IN ACCORDANCE TO ALL APPLICABLE NFPA CODES, OWNER & UNDERWRITER INSURANCE STANDARDS, THE LOCAL AUTHORITY HAVING JURISDICTION (AHJ) REQUIREMENTS AND THE ENGINEER OF RECORD (EOR) 61G-15 DOCUMENTS PER FLORIDA STATUTES.

FIRE SPRINKLER PERFORMANCE SPEC
ADDITION FLOOR PLAN

NORTH

1/8"=1'-0"



NORTH COUNTY LIBRARY
ADDITION FLOOR KEY PLAN N.T.S. NORTH

IMPORTANT ADDITIONAL NOTES:

1- THIS IS A FIRE SPRINKLER PERFORMANCE SPEC. A LICENSED AND CERTIFIED FIRE SPRINKLER CONTRACTOR SHALL FURNISH AND INSTALL NEW FIRE SPRINKLER COMPONENTS AS REQUIRED FOR A COMPLETE FUNCTIONAL FIRE PROTECTION SYSTEM IN ACCORDANCE WITH ALL APPLICABLE CODES AND LOCAL AHJ REQUIREMENTS.

2- FIRE SPRINKLER CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE SHOP DRAWINGS AND HYDRAULIC CALCULATIONS SIGNED AND SEALED BY THEIR OWN FLORIDA REGISTERED PROFESSIONAL ENGINEER FOR FIRE SPRINKLER PERMIT.

3- ALL FIRE SPRINKLERS SHALL HAVE A UL, APPROVED CORROSION RESISTANT COATING WHERE EXPOSED TO OUTSIDE AIR, SALT, CHEMICALS, MOISTURE, AND/OR OTHER CORROSIVE VAPORS SUFFICIENT TO CAUSE CORROSION OF SUCH DEVICES.

4- THE CONTRACTOR SHALL RECEIVE THE ARCHITECT'S APPROVAL FOR ALL FIRE SPRINKLERS/ESCUTCHEON FINISHES PRIOR TO ORDERING AND INSTALLING DESPITE WHAT IS SPECIFIED IN THESE DOCUMENTS.

5- ALL EXPOSED PIPE AND FITTINGS TO OUTSIDE AIR, SALT, CHEMICALS, MOISTURE, AND/OR OTHER CORROSIVE VAPORS SUFFICIENT TO CAUSE CORROSION OF SUCH MATERIALS SHALL BE BLACK STEEL PIPE SCH. 40, CARBON STEEL GROOVED FITTINGS, HANG UP WITH CORROSION RESISTANT STEEL ROD AND HANGERS AND SHALL BE ALL RED PAINTED PER NFPA 13:2013-8.16.4.2.

6- FIRE SPRINKLER CONTRACTOR SHALL BE RESPONSIBLE TO OBTAIN A FLOW TEST PERFORMED BY THE LOCAL AUTHORITY TO ASCERTAIN THE WATER SERVICE REQUIRED FOR THE FIRE SPRINKLER INSTALLATION; THE HYDRAULIC CALCULATIONS SHALL ALLOW FOR A 10% PRESSURE REDUCTION AS A FACTOR OF SAFETY AND COMPLY WITH THE AHJ REQUIREMENTS AND/OR USE PRESSURE AND FLOW CRITERIA AS REQUIRED BY THE LOCAL AUTHORITY HAVING JURISDICTION.

7- THE CONTRACTOR FOR HIS INSTALLATION PERMIT SHALL PROVIDE CUT SHEETS OF ALL FIRE SPRINKLER COMPONENTS WITH SHOP DRAWINGS AND HYDRAULIC CALCULATIONS PER NFPA 13-2013-8.15.20.5.2 ACCORDING TO THE RESPECTIVE HAZARD REQUIREMENTS BY OWNER STANDARDS IF ANY AND BY CODE, SHALL SHOW PIPE SIZES, ALL FITTINGS, AND DIMENSIONAL LOCATIONS FOR ALL FIRE SPRINKLERS, MAINS, BRANCHES, AND PIPING FOR THE WATER SUPPLY TO THE CONNECTION OF THE SYSTEM.

8- ANY PIPE SIZES INDICATED ON THE FIRE SPRINKLER EOR DOCUMENTS ARE PROVIDED FOR REFERENCE ONLY INCLUDING THE SIZE OF THE FIRE POINT OF SERVICE. THE ENGINEER OF RECORD MAKES NO REPRESENTATION AND CANNOT TAKE ANY RESPONSIBILITY FOR THE ACCURACY OF SUCH REPRESENTATION DUE TO THE LACK OF INFORMATION IN THE BEGINNING OF THE PROJECT, THE FIRE SPRINKLER CONTRACTOR CANNOT BASE HIS PRICE IN ANY EOR DRAWING PIPE SIZES DUE TO THE GIVEN REASONS. THE FIRE SPRINKLER CONTRACTOR SHALL BE RESPONSIBLE TO PERFORM AND PROVIDE A HYDRAULICALLY CALCULATED FIRE SPRINKLER SYSTEM, CONFORMING TO ALL APPLICABLE NFPA CODES, HAZARDS, INCREASING OF REMOTE AREAS AND/OR DENSITIES IF REQUIRED, USING AND PROVIDING THE PROPER PIPE SIZES FOR THE MOST REMOTE AREAS AND SYSTEMS DEMAND, STARTING AT THE DESIGNATED POINT OF SERVICE AND SUCH CONDITION SHALL BE REFLECTED AND UNDERSTOOD BY THE FIRE SPRINKLER CONTRACTOR ASSUMING ALL HIS RESPONSIBILITIES IF FINAL PIPE SIZES DIFFER FROM EOR DRAWINGS, BEFORE SIGNING ANY POSSIBLE CONTRACT WITH THE OWNERS REPRESENTATIVE.

9- THE CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD COORDINATION AND FINAL LOCATION OF THE FIRE SPRINKLER HEADS (AS PER NFPA 13 AND AHJ) WITH THE RESPECTIVE HAZARD REQUIREMENTS BY CODE AND PIPING FOR FINAL FIRE PROTECTION LAYOUT DOCUMENTS PREPARATION AND FINAL INSTALLATION.

10- CONTRACTOR SHALL TAP IN INTO EXISTING SYSTEM WITH MECH. TEES OR SIMILAR CONNECTED FROM THE FIRE SPRINKLER MAIN WHEN IS REQUIRED TO ADD SPRINKLERS TO PROVIDE PROPER PIPE SIZES ACCORDING TO NFPA 13.

11- THE CONTRACTOR SHALL COORDINATE ALL FIRE SPRINKLER WORK WITH ALL OTHER CONSTRUCTION DISCIPLINES INCLUDING BUT NOT LIMITED TO HVAC, PLUMBING, ELECTRICAL, STRUCTURAL, CIVIL, ARCHITECTURAL AND FIRE ALARM. THE CONTRACTOR SHALL ALSO COORDINATE ANY SPECIAL TESTING REQUIRED BY THE OWNER.

12- SPRINKLER CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE PROPER FIRE SPRINKLERS BELOW ANY OBSTRUCTION INCLUDED BUT NOT LIMITED TO DUCT, STRUCTURE, RAMP, ESCALATOR, STAIR, CEILING, SOFFIT, PIPE, DOOR, LANDING, RAMP ETC. IN ORDER TO PROVIDE PROPER FLOOR FIRE PROTECTION CODE COMPLIANCE SYSTEM DESPITE WHAT IS SPECIFIED IN THIS DRAWING. SUCH CONDITION SHALL BE REFLECTED IN HIS BID PRICE BEFORE SIGNING ANY CONTRACT WITH THE OWNER'S REPRESENTATIVE.

ISSUED FOR PERMIT	12-17-20
-	

KAMM CONSULTING PROJECT #: 2020-0276
PROJECT MANAGER: DUANE MILLAR

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Certification of Authorization #8189

PRINCIPAL
Bradly L Brown Florida License #58232

05-19-21
date

signed

Project:

ADDITION FOR

NORTH COUNTY LIBRARY

INDIAN RIVER COUNTY, FLORIDA

Key Plan:

Issues:

No.:	Date:	Description:
A.	05/11/20	CLIENT REVIEW
B.	12/17/20	PERMIT SET
C. 1	05/14/21	PERMIT COMMENTS
D.	09/16/21	BID SET

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Consultant:

Drawing Title:

FIRE SPRINKLER PERFORMANCE SPEC ADDITION FLOOR PLAN

Reference North

Drn:	Dwg. File:
MT	
Chd:	XREF File:
AJD	
Project No.:	Plot File:
2019-54	.
Sheet No.:	

Cert. No.: 12456

Date Signed:

FS2.1

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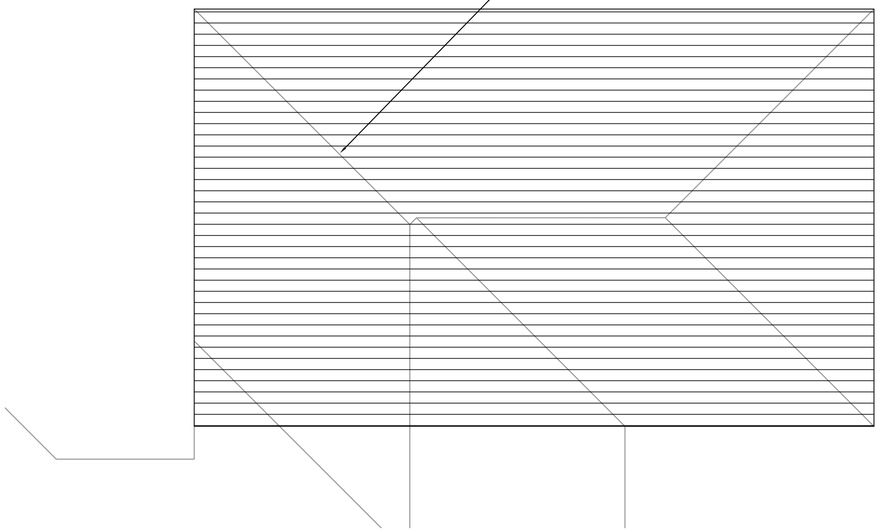
ROOF AREAS

LIGHT HAZARD (ROOF)
DENSITY: =0.10 GPM/ft2.
MAX. AREA PER HEAD 100 ft2.
TEMPERATURE 200°F.
HOSE ALLOWANCE 100 GPM.
CALCULATE THE MOST REMOTE 1500 ft2. REMOTE AREA IS ALLOWED TO BE REDUCED BY USING QUICK RESPONSE HEADS PER NFPA 13,2013:11.2.3.2.3.1

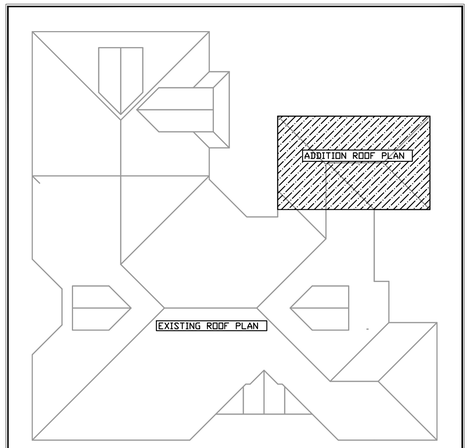


FIRE SPRINKLER CONTRACTOR SCOPE OF WORK:

A LICENSED AND CERTIFIED FIRE SPRINKLER CONTRACTOR SHALL BE RESPONSIBLE TO DESIGN, PERMIT AND INSTALL THE NEW FIRE SPRINKLER COMPONENTS AS REQUIRED CONNECTED FROM THE EXISTING SYSTEM FOR A COMPLETE FUNCTIONAL CODE COMPLIANT FIRE SPRINKLER SYSTEM IN ACCORDANCE TO ALL APPLICABLE NFPA CODES, OWNER & UNDERWRITER INSURANCE STANDARDS, THE LOCAL AUTHORITY HAVING JURISDICTION (AHJ) REQUIREMENTS AND THE ENGINEER OF RECORD (EOR) 61G-15 DOCUMENTS PER FLORIDA STATUTES.

FIRE SPRINKLER PERFORMANCE SPEC
ADDITION ROOF PLAN

1/8"=1'-0" NORTH



NORTH COUNTY LIBRARY
ADDITION ROOF KEY PLAN N.T.S. NORTH

IMPORTANT ADDITIONAL NOTES:

1- THIS IS A FIRE SPRINKLER PERFORMANCE SPEC. A LICENSED AND CERTIFIED FIRE SPRINKLER CONTRACTOR SHALL FURNISH AND INSTALL NEW FIRE SPRINKLER COMPONENTS AS REQUIRED FOR A COMPLETE FUNCTIONAL FIRE PROTECTION SYSTEM IN ACCORDANCE WITH ALL APPLICABLE CODES AND LOCAL AHJ REQUIREMENTS.

2- FIRE SPRINKLER CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE SHOP DRAWINGS AND HYDRAULIC CALCULATIONS SIGNED AND SEALED BY THEIR OWN FLORIDA REGISTERED PROFESSIONAL ENGINEER FOR FIRE SPRINKLER PERMIT.

3- ALL FIRE SPRINKLERS SHALL HAVE A U.L. APPROVED CORROSION RESISTANT COATING WHERE EXPOSED TO OUTSIDE AIR, SALT, CHEMICALS, MOISTURE, AND/OR OTHER CORROSIVE VAPORS SUFFICIENT TO CAUSE CORROSION OF SUCH DEVICES.

4- THE CONTRACTOR SHALL RECEIVE THE ARCHITECT'S APPROVAL FOR ALL FIRE SPRINKLERS/ESCUTCHEON FINISHES PRIOR TO ORDERING AND INSTALLING DESPITE WHAT IS SPECIFIED IN THESE DOCUMENTS.

5- ALL EXPOSED PIPE AND FITTINGS TO OUTSIDE AIR, SALT, CHEMICALS, MOISTURE, AND/OR OTHER CORROSIVE VAPORS SUFFICIENT TO CAUSE CORROSION OF SUCH MATERIALS SHALL BE BLACK STEEL PIPE SCH. 40, CARBON STEEL GROOVED FITTINGS, HANG UP WITH CORROSION RESISTANT STEEL ROD AND HANGERS AND SHALL BE ALL RED PAINTED PER NFPA 13:2013-8.16.4.2.

6- FIRE SPRINKLER CONTRACTOR SHALL BE RESPONSIBLE TO OBTAIN A FLOW TEST PERFORMED BY THE LOCAL AUTHORITY TO ASCERTAIN THE WATER SERVICE REQUIRED FOR THE FIRE SPRINKLER INSTALLATION; THE HYDRAULIC CALCULATIONS SHALL ALLOW FOR A 10% PRESSURE REDUCTION AS A FACTOR OF SAFETY AND COMPLY WITH THE AHJ REQUIREMENTS AND/OR USE PRESSURE AND FLOW CRITERIA AS REQUIRED BY THE LOCAL AUTHORITY HAVING JURISDICTION.

7- THE CONTRACTOR FOR HIS INSTALLATION PERMIT SHALL PROVIDE CUT SHEETS OF ALL FIRE SPRINKLER COMPONENTS WITH SHOP DRAWINGS AND HYDRAULIC CALCULATIONS PER NFPA 13-2013-8.15.20.5.2 ACCORDING TO THE RESPECTIVE HAZARD REQUIREMENTS BY OWNER STANDARDS IF ANY AND BY CODE, SHALL SHOW PIPE SIZES, ALL FITTINGS, AND DIMENSIONAL LOCATIONS FOR ALL FIRE SPRINKLERS, MAINS, BRANCHES, AND PIPING FOR THE WATER SUPPLY TO THE CONNECTION OF THE SYSTEM.

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KAMM CONSULTING PROJECT #: 2020-0276
PROJECT MANAGER: DUANE MILLAR

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Certification of Authorization #8189

PRINCIPAL
Bradly L Brown Florida License #58232

05-19-21
date

signed

Project:

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Architect:

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Consultant:

Drawing Title:

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Sheet No.:	

Cert. No.: 12456

Date Signed:

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