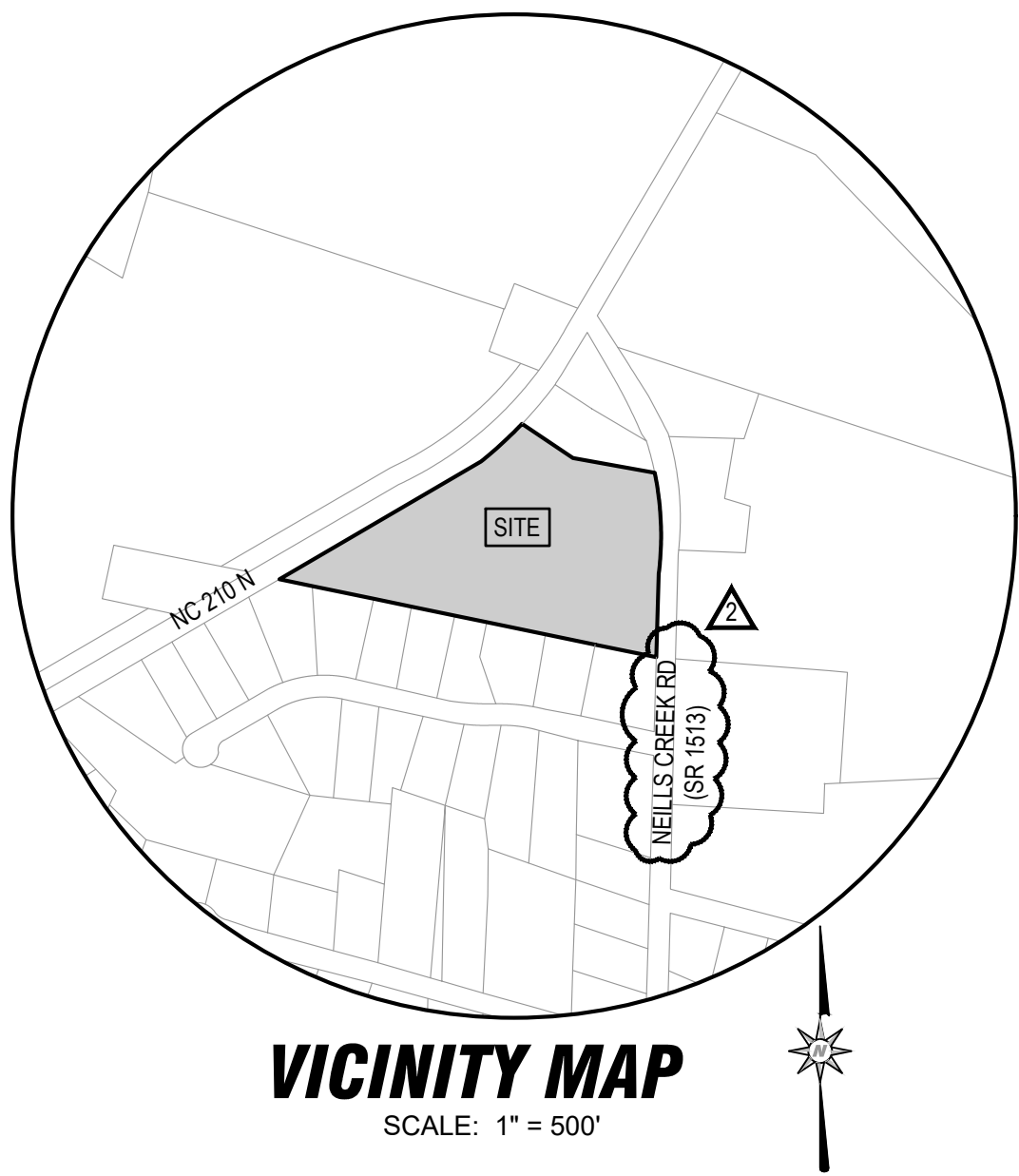


LAKE SIDE SELF-STORAGE

HARNETT COUNTY, NORTH CAROLINA

SITE PLAN

1st SUBMITTAL TO HARNETT COUNTY: JULY 29, 2021
2nd SUBMITTAL TO HARNETT COUNTY: OCTOBER 20, 2021
3rd SUBMITTAL TO HARNETT COUNTY: FEBRUARY 1, 2022
2nd SUBMITTAL TO NCDOT: MAY 27, 2022



SITE INFORMATION

LOCATION: 5556 NC 210 N
ANGIER, NC 27501

MUNICIPALITY: HARNETT COUNTY

ZONING: COMM

ACREAGE: 8.23 AC

NC WATERSHED: WS-IV-P
CAPE FEAR RIVER (LILLINGTON)

LAND USE CLASSIFICATION: LOW DENSITY RESIDENTIAL

BUILDING:

TOTAL DWELLING UNITS: 1

OFFICE SPACE: 2,500 SF

INDUSTRIAL SPACE: 7,100 SF

TOTAL BLDGS.: 9,600 SF

PARKING:

TOTAL PROPOSED SPACES: 17 REGULAR SPACES
2 HIC SPACE
= 19 SPACES

IMPERVIOUS AREAS

EXISTING:

SIDEWALK: 66 SQ FT

BUILDING: 4,042 SQ FT

TOTAL IMPERVIOUS: 4,108 SQ FT (0.09 AC) (1.1%)

PROPOSED (CURRENT):

PAVEMENT: 21,537 SQ FT (0.49 AC)

GRAVEL: 141,189 FT (3.24 AC)

BUILDING: 39,215 SQ FT (0.90 AC)

TOTAL IMPERVIOUS: 201,941 SQ FT (4.63 AC) (56.3%)

PROPOSED (FUTURE):

PAVEMENT: 21,537 SQ FT (0.49 AC)

GRAVEL: 107,189 SQ FT (2.46 AC)

BUILDING: 73,215 SQ FT (1.68 AC)

TOTAL IMPERVIOUS: 201,941 SQ FT (4.63 AC) (56.3%)

MAX. ALLOWABLE IMPERVIOUS: 4.71 AC (W/ SNIA APPROVAL)

SNIA REFERENCE.

SNIA2005-0001, APPROVED 7/13/20.

Developer:

**Imperial Self-Storage
Development, INC.**
6917 NC 55 Hw.
Fuquay-Varina, NC 27526
919.369.9872
Contact: John Auton
jauton@issdinc.com

Civil Engineering:

The Curry Engineering Group, PLLC
NC License # P-0799
PO Box 2018
205 S. Fuquay Ave
Fuquay-Varina, NC 27526
919.552.0849 (o)
919.880.9857 (m)
Contact: Don Curry, PE
don@curryeng.com

Surveyor:

Robinson & Plante, PC
970 Trinity Road
Raleigh, NC 27607
919-859-6030 (o)
Contact: Buddy Plante, PLS
buddy@robinsonplante.com

Architect:

G. Cleveland Pate, PLLC
919.851.0052
Contact: Ginger Anderson
patearchitecture@gmail.com

DRAWING INDEX

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MINI-STORAGE UDO REQUIREMENTS

- A. MAXIMUM BUILDING HEIGHT OF 20 FEET.**
B. A SECURED FENCE OF AT LEAST SIX (6) FEET IN HEIGHT SHALL SURROUND THE PERIMETER OF THE STORAGE FACILITY.
- C. ADEQUATE LIGHTING SHALL BE PROVIDED TO ILLUMINATE THE STORAGE FACILITY. THE MINIMUM SIZE STREET LIGHT SHALL BE A 75 WATT MERCURY-VAPOR (APPROXIMATELY 7,000 LUMEN CLASS) OR ITS EQUIVALENT, SPACED AT INTERVALS OF NOT MORE THAN 300 FEET.**
- D. NO OUTSIDE STORAGE SHALL BE PERMITTED EXCEPT AS PROVIDED BELOW.**
- E. OUTSIDE STORAGE SHALL BE LIMITED TO RECREATIONAL VEHICLES, CAMPER, EQUIPMENT, MATERIALS, ETC IN DESIGNATED SPACES SHALL MEET THE FOLLOWING REQUIREMENTS:**
1. IF OUTDOOR STORAGE IS PROPOSED THE AREA SHALL BE DESIGNATED AS OUTDOOR STORAGE ON THE REQUIRED SITE PLAN.
- A. EXISTING FACILITIES EXPANDING TO INCLUDE OUTDOOR STORAGE SHALL SUBMIT A REVISED SITE PLAN SHOWING SUCH, IN ACCORDANCE WITH THE PROVISIONS OF THIS ORDINANCE.
- B. AREA DESIGNATED FOR OUTDOOR STORAGE SHALL NOT BE VISIBLE FROM ADJACENT RIGHT-OF-WAY AND SHALL INSTALL A TYPE D BUFFER ALONG THE EXTERIOR OF THE PERIMETER FENCING.
3. IF ASSOCIATED WITH A MINI-STORAGE FACILITY THAT HAVE ENCLOSED STORAGE BUILDINGS, OUTDOOR STORAGE SPACE(S) SHALL BE LOCATED AT THE REAR OR SIDE OF THE SITE.

UTILITY AGENCIES:

WATER & SEWER
HARNETT COUNTY PUBLIC
UTILITIES DEPT.
700 McKINNEY PARKWAY
LILLINTON, NC 27546
910.893.7575
CONTACT: MR. SHANE CUMMINGS

NCDENR-PUBLIC WATER SUPPLY
NCDENR DIVISION OF WATER RESOURCES
RALEIGH REGIONAL OFFICE
512 N. SALISBURY STREET
RALEIGH, NC 27604
919.707.9100

GOVERNING AGENCIES

PLANNING/ZONING/LANDSCAPE
HARNETT COUNTY
PLANNING DEPT.
108 E. FRONT ST.
LILLINGTON, NC 27546
910.893.7525 OPT. 4
CONTACT: MR. LANDON CHANDLER

ENGINEERING
MS CONSULTANTS, INC
920 MAIN CAMPUS DRIVE
RALEIGH, NC 27606
919.818.2235
CONTACT: MR. BILL DREITZLER, PE

STORMWATER

NCDEQ DIVISION OF ENERGY, MINERAL & LAND
RESOURCES
RALEIGH REGIONAL OFFICE
512 N. SALISBURY STREET
RALEIGH, NC 27604
919.807.6369
CONTACT: MR. ROBERT PATTERSON, PE

EROSION CONTROL

NCDEQ DIVISION OF ENERGY, MINERAL & LAND
RESOURCES
FAYETTEVILLE REGIONAL OFFICE
225 GREEN STREET, SUITE 714
FAYETTEVILLE, NC 28301
910.433.3300
CONTACT: MS. JODI PACE

General Notes

1. ORIGINAL TOPOGRAPHICAL AND BOUNDARY DATA PERFORMED BY ROBINSON & PLANTE, PA. SITE BENCHMARK IS AVAILABLE FROM SURVEYOR. CONTOURS SHOWN HEREON ARE FROM AN ACTUAL FIELD SURVEY.
2. THE CONTRACTOR SHALL NOTIFY AND COOPERATE WITH ALL UTILITY COMPANIES OF FIRMS HAVING FACILITIES ON OR ADJACENT TO THE SITE BEFORE DISTURBING, ALTERING, REMOVING, RELOCATING, ADJUSTING OR CONNECTING TO SAID FACILITIES. THE OWNER SHALL PAY ALL COSTS IN CONNECTION WITH ALTERATION OF OR RELOCATION OF ANY EXISTING FACILITIES.
3. ALL EXCAVATION IS UNCLASSIFIED AND SHALL INCLUDE ALL MATERIALS ENCOUNTERED.
4. ALL STRUCTURAL FILL MATERIAL SHALL BE FREE OF ALL STICKS, ROCKS, AND CLUMPS OF MUD.
5. UNUSABLE EXCAVATED MATERIALS AND ALL WASTE RESULTING FROM CLEARING AND GRUBBING SHALL BE DISPOSED OF OFF-SITE BY THE CONTRACTOR IN AN APPROVED SOLID WASTE LANDFILL.
6. THERE IS EXISTING UNDERGROUND WATER, SEWER, ELECTRICAL, AND FIBER OPTIC ON-SITE OR WITHIN CLOSE PROXIMITY. CONTRACTORS SHALL DIG WITH EXTREME CAUTION.
7. CONCRETE SUB SHALL BE RESPONSIBLE FOR ALL SCORE JOINTS AND EXPANSION JOINTS. SHOULD A QUESTION ARISE ABOUT THE PROPOSED PATTERN CONSULT WITH THE ENGINEER PRIOR TO POURING.
8. CONTRACTOR TO FURNISH ALL PAVEMENT MARKINGS AS SHOWN.
9. LOCATION OF UNDERGROUND UTILITIES ARE APPROXIMATE AND MUST BE FIELD VERIFIED. CONTACT THE NC ONE CALL CENTER AT LEAST 48 HOURS PRIOR TO DIGGING @ 1.800.632.4849. THE SURVEYOR HAS ONLY LOCATED THE UTILITIES THAT ARE ABOVE GROUND. AT THE TIME OF FIELD SURVEY, UNDERGROUND LINES SHOWN HEREON ARE APPROXIMATE OR AS REPORTED BY VARIOUS RESPONSIBLE PARTIES. THE SURVEYOR DOES NOT GUARANTEE THAT ANY UNDERGROUND STRUCTURES SUCH AS UTILITIES, TANKS AND PIPES ARE LOCATED HEREON.
11. ALL PIPE LENGTHS ARE HORIZONTAL, DISTANCES AND ARE APPROXIMATE.
12. ALL WORK SHALL COMPLY WITH ALL APPLICABLE CODES, REGULATIONS, AND/OR LOCAL STANDARDS IMPOSED BY LOCAL UTILITY, HARNETT COUNTY, AND HARNETT REGIONAL WATER.
13. ALL CONSTRUCTION AND MATERIALS SHALL MEET HARNETT COUNTY SPECIFICATIONS AND STANDARDS, LATEST EDITION. ALL WORK WITHIN NCDOT RIGHT-OF-WAY SHALL MEET THE SPECIFICATIONS AND STANDARDS OF NCDOT.
14. ALL CONCRETE PIPE IS TO BE ASTM C-76, CLASS II WITH RAM-NEK.
15. THIS PROPERTY IS NOT LOCATED IN A FLOOD HAZARD ZONE PER FEMA MAP. FEMA COMMUNITY MAP # 3720066200, DATED OCTOBER 3, 2006.
16. ALL LOT DIMENSIONS SHOWN ARE APPROXIMATE. CONSULT THE BOUNDARY SURVEY OF ACTUAL SITE BOUNDARY INFORMATION. WETLANDS ARE NOT PRESENT ON SITE.
17. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK ZONE TRAFFIC CONTROL IN OR ADJACENT TO NCDOT RIGHT-OF-WAY. ALL SIGNS, PAVEMENT MARKINGS AND OTHER TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), LATEST EDITION.
19. PRIOR TO PLACING C&G STONE BASE, THE CONTRACTOR SHOULD NOTIFY THE PROJECT ENGINEER TO INSPECT AND PROOF ROLL THE SUBGRADE. ANY STONE PLACEMENT WITHOUT PRIOR APPROVAL WILL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
20. DESIGN/FIELD CONDITIONS QUITE EASILY MAY VARY FROM THAT REPRESENTED IN THE INITIAL SOILS REPORT AND/OR TOPOGRAPHICAL REPORT. ISOLATED AREAS MAY SHOW UP WEAK AND ADVERSE SOILS OR GROUNDWATER CONDITIONS MAY BE DISCOVERED THAT WERE NOT REVEALED DURING THE INITIAL SOILS INVESTIGATION. THEREFORE, THE OWNER/CITY IS TO BE ADVISED AND CURRY ENGINEERING GROUP, PLLC WILL NOT AND CANNOT BE HELD RESPONSIBLE FOR ANY FAILURES TO EITHER A STREET OR PARKING LOT PAVEMENT DESIGN UNLESS WE CAN BE FULLY AND TOTALLY INVOLVED IN THE CONSTRUCTION PROCESS WHICH MAY INCLUDE, BUT MAY NOT NECESSARILY BE LIMITED TO, TESTING SUBGRADE AND BASE DENSITY, ENGAGING THE DESIGN ENGINEER FOR THE EVALUATION OF THE SUBGRADE AND FOR THE OBSERVATION OF PROOF ROLLING SUBGRADE AND BASE AT VARIOUS STEPS OF CONSTRUCTION, OPPORTUNITY FOR THE DESIGN ENGINEER TO CALL IN A SOILS ENGINEER FOR CONSULTATION AND ADVICE, ETC. - STEPS WHICH TAKEN ALTOGETHER WITH THE INITIAL DESIGN SHOWN ON THE PLANS, CONSTITUTE THE COMPLETE DESIGN OF THE ROAD, STREET OF PARKING AREA (PRIVATE OR PUBLIC), THE DESIGN ENGINEER MUST BE GIVEN THE FULL LATITUDE AND OPPORTUNITY TO COMPLETE THE DESIGN BY FULLY PARTICIPATING IN THE CONSTRUCTION PROCESS. PLAN DESIGN IS A SMALL PORTION OF THE DESIGN AND CANNOT BE SEPARATED FROM THE CONSTRUCTION PROCESS IF THE OWNER/SCLIENT'S DESIRE IS TO HAVE THE DESIGN ENGINEER STAND BEHIND THE COMPLETED DESIGN PROJECT.
21. ALL UTILITY SERVICES (POWER, TELEPHONE, CABLE, ETC.) ARE PROPOSED TO BE UNDERGROUND. DO NOT SEED OR MULCH DISTURBED AREAS UNTIL ALL UNDERGROUND UTILITIES HAVE BEEN INSTALLED.
22. LIGHTS ARE LEASED AND SUPPLIED BY DUKE ENERGY. SEE PHOTOMETRICS SHEET FOR DETAILS.
23. WATER IS TO BE PROVIDED BY HARNETT REGIONAL WATER.
24. THE BUILDING SETBACK LINES SHOWN ON THIS PLAN ARE FOR THE ENGINEER'S USE IN ESTABLISHING MINIMUM LOT FRONTAGES AT THE SETBACK LINE AND FOR RESERVING SUFFICIENT BUILDING AREA. BUILDING CONTRACTORS ARE TO VERIFY LOT LINE SETBACKS BEFORE SETTING FORMS OR DIGGING FOOTINGS.
25. REGULATORY SIGNS, STOPS SIGNS AND STREET NAME SIGNS SHALL BE MANUFACTURED FROM HIGH INTENSITY REFLECTIVE MATERIALS.
26. ALL EXCESS TOPSOIL AND UNCLASSIFIED EXCAVATION IS TO BE HAULED OFF-SITE, UNLESS OTHERWISE DIRECTED BY THE OWNER.
27. ALL CONSTRUCTION MUST BE INSPECTED BY THE PROJECT ENGINEER AT THE FOLLOWING STAGES:
A. COMPLETION OF GRADING SUBGRADE PRIOR TO PLACING STONE BASE.
B. COMPLETION OF STONE PAVEMENT PRIOR TO PAVING.
C. FINAL INSPECTION WHEN ALL WORK IS COMPLETE.
28. THE SURVEYOR DID NOT VISIBLY SEE ANY CEMETERIES IN ANY OPEN AREAS UNLESS OTHERWISE NOTED.
29. THIS PROPERTY DOES NOT DEPICT ENCUMBRANCES THAT ARE FOUND DURING A THOROUGH TITLE SEARCH.
30. ALL HVAC UNITS FOR THE PROPOSED BUILDING WILL BE SCREENED FROM PUBLIC RIGHT OF WAY.
31. ALL CURB AND GUTTER TO BE 24" STANDARD CURB AND GUTTER. ALL CURB AND GUTTER WITHIN NCDOT RW SHALL BE 30" STANDARD.
32. ALL CURB AND GUTTER AND SIDEWALK CONCRETE IS TO BE MINIMUM 3,000 PSI AT 28 DAYS, AIR ENTRAINED.
33. ALL DIMENSIONS ARE TO FACE OF CURB UNLESS INDICATED OTHERWISE.
34. HANDICAP SPACES SHALL BE MARKED AND RAISED AS SHOWN.
35. HANDICAP VOLUMES ARE TO MEET "ADA ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES" AS DETAILED IN THE FEDERAL REGISTER, VOLUME 56, NUMBER 144 DATED JULY 26, 1991, RULES AND REGULATIONS ACTIVATED JANUARY 26, 1992. FOR ADDITIONAL INFORMATION, REFER TO THE 2012 NC STATE BUILDING CODE CHAPTER 11, "ACCESSIBILITY." ALL STREET RETURNS TO HAVE H.C. RAMPS.
36. CONTRACTOR SHALL NOT POUR ANY CONCRETE BEFORE FORMS ARE INSPECTED BY THE PROJECT ENGINEER AND/OR OWNER. ANY CONCRETE THAT HAS NOT BEEN APPROVED BY THE ENGINEER AND/OR OWNER WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.
37. ALL AREAS NOT COVERED BY BUILDING OR PARKING SHALL BE COVERED WITH 4" MINIMUM OF TOPSOIL, FREE OF ROOT MATTER AND ROCKS AND GRASSED.
38. CONTRACTOR SHALL SAW-CUT TO PROVIDE SMOOTH TRANSITIONS WHERE EXISTING ASPHALT AND/OR CURB AND GUTTER IS TO BE REMOVED.
39. THE CONTRACTOR SHALL PROVIDE ALL THE MATERIAL AND APPURTENANCES NECESSARY FOR THE COMPLETE INSTALLATION OF THE UTILITIES. ALL PIPE AND FITTINGS SHALL BE INSPECTED PRIOR TO BEING COVERED.
40. ALL HANDICAP SPACES ARE TO RECEIVE A HANDICAP SIGN AND HANDICAP SYMBOL PAINTED ON THE ASPHALT. NOTE STALLS TO RECEIVE "VAN ACCESSIBLE" SIGNAGE.
41. THE CONTRACTOR SHALL REFER TO THE ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF PRECISE BUILDING DIMENSIONS AND EXACT UTILITY ENTRANCE POINTS.
42. INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS AND FIELD CONDITIONS WHEN POSSIBLE, BUT THE CONTRACTOR MUST DETERMINE THE EXACT LOCATION AND ELEVATION OF ALL EXISTING UTILITIES BY DIGGING TEST PITS BY HAND AT ALL UTILITY CROSSINGS WELL IN ADVANCE OF TRENCHING. IF THE CLEARANCES ARE LESS THAN SPECIFIED ON THE PLANS OR 12 INCHES, WHICH EVER IS LESS, CONTACT THE PROJECT ENGINEER PRIOR TO PROCEEDING WITH CONSTRUCTION.
43. THE CONTRACTOR SHALL INCLUDE IN HIS CONTRACT PRICE THE REMOVAL AND DISPOSAL OF ANY EXCESS TOPSOIL HE DETERMINES IS NOT REQUIRED TO PERFORM THE FINAL GRADING AND LANDSCAPING OPERATION.
44. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND IMPLEMENTATION OF ALL REQUIRED NECESSARY SHELTERING, SHORING, AND SPECIAL EXCAVATION MEASURES REQUIRED ON THE PROJECT TO MEET OSHA, FEDERAL, STATE AND LOCAL REGULATIONS PURSUANT TO THE INSTALLATION OF THE WORK INDICATED ON THE DRAWINGS. HARNETT COUNTY, HARNETT REGIONAL WATER, & CURRY ENGINEERING ACCEPT NO RESPONSIBILITY FOR THE DESIGN TO INSTALL SAID ITEMS.
45. THE CONTRACTOR SHALL INCLUDE IN THE CONTRACT PRICE DAILY RECORD KEEPING OF THE AS-BUILT CONDITION OF ALL OF THE UNDERGROUND UTILITIES, CONSTRUCTION STAKEOUT ASSOCIATED WITH THE PROJECT.
46. ALL WATER LINE AND SEWER LINE INSTALLATION SHALL CONFORM TO THE STANDARDS AND DETAILS OF THE STATE OF NORTH CAROLINA DEPARTMENT OF HEALTH CONSTRUCTION PERMIT AND HARNETT REGIONAL WATER.
47. THE LAND DISTURBANCE PERMIT MUST BE KEPT ON THE WORK SITE AND SHOWN UPON REQUEST.
48. THE CONTRACTOR SHALL INCLUDE IN THE CONTRACT PRICE ALL MATERIAL AND LABOR ASSOCIATED WITH THE TESTING OF THE WATER AND SEWER LINES REQUIRED BY THE STATE OF NORTH CAROLINA DEPARTMENT OF HEALTH & HARNETT REGIONAL WATER.
49. THE CONTRACTOR SHALL INCLUDE IN THE CONTRACT PRICE ANY DE-WATERING NECESSARY TO CONSTRUCT THE PROJECT AS SHOWN ON THE PLANS.
50. NATURAL GAS MAY BE AVAILABLE. SEE CONTACT INFORMATION THIS SHEET.
51. TESTING BY CONTRACTOR: CONTRACTOR SHALL EMPLOY AT HIS EXPENSE AN OUTSIDE INDEPENDENT SOIL TESTING SERVICE (APPROVED BY THE ARCHITECT) TO PERFORM SOIL TESTING AND INSPECTION SERVICE FOR QUALITY CONTROL. TESTING DURING EARTHWORK OPERATIONS. COPIES OF RESULTS OF TESTS SHALL BE SUBMITTED BY THE TESTING SERVICE DIRECTLY TO THE CONTRACTOR, THE ARCHITECT, AND THE STRUCTURAL ENGINEER. -THE TESTING SERVICE WILL CLASSIFY PROPOSED ON-SITE AND BORROW SOILS TO VERIFY THAT SOILS COMPLY WITH SPECIFIED REQUIREMENTS AND TO PERFORM REQUIRED FIELD AND LABORATORY TESTING. (MINIMUM REQUIRED SOIL BEARING CAPACITY IS NOTED ON THE STRUCTURAL DRAWINGS). -IN PAVED AND BUILDING SLAB AREAS, THE TESTING SERVICE SHALL MAKE AT LEAST ONE FIELD DENSITY TEST FOR EACH 2000 SQUARE FEET OF FILL IN EACH COMPACTED FILL LAYER. IF A TEST SHOULD FAIL TO MEET REQUIRED DENSITY, THE CONTRACTOR SHALL RE-COMPACT THAT LAYER. THE SOIL TESTING SERVICE SHALL PERFORM ADDITIONAL TESTS AT THE CONTRACTOR'S EXPENSE TO SHOW THAT THE FAILED LAYER HAS REACHED THE REQUIRED COMPACTION. -IN FOUNDATION WALL AREAS, THE TESTING SERVICE SHALL MAKE AT LEAST ONE FIELD DENSITY TEST FOR EACH 100 FEET OR LESS OF WALL LENGTH OF FILL IN EACH COMPACTED FILL LAYER, WITH NO LESS THAN TWO TESTS ALONG A WALL FACE. IF A TEST SHOULD FAIL TO MEET REQUIRED DENSITY, THE CONTRACTOR SHALL RE-COMPACT THAT LAYER. THE SOIL TESTING SERVICE SHALL PERFORM ADDITIONAL TESTS AT THE CONTRACTOR'S EXPENSE TO SHOW THAT THE FAILED LAYER HAS REACHED THE REQUIRED COMPACTION.
52. COMPACTION: COMPACT EACH LAYER OF BACKFILL AND FILL SOIL MATERIALS AND THE TOP 12" OF SUBGRADE IN CUT AREAS TO 98% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D698 FOR STRUCTURES, SLABS, AND PAVEMENTS AND 95% OF MAXIMUM DENSITY FOR LAWNS OR UNPAVED AREAS.
53. THE BUILDING CONTRACTOR AND THE SITE WORK CONTRACTOR ARE TO COORDINATE THE INSTALLATION OF DRAINAGE PIPES AROUND THE BUILDING STRUCTURE.
54. ANY RELOCATION OF EXISTING UTILITIES WILL BE AT THE COST OF THE DEVELOPER/OWNER. THE TOWN WILL NOT ACCEPT RESPONSIBILITY FOR DAMAGES TO CURBS AND GUTTERS OR STREET IMPROVEMENTS INSTALLED PRIOR TO UNDERGROUND SERVICES. NOR WILL THE TOWN ABSORB THE COST FOR BORINGS TO INSTALL UNDERGROUND SERVICE, PAVEMENT PATCHING OR DAMAGE TO LANDSCAPING. THESE WILL BE THE RESPONSIBILITY OF THE DEVELOPER/OWNER.
55. FIRE DEPARTMENT VEHICULAR ACCESS TO ALL STRUCTURES UNDER CONSTRUCTION SHALL BE PROVIDED AT ALL TIMES. IN AREAS WHERE GROUND SURFACES ARE SOFT OR LIKELY TO BECOME SOFT, HARD ALL WEATHER SURFACE ROADS SHALL BE PROVIDED AND MAINTAINED.
56. ADDRESS NUMBERS, BOTH COMMERCIAL AND RESIDENTIAL, MUST BE POSTED ON THE FRONT OF THE STRUCTURE, NEAREST TO THE MAIN ENTRANCE IN A POSITION TO BE PLAINLY LEGIBLE, VISIBLE, AND UNOBSTRUCTED FROM THE STREET OR ROAD FRONTING THE PROPERTY.
57. DISTURBED AREA IS IN EXCESS OF 1 ACRE AND FORMAL SEDIMENTATION & EROSION CONTROL PLAN APPROVAL WAS REQUIRED AS A CONDITION OF CONSTRUCTION PLAN APPROVAL. A COPY OF THE APPROVED EROSION CONTROL PLAN MUST BE KEPT ON SITE AT ALL TIMES. THE APPROVED SEDIMENTATION & EROSION CONTROL PLAN SHOULD BE REGARDED AS MINIMUM REQUIREMENTS; ADDITIONAL MEASURES SHALL BE PUT IN PLACE AS NEEDED TO ENSURE THAT NO SEDIMENT IS RELEASED FROM THE SITE.
58. (CONSTRUCTION/SITE PLANS) WATER AND SEWER PERMIT APPLICATIONS HAVE BEEN APPROVED BY THE DENR. PERMIT NUMBERS ARE AS FOLLOWS:
A. WATER PERMIT NUMBER: N/A
B. SEWER PERMIT NUMBER: N/A
59. COPIES OF ALL PERMITS AND APPROVED PLANS MUST BE KEPT ON SITE IN A PERMIT BOX THAT IS CONSPICUOUSLY LOCATED AND EASILY ACCESSIBLE DURING CONSTRUCTION. THIS INCLUDES APPROVED CONSTRUCTION PLANS, APPROVED EROSION CONTROL PLANS, ENCROACHMENT AGREEMENTS, DRIVEWAY PERMITS, WATER/SEWER PERMITS, ETC.
60. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH ALL HARNETT COUNTY, HARNETT REGIONAL WATER AND NCDENR STANDARDS AND SPECIFICATIONS.
61. MAINTAIN MINIMUM 3' COVER FOR ALL WATER PIPE.
62. WHERE WATERLINE CROSSES:
A. SANITARY SEWER: WATERLINE SHALL CROSS ABOVE AND MAINTAIN 2' VERTICAL SEPARATION OR 10' OF HORIZONTAL SEPARATION. IF THIS SEPARATION CANNOT MAINTAIN OR IF WATERLINE PASSES BELOW SEWER LINE THEN BOTH WATERLINE AND SEWER LINE SHALL BE CLASS 50 DUCTILE IRON PIPE FOR A MINIMUM OF 10' EACH SIDE OF CROSSING.
B. STORM SEWER: WHERE WATERLINE CROSSES ABOVE MAINTAIN 1' VERTICAL SEPARATION, WHERE WATERLINE CROSSES BELOW MAINTAIN 2' VERTICAL SEPARATION. IF THIS SEPARATION CANNOT BE MAINTAINED WATERLINE SHALL BE CLASS 50

SITE NOTES:

1. NC 210 AND NEILLS CREEK RD. ARE ON THE HARNET COUNTY COMPREHENSIVE TRANSPORTATION PLAN.
2. THIS DEVELOPMENT IS WITHIN ONE MILE OF A VOLUNTARY AGRICULTURAL DISTRICT.

SEAL



The seal is circular with a dashed outer border. Inside the border, the text "NORTH CAROLINA" is at the top, "PROFESSIONAL" is on the left, "SEAL" is at the bottom, and "ENGINEER" is on the right. In the center, the name "DONALD L. CURRY, JR." is written in a circular path, and the number "026970" is at the bottom center.

Donald L. Curry

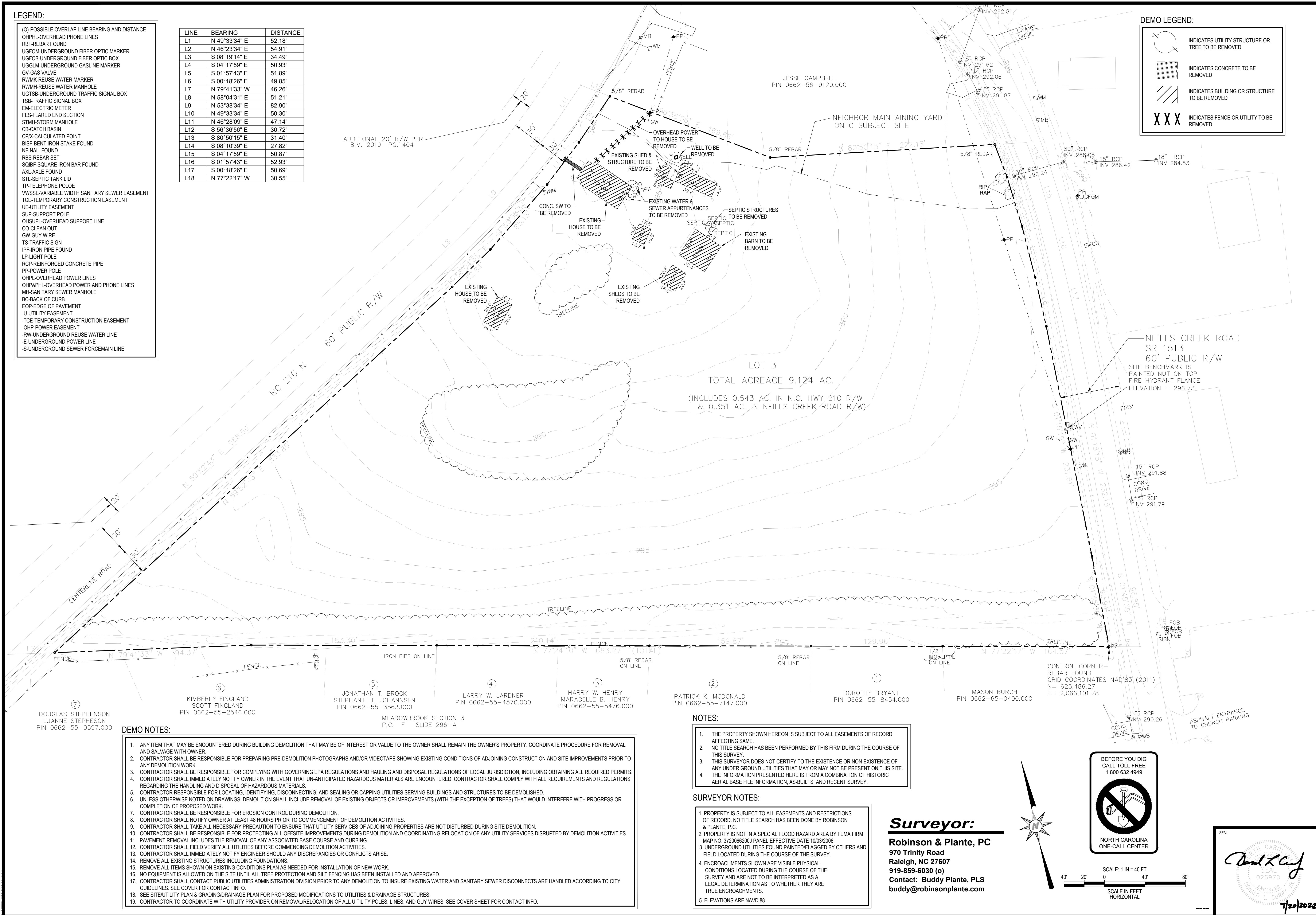
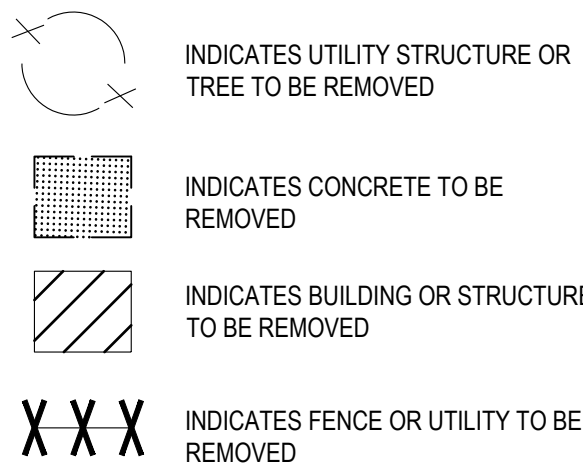
7/20/2023

LEGEND:

(O)-POSSIBLE OVERLAP LINE BEARING AND DISTANCE
OHPL-OVERHEAD PHONE LINES
RBF-REBAR FOUND
UGFOM-UNDERGROUND FIBER OPTIC MARKER
UGFOB-UNDERGROUND FIBER OPTIC BOX
UGGLM-UNDERGROUND GASLINE MARKER
GV-GAS VALVE
RWK-REUSE WATER MARKER
RWMH-REUSE WATER MANHOLE
UGTSB-UNDERGROUND TRAFFIC SIGNAL BOX
TSB-TRAFFIC SIGNAL BOX
EM-ELECTRIC METER
FES-FLARED END SECTION
STMH-STORM MANHOLE
CB-CATCH BASIN
CPIK-CALCULATED POINT
BISF-BENT IRON STAKE FOUND
NF-NAIL FOUND
RBS-REBAR SET
SQIBF-SQUARE IRON BAR FOUND
AXL-AXLE FOUND
STL-SEPTIC TANK LID
TP-TELEPHONE POLOE
VWSSE-VARIABLE WIDTH SANITARY SEWER EASEMENT
TCE-TEMPORARY CONSTRUCTION EASEMENT
UE-UTILITY EASEMENT
SUP-SUPPORT POLE
OHSUPL-OVERHEAD SUPPORT LINE
CO-CLEAN OUT
GW-GUY WIRE
TS-TRAFFIC SIGN
IPF-IRON PIPE FOUND
LP-LIGHT POLE
RCP-REINFORCED CONCRETE PIPE
PP-POWER POLE
OHPL-OVERHEAD POWER LINES
OHPL&PHL-OVERHEAD POWER AND PHONE LINES
MH-SANITARY SEWER MANHOLE
BC-BACK OF CURB
EOP-EDGE OF PAVEMENT
-U-UTILITY EASEMENT
-TCE-TEMPORARY CONSTRUCTION EASEMENT
-OHP-POWER EASEMENT
-RW-UNDERGROUND REUSE WATER LINE
-E-UNDERGROUND POWER LINE
-S-UNDERGROUND SEWER FORCEMAIN LINE

LINE	BEARING	DISTANCE
L1	N 49°33'34" E	52.18'
L2	N 46°23'34" E	54.91'
L3	S 08°19'14" E	34.49'
L4	S 04°17'59" E	50.93'
L5	S 01°57'43" E	51.89'
L6	S 00°18'26" E	49.85'
L7	N 79°41'33" W	46.26'
L8	N 58°04'31" E	51.21'
L9	N 53°38'34" E	82.90'
L10	N 49°33'34" E	50.30'
L11	N 46°28'09" E	47.14'
L12	S 56°36'56" E	30.72'
L13	S 80°50'15" E	31.40'
L14	S 08°10'39" E	27.82'
L15	S 04°17'59" E	50.87'
L16	S 01°57'43" E	52.93'
L17	S 00°18'26" E	50.69'
L18	N 77°22'17" W	30.55'

DEMO LEGEND:



DEMO NOTES:

1. ANY ITEM THAT MAY BE ENCOUNTERED DURING BUILDING DEMOLITION THAT MAY BE OF INTEREST OR VALUE TO THE OWNER SHALL REMAIN THE OWNER'S PROPERTY. COORDINATE PROCEDURE FOR REMOVAL AND SALVAGE WITH OWNER.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR PREPARING PRE-DEMOLITION PHOTOGRAPHS AND/OR VIDEOTAPE SHOWING EXISTING CONDITIONS OF ADJOINING CONSTRUCTION AND SITE IMPROVEMENTS PRIOR TO ANY DEMOLITION WORK.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH GOVERNING EPA REGULATIONS AND HAULING AND DISPOSAL REGULATIONS OF LOCAL JURISDICTION, INCLUDING OBTAINING ALL REQUIRED PERMITS.
4. CONTRACTOR SHALL IMMEDIATELY NOTIFY OWNER IN THE EVENT THAT UN-ANTICIPATED HAZARDOUS MATERIALS ARE ENCOUNTERED. CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS AND REGULATIONS REGARDING THE HANDLING AND DISPOSAL OF HAZARDOUS MATERIALS.
5. CONTRACTOR RESPONSIBLE FOR LOCATING, IDENTIFYING, DISCONNECTING, AND SEALING OR CAPPING UTILITIES SERVING BUILDINGS AND STRUCTURES TO BE DEMOLISHED.
6. UNLESS OTHERWISE NOTED ON DRAWINGS, DEMOLITION SHALL INCLUDE REMOVAL OF EXISTING OBJECTS OR IMPROVEMENTS (WITH THE EXCEPTION OF TREES) THAT WOULD INTERFERE WITH PROGRESS OR COMPLETION OF PROPOSED WORK.
7. CONTRACTOR SHALL BE RESPONSIBLE FOR EROSION CONTROL DURING DEMOLITION.
8. CONTRACTOR SHALL NOTIFY OWNER AT LEAST 48 HOURS PRIOR TO COMMENCEMENT OF DEMOLITION ACTIVITIES.
9. CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTION TO ENSURE THAT UTILITY SERVICES OF ADJOINING PROPERTIES ARE NOT DISTURBED DURING SITE DEMOLITION.
10. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL OFFSITE IMPROVEMENTS DURING DEMOLITION AND COORDINATING RELOCATION OF ANY UTILITY SERVICES DISRUPTED BY DEMOLITION ACTIVITIES.
11. PAVEMENT REMOVAL INCLUDES THE REMOVAL OF ANY ASSOCIATED BASE COURSE AND CURBING.
12. CONTRACTOR SHALL FIELD VERIFY ALL UTILITIES BEFORE COMMENCING DEMOLITION ACTIVITIES.
13. CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER SHOULD ANY DISCREPANCIES OR CONFLICTS ARISE.
14. REMOVE ALL EXISTING STRUCTURES INCLUDING FOUNDATIONS.
15. REMOVE ALL ITEMS SHOWN ON EXISTING CONDITIONS PLAN AS NEEDED FOR INSTALLATION OF NEW WORK.
16. NO EQUIPMENT IS ALLOWED ON THE SITE UNTIL ALL TREE PROTECTION AND SILT FENCING HAS BEEN INSTALLED AND APPROVED.
17. CONTRACTOR SHALL CONTACT PUBLIC UTILITIES ADMINISTRATION DIVISION PRIOR TO ANY DEMOLITION TO INSURE EXISTING WATER AND SANITARY SEWER DISCONNECTS ARE HANDLED ACCORDING TO CITY GUIDELINES. SEE COVER FOR CONTACT INFO.
18. SEE SITE UTILITY PLAN & GRADING/DRAINAGE PLAN FOR PROPOSED MODIFICATIONS TO UTILITIES & DRAINAGE STRUCTURES.
19. CONTRACTOR TO COORDINATE WITH UTILITY PROVIDER ON REMOVAL/RELOCATION OF ALL UTILITY POLES, LINES, AND GUY WIRES. SEE COVER SHEET FOR CONTACT INFO.

NOTES:

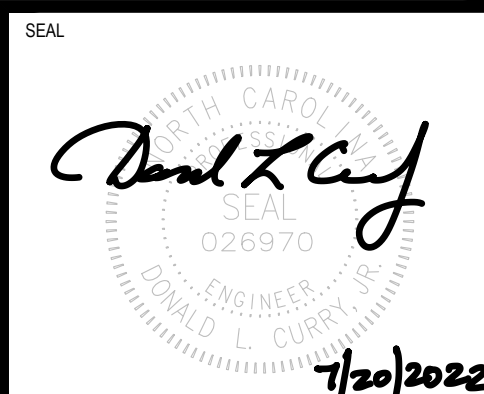
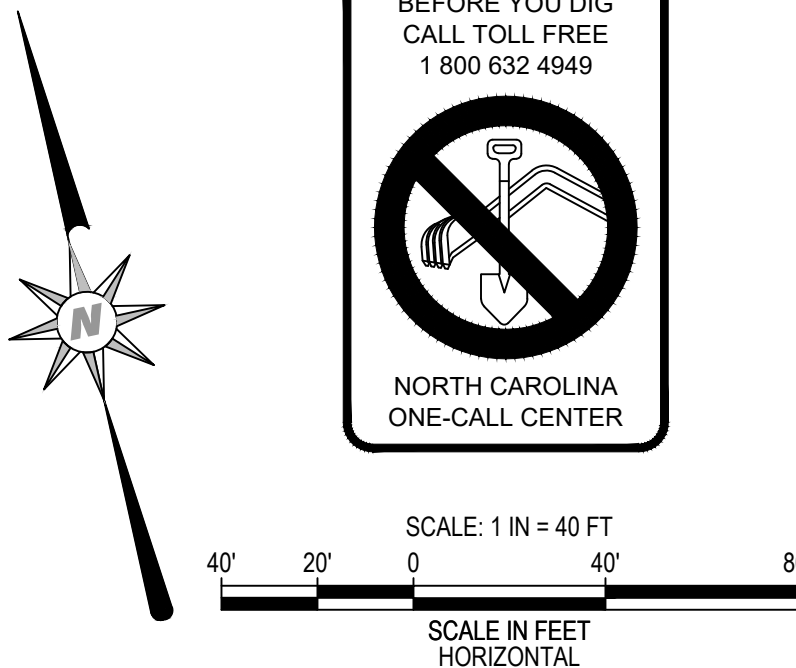
1. THE PROPERTY SHOWN HEREON IS SUBJECT TO ALL EASEMENTS OF RECORD AFFECTING SAME.
2. NO TITLE SEARCH HAS BEEN PERFORMED BY THIS FIRM DURING THE COURSE OF THIS SURVEY.
3. THIS SURVEYOR DOES NOT CERTIFY TO THE EXISTENCE OR NON-EXISTENCE OF ANY UNDER GROUND UTILITIES THAT MAY OR MAY NOT BE PRESENT ON THIS SITE. THE INFORMATION PRESENTED HERE IS FROM A COMBINATION OF HISTORIC AERIAL BASE FILE INFORMATION, AS-BUILTS, AND RECENT SURVEY.

SURVEYOR NOTES:

1. PROPERTY IS SUBJECT TO ALL EASEMENTS AND RESTRICTIONS OF RECORD. NO TITLE SEARCH HAS BEEN DONE BY ROBINSON & PLANTE, P.C.
2. PROPERTY IS NOT IN A SPECIAL FLOOD HAZARD AREA BY FEMA FIRM MAP NO. 372006200J PANEL EFFECTIVE DATE 10/03/2006.
3. UNDERGROUND UTILITIES FOUND PAINTED/FLAGGED BY OTHERS AND FIELD LOCATED DURING THE COURSE OF THE SURVEY.
4. ENCROACHMENTS SHOWN ARE VISIBLE PHYSICAL CONDITIONS LOCATED DURING THE COURSE OF THE SURVEY AND ARE NOT TO BE INTERPRETED AS A LEGAL DETERMINATION AS TO WHETHER THEY ARE TRUE ENCROACHMENTS.
5. ELEVATIONS ARE NAVD 88.

Surveyor:

Robinson & Plante, PC
970 Trinity Road
Raleigh, NC 27607
919-859-6030 (o)
Contact: Buddy Plante, PLS
buddy@robinsonplante.com



LAKESIDE SELF-STORAGE - HARNETT COUNTY
EXISTING CONDITIONS & DEMOLITION PLAN

206 S. Fidelity Avenue
Fayetteville, NC 27506
T (919) 562-0849
F (919) 562-0845

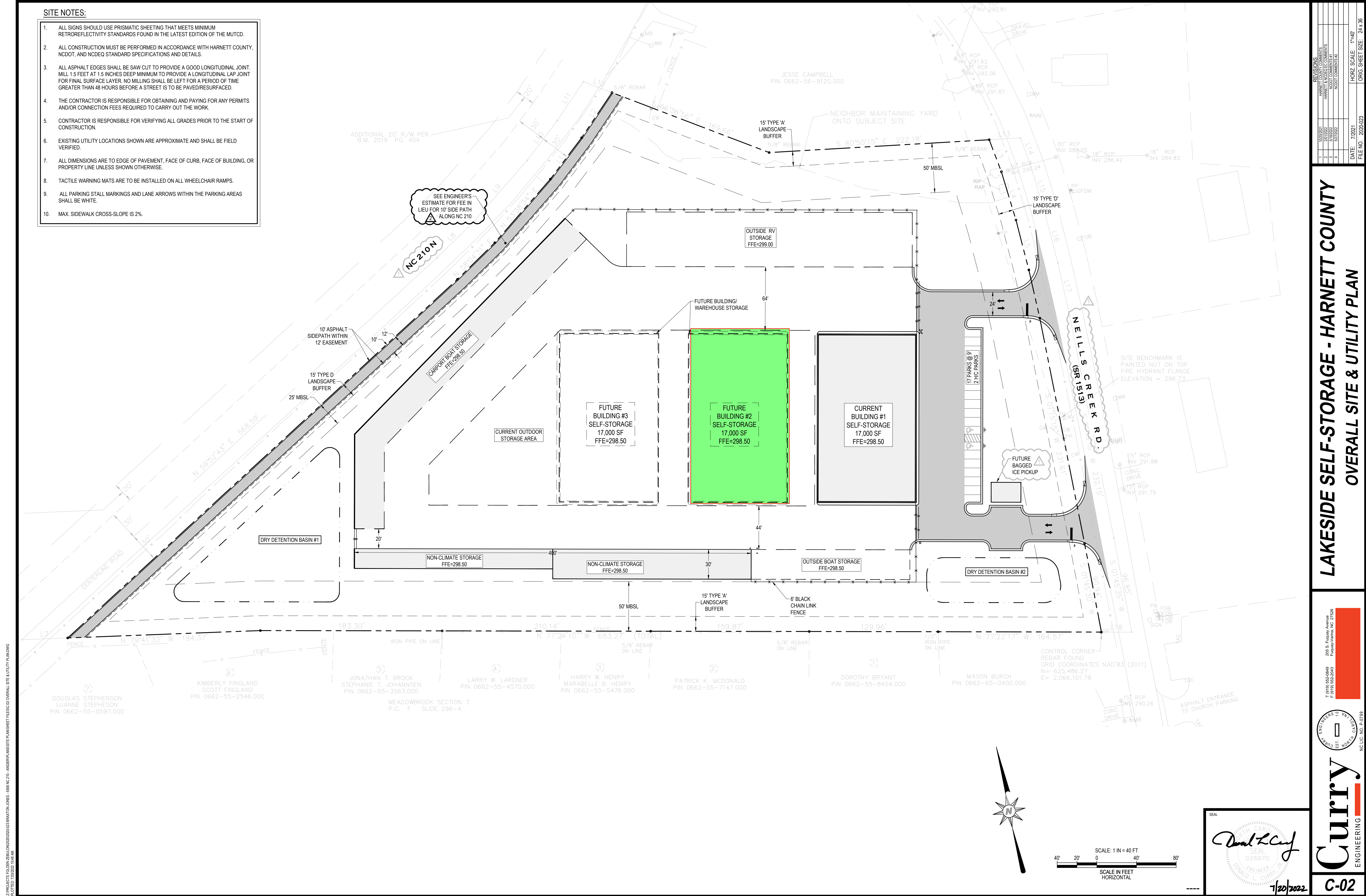
Curry
ENGINEERING

7/20/2022

C-01

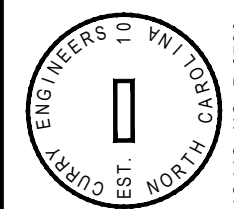
SITE NOTES:

1. ALL SIGNS SHOULD USE PRISMATIC SHEETING THAT MEETS MINIMUM RETROREFLECTIVITY STANDARDS FOUND IN THE LATEST EDITION OF THE MUTCD.
2. ALL CONSTRUCTION MUST BE PERFORMED IN ACCORDANCE WITH HARNETT COUNTY, NCDOT, AND NCDEQ STANDARD SPECIFICATIONS AND DETAILS.
3. ALL ASPHALT EDGES SHALL BE SAW CUT TO PROVIDE A GOOD LONGITUDINAL JOINT. MILL 1.5 FEET AT 1.5 INCHES DEEP MINIMUM TO PROVIDE A LONGITUDINAL LAP JOINT FOR FINAL SURFACE LAYER. NO MILLING SHALL BE LEFT FOR A PERIOD OF TIME GREATER THAN 48 HOURS BEFORE A STREET IS TO BE PAVED/RESURFACED.
4. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND PAYING FOR ANY PERMITS AND/OR CONNECTION FEES REQUIRED TO CARRY OUT THE WORK.
5. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL GRADES PRIOR TO THE START OF CONSTRUCTION.
6. EXISTING UTILITY LOCATIONS SHOWN ARE APPROXIMATE AND SHALL BE FIELD VERIFIED.
7. ALL DIMENSIONS ARE TO EDGE OF PAVEMENT, FACE OF CURB, FACE OF BUILDING, OR PROPERTY LINE UNLESS SHOWN OTHERWISE.
8. TACTILE WARNING MATS ARE TO BE INSTALLED ON ALL WHEELCHAIR RAMPS.
9. ALL PARKING STALL MARKINGS AND LANE ARROWS WITHIN THE PARKING AREAS SHALL BE WHITE.
10. MAX. SIDEWALK CROSS-SLOPE IS 2%.



LAKESIDE SELF-STORAGE - HARNETT COUNTY
OVERALL SITE & UTILITY PLAN

206 S. Fidelity Avenue
Fayetteville, NC 27506
T (919) 562-0849
F (919) 562-2043

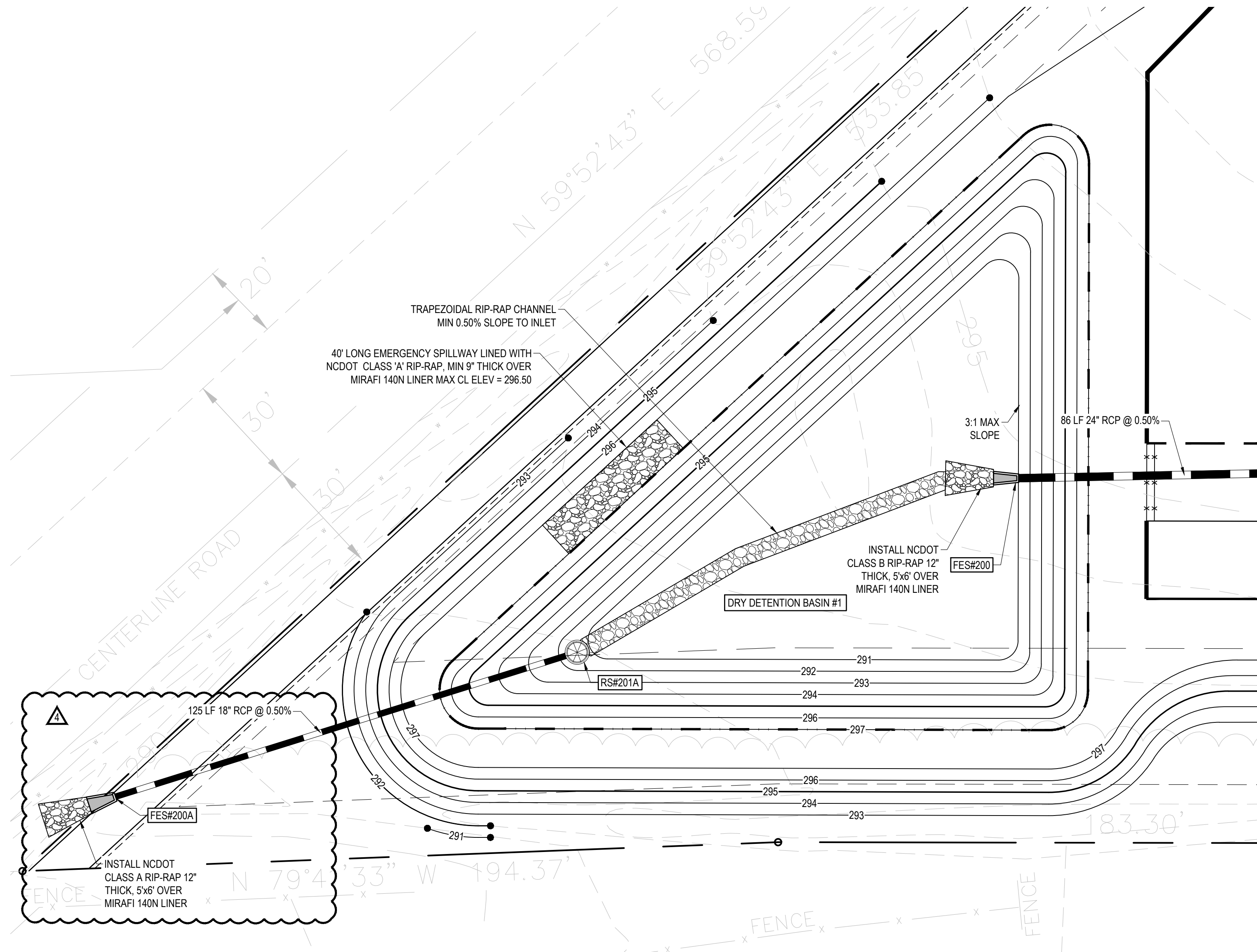


Curry
ENGINEERING

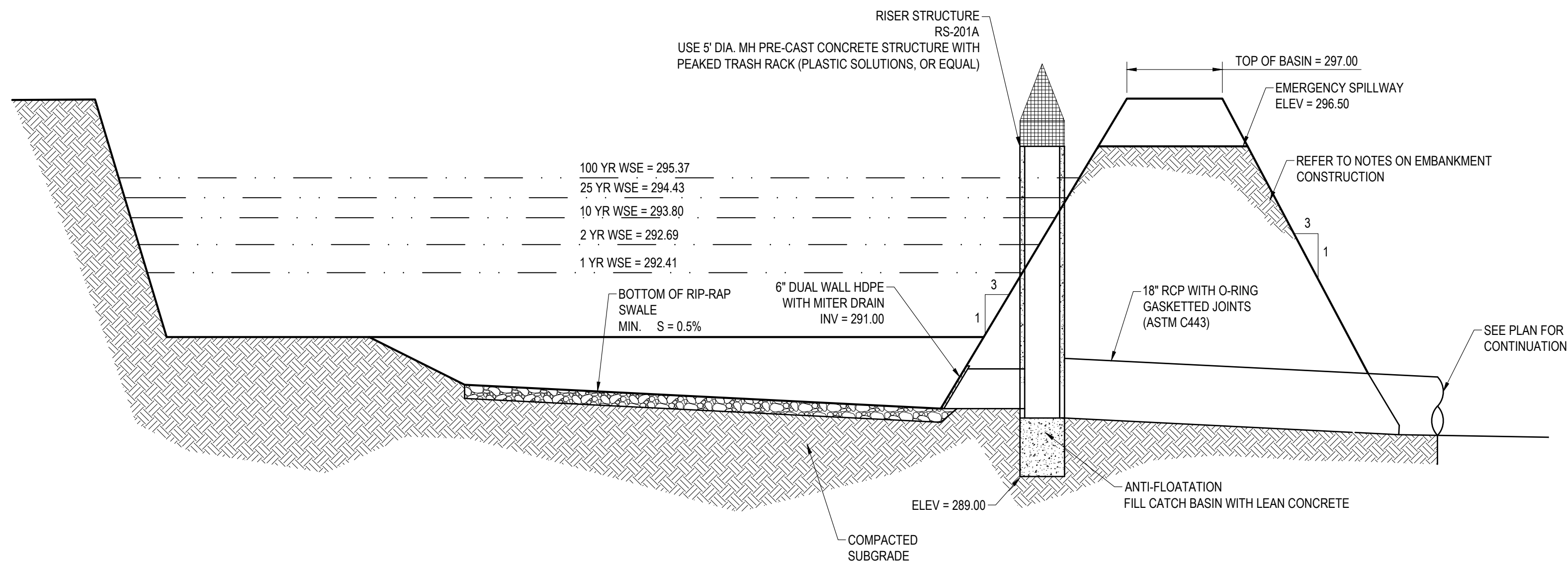
C-02

REVISIONS			
1	10/20/2021	HARNETT COUNTY COMMENTS	
2	2/10/2022	HARNETT & NCDEQ COMMENTS	
3	5/10/2022	NCDOT COMMENTS #1	
4	5/10/2022	NCDOT COMMENTS #2	
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FILE NO. 2020-023			ORIG. SHEET SIZE: 24x36

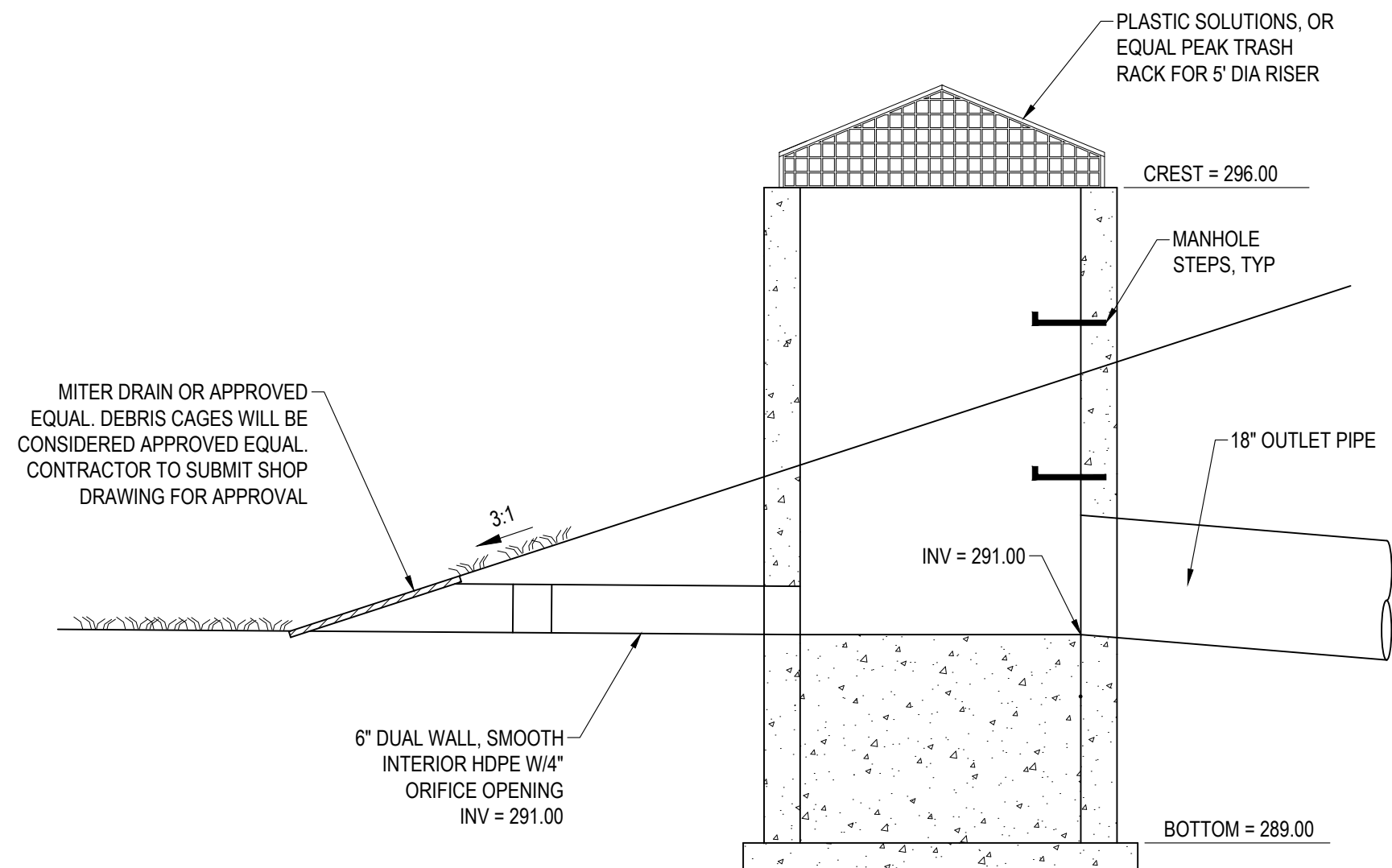
PROJECT: LAKESIDE SELF-STORAGE - HARNETT COUNTY
DRAWN BY: J. HARRIS
CHECKED BY: J. HARRIS
DATE: 7/20/2022 10:51 AM
PLOT: 1



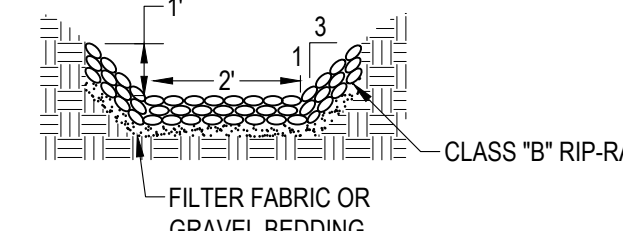
1 SCM LAYOUT
SCALE: 1"=20'



2 DRY DETENTION - SECTION A
SCALE: N.T.S.



4 RISER STRUCTURE DETAIL
SCALE: N.T.S.



STONE CLASSIFICATION	RIP RAP DEPTH
A	12"
B	18"
CLASS 1	24"
CLASS 2	24"-36"

3 RIP-RAP CHANNEL
SCALE: N.T.S.

GENERAL NOTES:

- THIS SITE IS LOCATED IN THE CAPE FEAR RIVER BASIN.
- DRY DETENTION BASIN SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH THE NORTH CAROLINA DEPARTMENT OF NATURAL RESOURCES STORMWATER BMP MANUAL - LATEST EDITION. DRY DETENTION BASIN PROVIDES MINIMAL WATER QUALITY TREATMENT.
- THE PROJECT MEETS THE REQUIREMENTS OF NCDEQ BMP MANUAL, LATEST EDITION.
- MAXIMUM SLOPE OF BASIN IS 3:1.
- ALL SIDE SLOPES, EMBANKMENTS AND SPILLWAYS SHALL BE COMPACTED TO MINIMUM 95% STANDARD PROCTOR PER ASTM-D698.
- CONTROLLED FILL, AS SPECIFIED BY THE RESIDENT ENGINEER, IN THE DAM EMBANKMENT SHALL BE PLACED IN 6-INCH LOOSE LAYERS (3-INCH LOOSE LAYERS WITHIN 3-FEET OF EITHER SIDE OF THE PRINCIPAL SPILLWAY PIPE TO A DEPTH OF 2-FEET OVER THE PIPE) AND SHALL BE COMPACTED TO A DENSITY OF NO LESS THAN 95% OF THE STANDARD PROCTOR MAXIMUM DENSITY AT A MOISTURE CONTENT OF + OR - TWO PERCENTAGE POINTS OF THE OPTIMUM MOISTURE CONTENT IN ACCORDANCE WITH ASTM-D698.
- ALL VISIBLE ORGANIC DEBRIS SUCH AS ROOTS AND LIMBS SHALL BE REMOVED FROM THE FILL MATERIAL PRIOR TO COMPACTION TO THE REQUIRED DENSITY. SOILS WITH ORGANIC MATTER CONTENT EXCEEDING 5% BY WEIGHT SHALL BE USED. STONES GREATER THAN 3-INCH (IN ANY DIRECTION) SHALL BE REMOVED FROM THE FILL PRIOR TO COMPACTION.
- FILL MATERIAL PLACED AT DENSITIES LOWER THAN SPECIFIED MINIMUM DENSITIES OR AT MOISTURE CONTENTS OUTSIDE THE SPECIFIED RANGES OR OTHERWISE NOT CONFORMING TO SPECIFIED REQUIREMENTS SHALL BE REMOVED AND REPLACED WITH ACCEPTABLE MATERIALS.
- ANY FILL LAYER THAT IS SMOOTH DRUM ROLLED TO REDUCE MOISTURE PENETRATION DURING A STORM EVENT SHALL BE PROPERLY SCARIFIED PRIOR TO THE PLACEMENT OF THE NEXT SOIL LIFT.
- SURFACE WATER AND STREAM FLOW SHALL BE CONTINUOUSLY CONTROLLED THROUGHOUT CONSTRUCTION AND THE PLACEMENT OF CONTROLLED FILL.
- FOUNDATION AREAS MAY REQUIRE UNDERCUTTING OF COMPRESSIBLE AND/OR UNSUITABLE SOILS IN ADDITION TO THAT INDICATED ON THE PLANS. ALL SUCH UNDERCUTTING SHALL BE PERFORMED AT THE DISCRETION OF THE GEOTECHNICAL ENGINEER AND SHALL BE MONITORED AND DOCUMENTED. IN NO CASE SHALL THERE BE AN ATTEMPT TO STABILIZE AND PORTIONS OF THE FOUNDATION SOILS WITH CRUSHED STONE.
- TREATMENT OF SEEPAGE AREAS, SUBGRADE PREPARATION, FOUNDATION DEWATERING AND ROCK FOUNDATION PREPARATION (I.E., TREATMENT WITH SLUSH GROUTING, DENTAL CONCRETE, ETC.) MAY BE REQUIRED AT THE DISCRETION OF THE RESIDENTIAL ENGINEER. ALL SUCH ACTIVITIES SHALL BE CLOSELY MONITORED AND DOCUMENTED BY THE GEOTECHNICAL ENGINEER.
- FILL ADJACENT TO THE RISER AND PRINCIPAL SPILLWAY PIPE SHALL BE PLACED SO THAT LIFTS ARE AT THE SAME LEVEL ON BOTH SIDES OF THE STRUCTURES.
- EARTHWORK COMPACTION WITHIN 3-FEET OF ANY STRUCTURES SHALL BE ACCOMPLISHED BY MEANS OF HAND TAMPERS, MANUALLY DIRECTED POWER TAMPERS OR PLATE COMPACTORS OR MINIATURE SELF-PROPELLED ROLLERS.
- COMPACTION BY MEANS OF DROP WEIGHTS FROM A CRANE OR HOIST SHALL NOT BE PERMITTED.
- HEAVY EQUIPMENT SHALL NOT BE ALLOWED TO PASS OVER CAST-IN-PLACE STRUCTURES UNTIL ADEQUATE CURING TIME HAS ELAPSED.
- TO RE-ESTABLISH VEGETATION AFTER CONSTRUCTION, A 2- TO 3-INCH LAYER OF TOPSOIL SHALL BE PLACED ON THE DISTURBED EMBANKMENT SURFACE AND THE AREA SEEDED AND MULCHED OR HYDROSEEDDED.
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- ALL RISER STRUCTURES SHALL BE LOCATED SUCH THAT DIRECT ACCESS FROM THE DAM EMBANKMENT CAN BE ACHIEVED.
- RISER STRUCTURES WITH MULTIPLE BARREL SECTIONS SHALL HAVE GASKETTED JOINTS, AND EACH SECTION SHALL BE BOLTED TO ADJACENT SECTIONS WITH STAINLESS STEEL STRAPS.

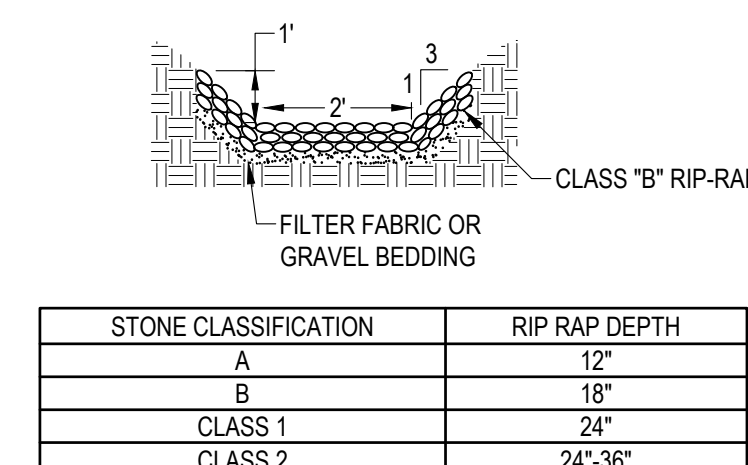
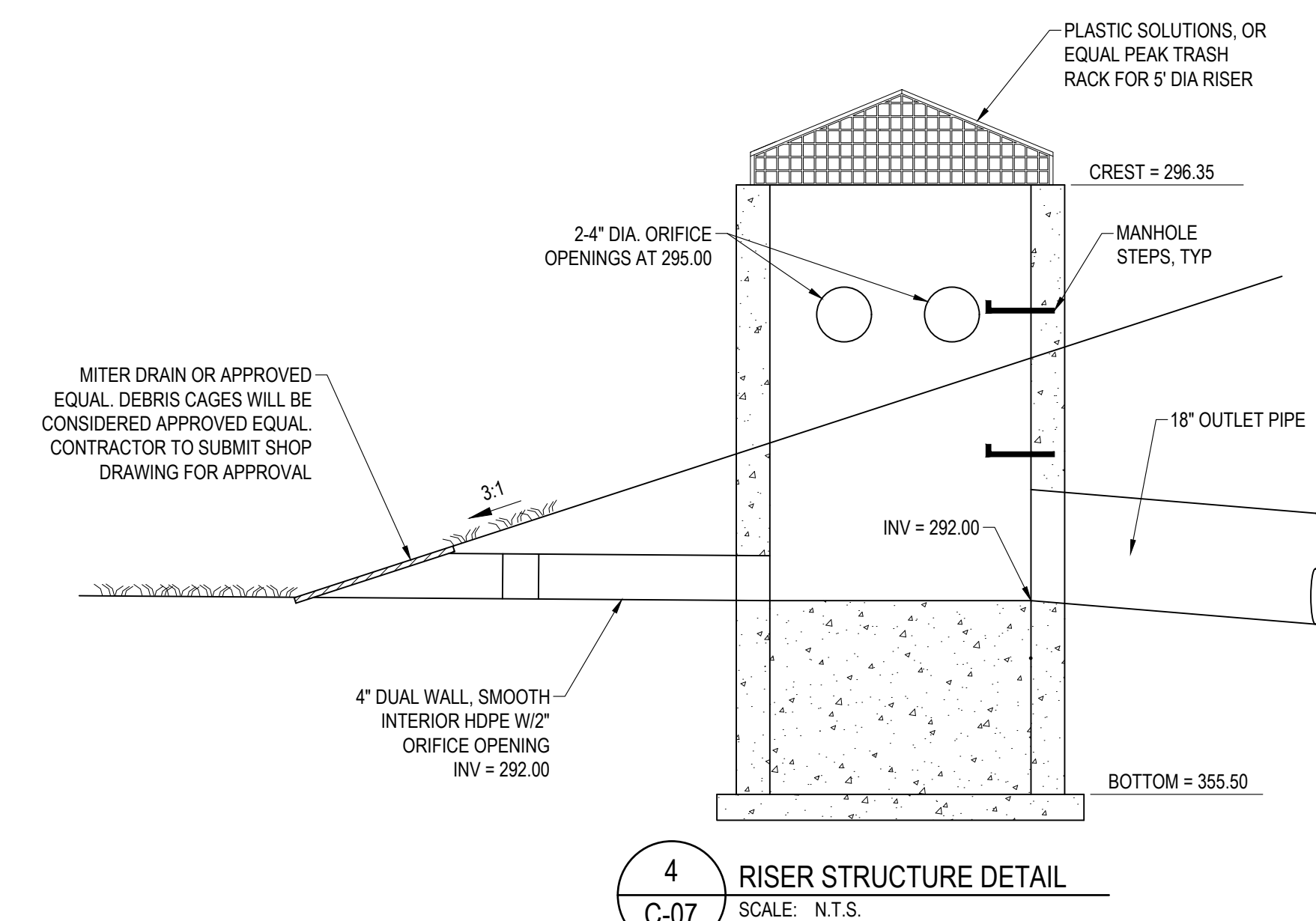
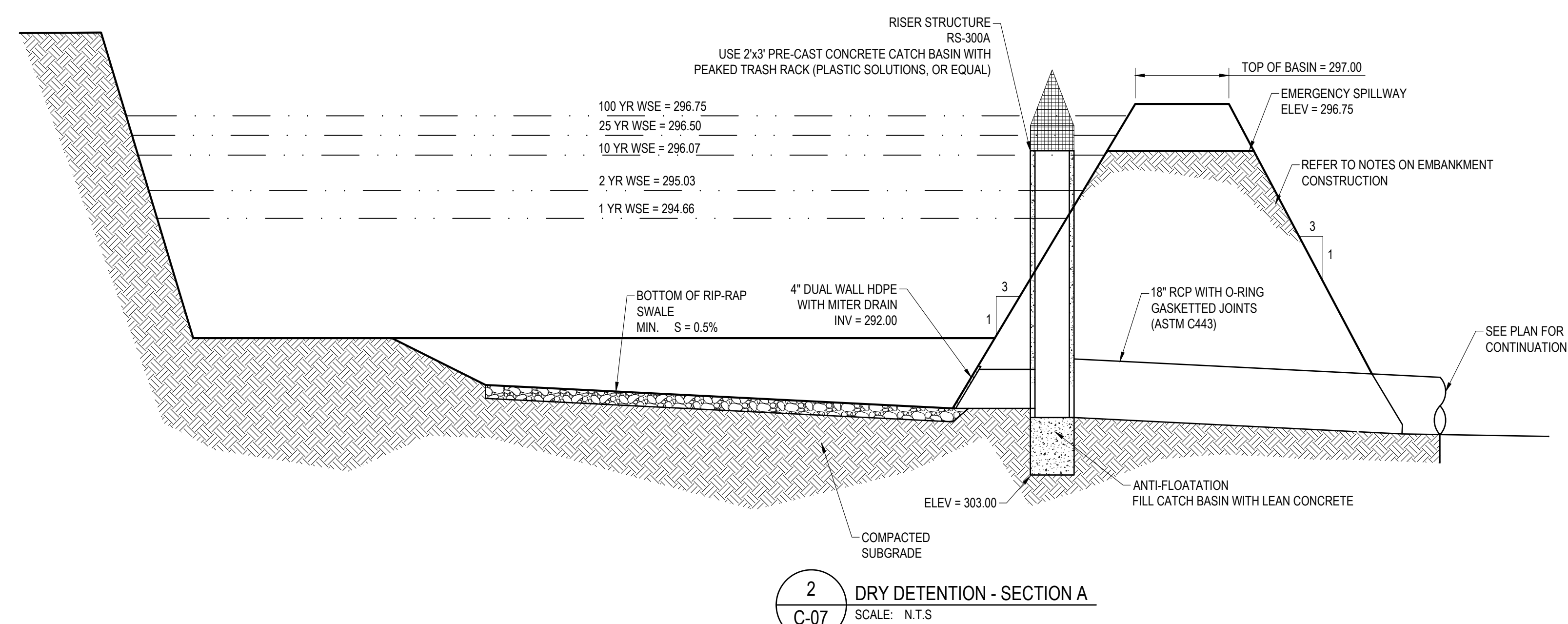
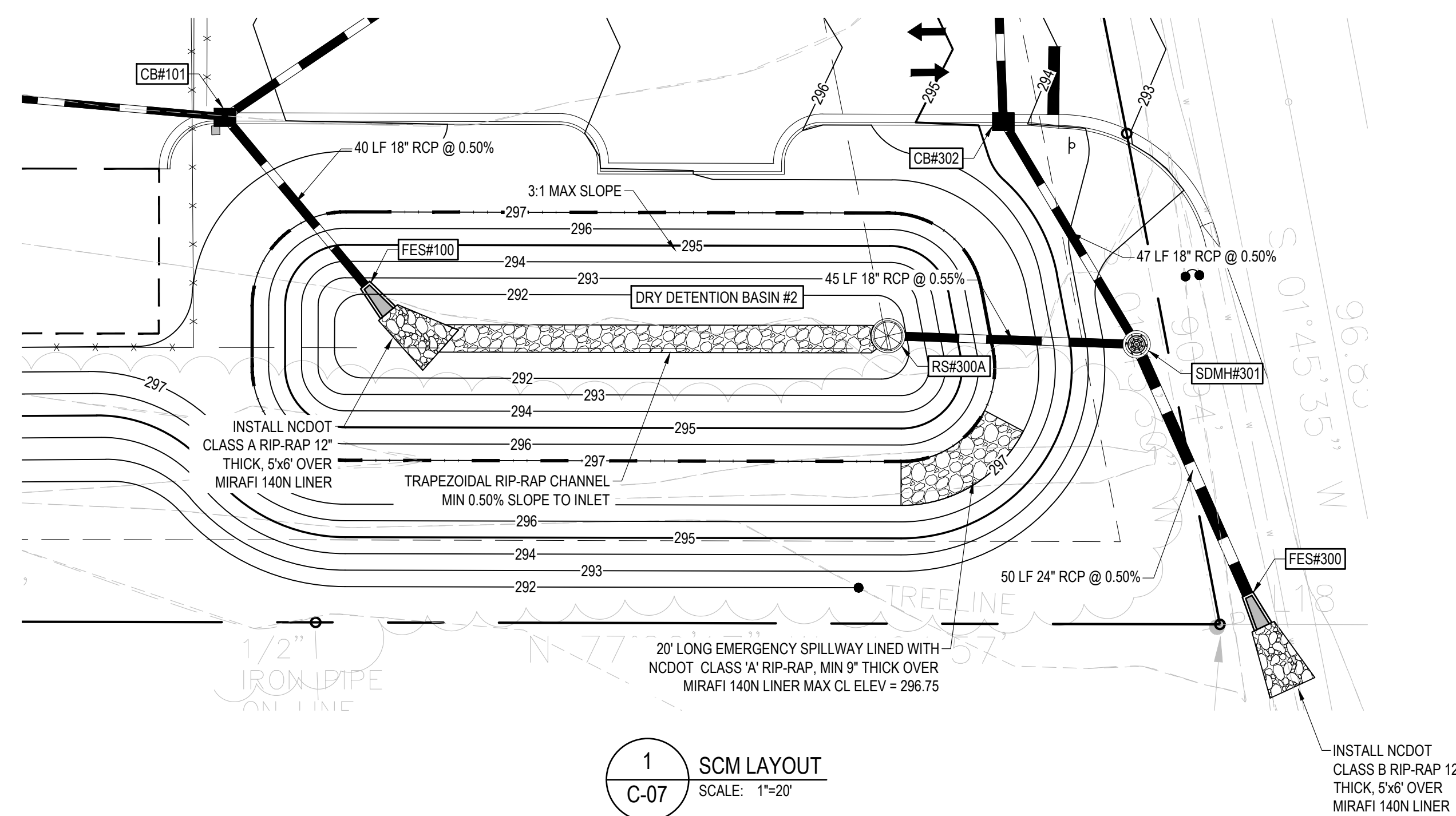
Seal of the Engineer, Donald L. Curry, State of North Carolina, License No. 026970, dated 7/20/2022.

LAKESIDE SELF-STORAGE - HARNETT COUNTY SCM PLAN & SECTIONS I

206 S. FURNACE AVENUE
FURNACE, NC 27506
T (919) 562-5849
F (919) 562-5843

Curry
ENGINEERING

C-06



- GENERAL NOTES:

1. THIS SITE IS LOCATED IN THE CAPE FEAR RIVER BASIN.
2. DRY DETENTION BASIN SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH THE NORTH CAROLINA DEPARTMENT OF NATURAL RESOURCES STORMWATER BMP MANUAL - LATEST EDITION. DRY DETENTION BASIN PROVIDES MINIMAL WATER QUALITY TREATMENT.
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20. RISER STRUCTURES WITH MULTIPLE BARREL SECTIONS SHALL HAVE GASKETTED JOINTS, AND EACH SECTION SHALL BE BOLTED TO ADJACENT SECTIONS WITH STAINLESS STEEL STRAPS.

LAKESIDE SELF-STORAGE - HARNETT COUNTY
SCM PLAN & SECTIONS II

Fuquay-Varina, NC 27526

10

July

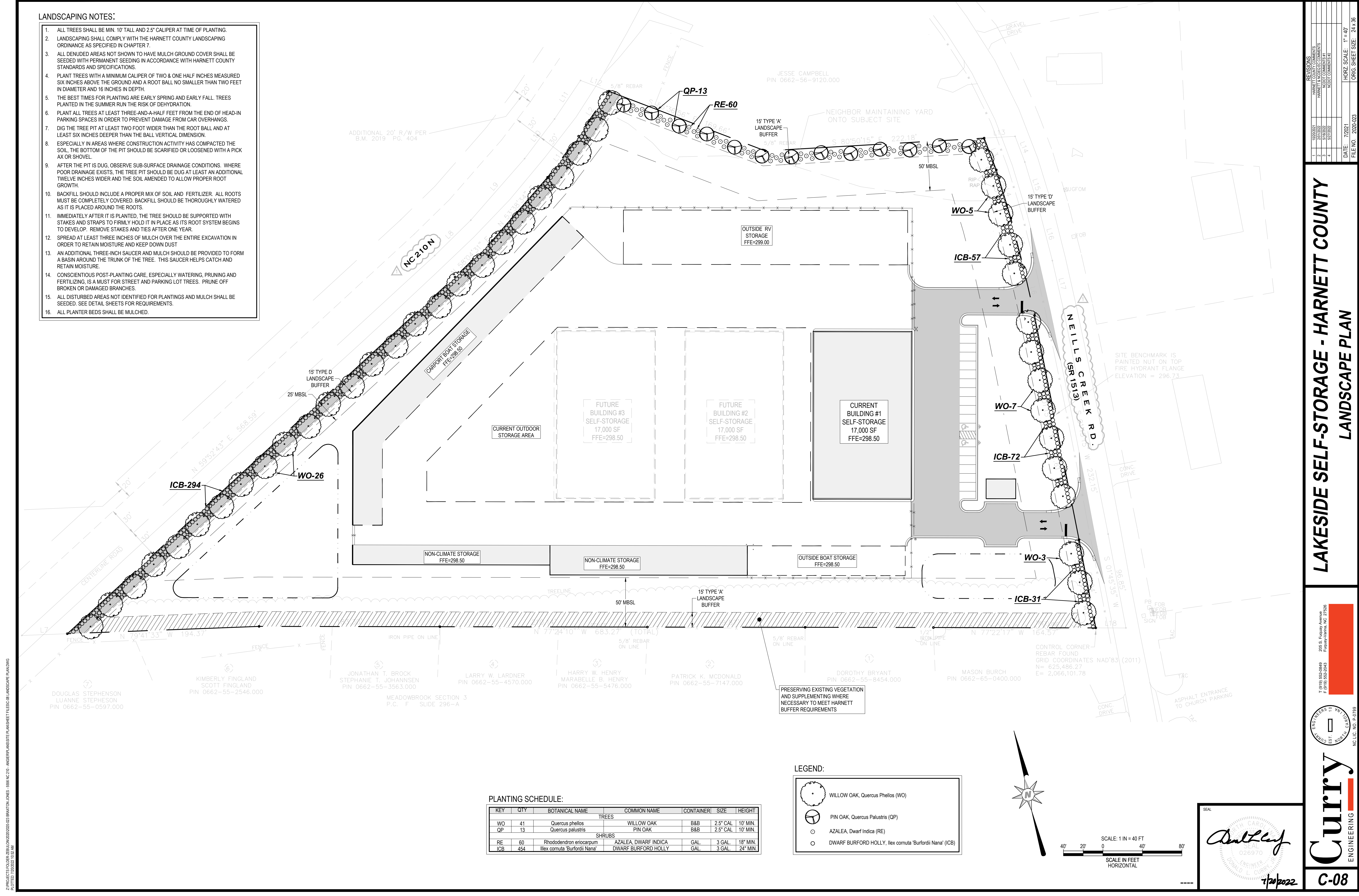
C-07

C LIC. NO. P-0799

4/20/2022

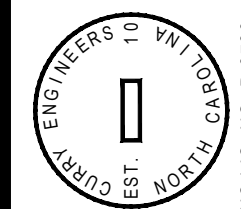
LANDSCAPING NOTES:

1. ALL TREES SHALL BE MIN. 10' TALL AND 2.5" CALIPER AT TIME OF PLANTING.
2. LANDSCAPING SHALL COMPLY WITH THE HARNETT COUNTY LANDSCAPING ORDINANCE AS SPECIFIED IN CHAPTER 7.
3. ALL DENUDED AREAS NOT SHOWN TO HAVE MULCH GROUND COVER SHALL BE SEEDED WITH PERMANENT SEEDING IN ACCORDANCE WITH HARNETT COUNTY STANDARDS AND SPECIFICATIONS.
4. PLANT TREES WITH A MINIMUM CALIPER OF TWO & ONE HALF INCHES MEASURED SIX INCHES ABOVE THE GROUND AND A ROOT BALL NO SMALLER THAN TWO FEET IN DIAMETER AND 16 INCHES IN DEPTH.
5. THE BEST TIMES FOR PLANTING ARE EARLY SPRING AND EARLY FALL. TREES PLANTED IN THE SUMMER RUN THE RISK OF DEHYDRATION.
6. PLANT ALL TREES AT LEAST THREE-AND-A-HALF FEET FROM THE END OF HEAD-IN PARKING SPACES IN ORDER TO PREVENT DAMAGE FROM CAR OVERHANGS.
7. DIG THE TREE PIT AT LEAST TWO FOOT WIDER THAN THE ROOT BALL AND AT LEAST SIX INCHES DEEPER THAN THE BALL VERTICAL DIMENSION.
8. ESPECIALLY IN AREAS WHERE CONSTRUCTION ACTIVITY HAS COMPACTED THE SOIL, THE BOTTOM OF THE PIT SHOULD BE SCARIFIED OR LOOSENED WITH A PICK AX OR SHOVEL.
9. AFTER THE PIT IS DUG, OBSERVE SUB-SURFACE DRAINAGE CONDITIONS. WHERE POOR DRAINAGE EXISTS, THE TREE PIT SHOULD BE DUG AT LEAST AN ADDITIONAL TWELVE INCHES WIDER AND THE SOIL AMENDED TO ALLOW PROPER ROOT GROWTH.
10. BACKFILL SHOULD INCLUDE A PROPER MIX OF SOIL AND FERTILIZER. ALL ROOTS MUST BE COMPLETELY COVERED. BACKFILL SHOULD BE THOROUGHLY WATERED AS IT IS PLACED AROUND THE ROOTS.
11. IMMEDIATELY AFTER IT IS PLANTED, THE TREE SHOULD BE SUPPORTED WITH STAKES AND STRAPS TO FIRMLY HOLD IT IN PLACE AS ITS ROOT SYSTEM BEGINS TO DEVELOP. REMOVE STAKES AND TIES AFTER ONE YEAR.
12. SPREAD AT LEAST THREE INCHES OF MULCH OVER THE ENTIRE EXCAVATION IN ORDER TO RETAIN MOISTURE AND KEEP DOWN DUST.
13. AN ADDITIONAL THREE-INCH SAUCER AND MULCH SHOULD BE PROVIDED TO FORM A BASIN AROUND THE TRUNK OF THE TREE. THIS SAUCER HELPS CATCH AND RETAIN MOISTURE.
14. CONSCIENTIOUS POST-PLANTING CARE, ESPECIALLY WATERING, PRUNING AND FERTILIZING, IS A MUST FOR STREET AND PARKING LOT TREES. PRUNE OFF BROKEN OR DAMAGED BRANCHES.
15. ALL DISTURBED AREAS NOT IDENTIFIED FOR PLANTINGS AND MULCH SHALL BE SEEDED. SEE DETAIL SHEETS FOR REQUIREMENTS.
16. ALL PLANTER BEDS SHALL BE MULCHED.



LAKESIDE SELF-STORAGE - HARNETT COUNTY
LANDSCAPE PLAN

206 S. Fulsby Avenue
Fayetteville, NC 27506
T (919) 562-0849
F (919) 562-2043



Curry
ENGINEERING
C-08

REVISIONS				DATE	FILE NO.	DATE	FILE NO.
1	10/03/2021	HARNETT COUNTY COMMENTS		7/20/2022	2020-023		
2	20/07/2022	HARNETT & WOODS COMMENTS					
3	20/07/2022	WOODS COMMENTS #1					
4	5/07/2022	WOODS COMMENTS #2					
DATE: 7/20/21				DATE: 7/20/21	DATE: 7/20/21		
SCALE: 1" = 40'				SCALE: 1" = 40'	SCALE: 1" = 40'		
ORIG. SHEET SIZE: 24" x 36"				ORIG. SHEET SIZE: 24" x 36"	ORIG. SHEET SIZE: 24" x 36"		

The following utility notes should be added to the coversheet of utility plans for projects located in Harnett County:

A. The Fire Marshal's Office shall approve all hydrant types and locations in new subdivisions. However, Harnett Regional Water (HRW) prefers the contractors to install one of the following fire hydrants:

- All water mains will be constructed with SDR-21 PVC pipe. All Class 20 ductile iron Pipe rated for at least 200 psi or greater. All pipes must be protected during loading, transport, unloading and installation. The contractor shall be responsible for the extended exposure to sunlight prior to installation.
- The contractor shall be responsible for obtaining all permits in accordance with the standard specifications of the Harnett Regional Water. All water samples collected for bacteria testing shall be approved by the Harnett Utility Construction Inspector and tested in the Harnett Laboratory.
- All fittings larger than two (2") inches diameter shall be ductile iron. All fittings smaller than two (2") inches diameter shall be galvanized steel. All fittings shall be approved by Harnett Regional Water. Pipe fittings are not approved by Harnett. All pipe fittings are size smaller than twelve inches (12") diameter. All pipe used for water mains shall be installed in a slip joint or mechanical joint with gaskets. Glued pipe joints are not allowed on PVC pipe used for water mains in Harnett.
- The Harnett requires that the Utility Contractor install tracer wire in the trench with all water lines. The tracer wire shall be 12 ga. minimum and shall be installed in the trench with the water line at the top of the valve boxes or manholes. No spliced wire connections shall be made underground on tracer wire installed in the trench. The Utility Contractor shall be required to install tape to the top of the pipe before backfilling.
- The Utility Contractor will provide Professional Engineer (PE) to prepare and submit to the Harnett Utility Contractor the final drawings to identify the installed locations of the water line(s) and all associated services. All change orders must be submitted to the Harnett Utility Contractor for review and approval in writing and properly documented in the red line field drawings. The Utility Contractor shall spot dig to expose utility pipe or conduits to verify the locations of the installed utility pipe and extensions well in advance to verify locations of the existing utilities. The Utility Contractor shall provide both horizontal and vertical locations to the Harnett Utility Contractor. The Utility Contractor shall submit the drawings to the Harnett Utility Contractor PE to adjust the water line design in order to avoid conflicts with existing underground utilities. The Utility Contractor shall coordinate with the Harnett Utility Contractor to schedule any temporary relocation and/or securing existing utilities services, pipes, wires, cables, signs and/or utilities including poles in advance of the water line installation. The Utility Contractor shall coordinate with the Harnett Utility Contractor for the installation, grading and street construction.
- Prior to the commencement of any work without published Utility Contractor or NCDOT right of way, the Utility Contractor is required to have a signed NCDOT encroachment agreement with the Harnett Utility Contractor. The Utility Contractor shall be in accordance with G.S. 87-102. The Utility Contractor must call the NC One Call Center at 811 or (800) 632-4949 to verify the location of existing utilities and to obtain the beginning and ending construction. Existing utilities shown in these plans are derived from maps furnished by various utility companies and have not been physically located. The Utility Contractor shall verify the location, DEPTH, WATER, SEWER, ELECTRICAL, POWER, FIBER OPTIC, NATURAL GAS, ETC.). The Utility Contractor will be responsible for the location and all damages to the satisfaction of the related utility company.

Y. The Utility Contractor shall provide HRW with at least one (1) fire hydrant wrench and one (1) break-away flange kit for every subdivision with fire hydrants developed in Harnett County. The Utility Contractor must install a concrete hydrant location marker to be scheduled by the HRW Utility Construction Inspector. In addition, the Utility Contractor shall install a 4" x 4" concrete valve marker at the edge of the concrete hydrant location. The location of each gate valve is to be installed in the new water system with the exception of the fire hydrant isolation valves. The Contractor shall measure the distance from the center of the concrete valve marker to the center of the hydrant (the distance in feet) shall be stamped on the brass plate located on the top of the concrete valve marker. In lieu of installing the concrete valve markers, the Utility Contractor may provide at least two measurement points from two existing structures to existing ground structures to the Professional Engineer (PE) in the red line drawings to identify the valve locations. The Professional Engineer (PE) must include the measurements in the As-Built Record. Drawings are submitted to HRW.

Z. The Utility Contractor will be responsible for any and all repairs due to leakage damage from poor workmanship during the one (1) year warranty period once the water system improvements have been accepted by Harnett Regional Water. Harnett Regional Water will provide maintenance and repairs when requested and bill the Developer and/or Utility Contractor if necessary due to lack of response within 48 hours of notification of warranty work. The Utility Contractor will be responsible for any and all repairs due to damages resulting from failure to locate the new water lines and associated appurtenances for other utilities and their contractors until the water lines have been approved by NCDEQ and accepted by HRW. The final inspection of water

system improvements cannot be scheduled with HRW until the streets have been paved; the rights-of-way and utility easements needed to be cleared and the sidewalks and adequate stand of grass in place to prevent erosion issues on site.

The Engineer of Record is responsible to insure that construction is, at all times, in compliance with accepted sanitary engineering practices and approved plans and specifications. Field changes to the approved plans are allowed without prior written approval by HRW. A copy of each engineer's field report is to be submitted to HRW as each such inspection is made on system improvements.

Sanitary engineering is performed in accordance with the following infrastructure must pass all tests required by HRW specification and those of all applicable regulatory agencies. These tests include, but are not limited to air test, vacuum test, mandrel test, inflow test, pressure test, bacteriological test, etc. A HRW

Inspector must be present during testing and all test results shall be submitted to HRW. All tests must be satisfied before the final inspection will be scheduled by the HRW Inspector. The Developer/Engineer of Record must request in writing to schedule the final inspection once all construction is complete. The Developer/Engineer of Record and the HRW Utility Construction Inspector shall schedule a written punch list of any defects or deficiencies noted during the final inspection, should any exist. Upon completion of the punch list, the Developer/Engineer of Record will schedule another inspection. In the event the number of inspections performed by the HRW exceeds two, additional fees may be assessed to the Developer.

SANITARY SEWER

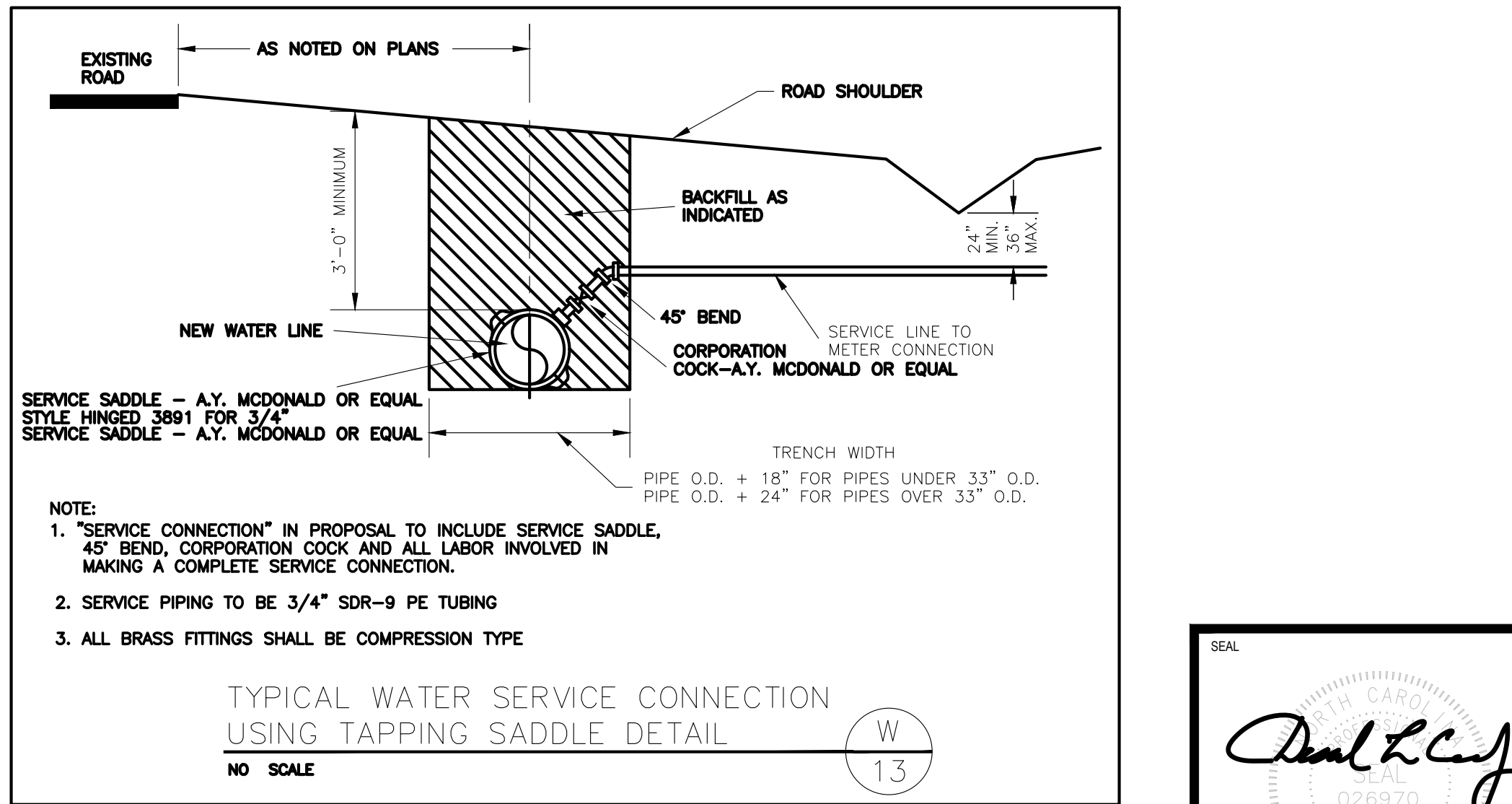
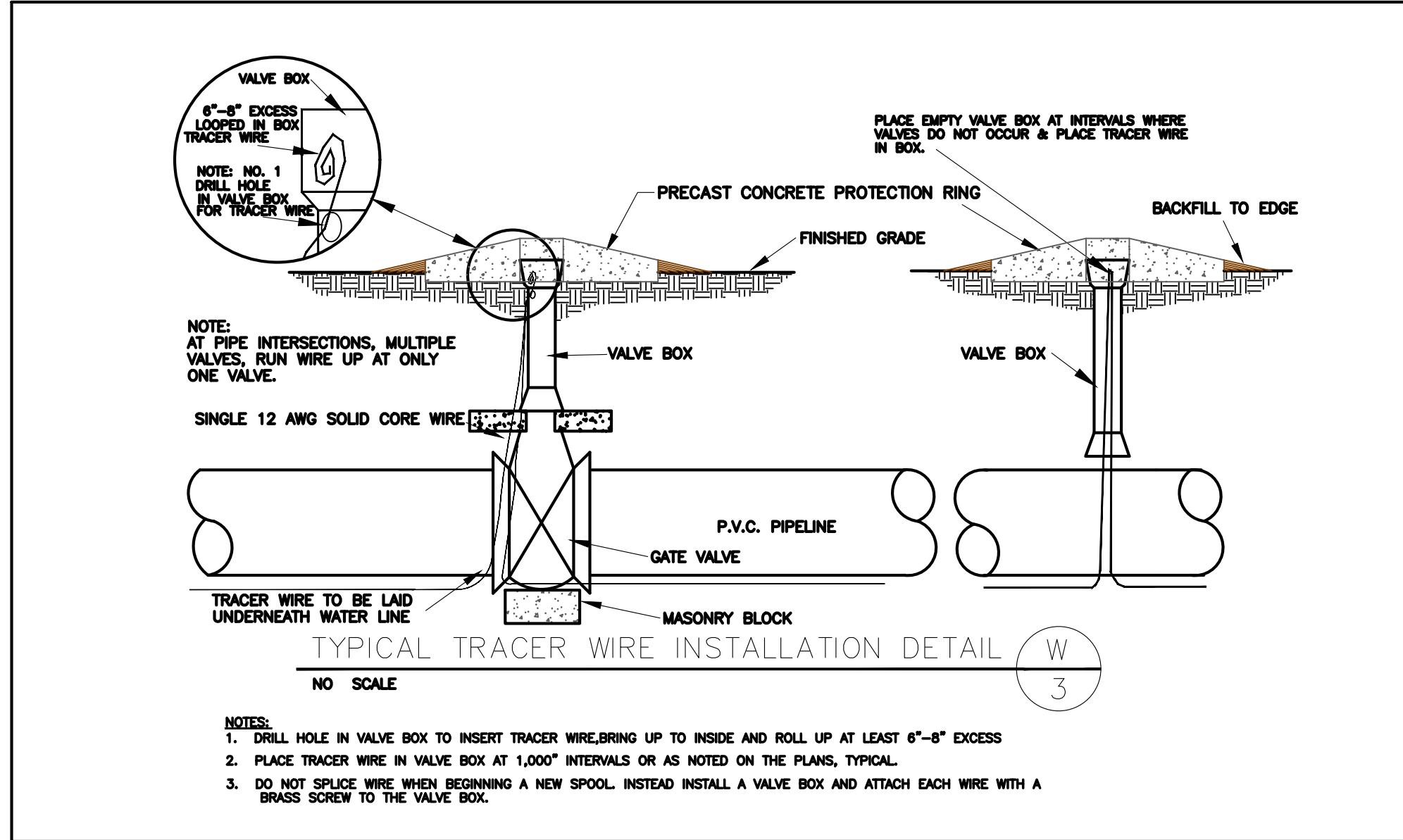
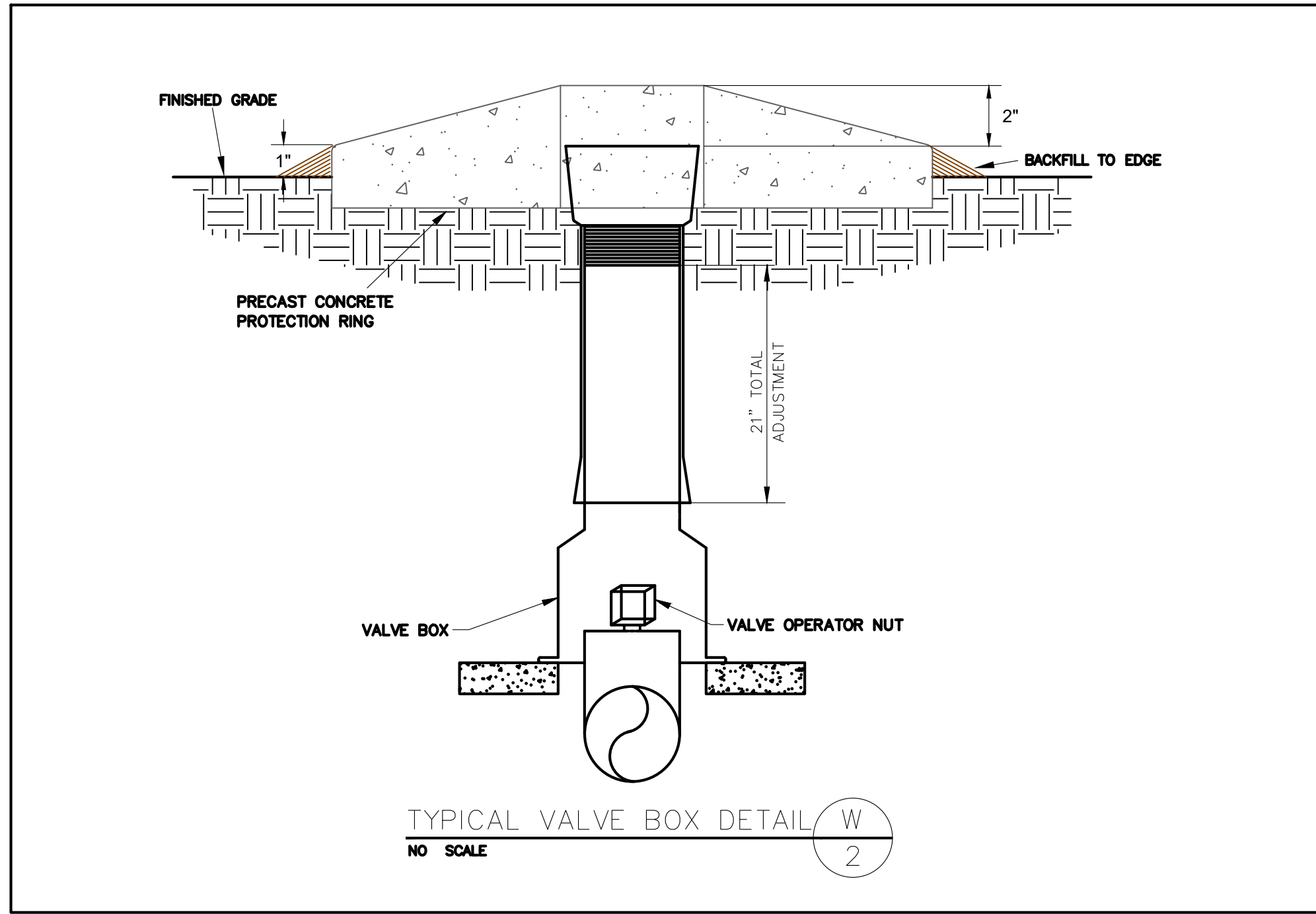
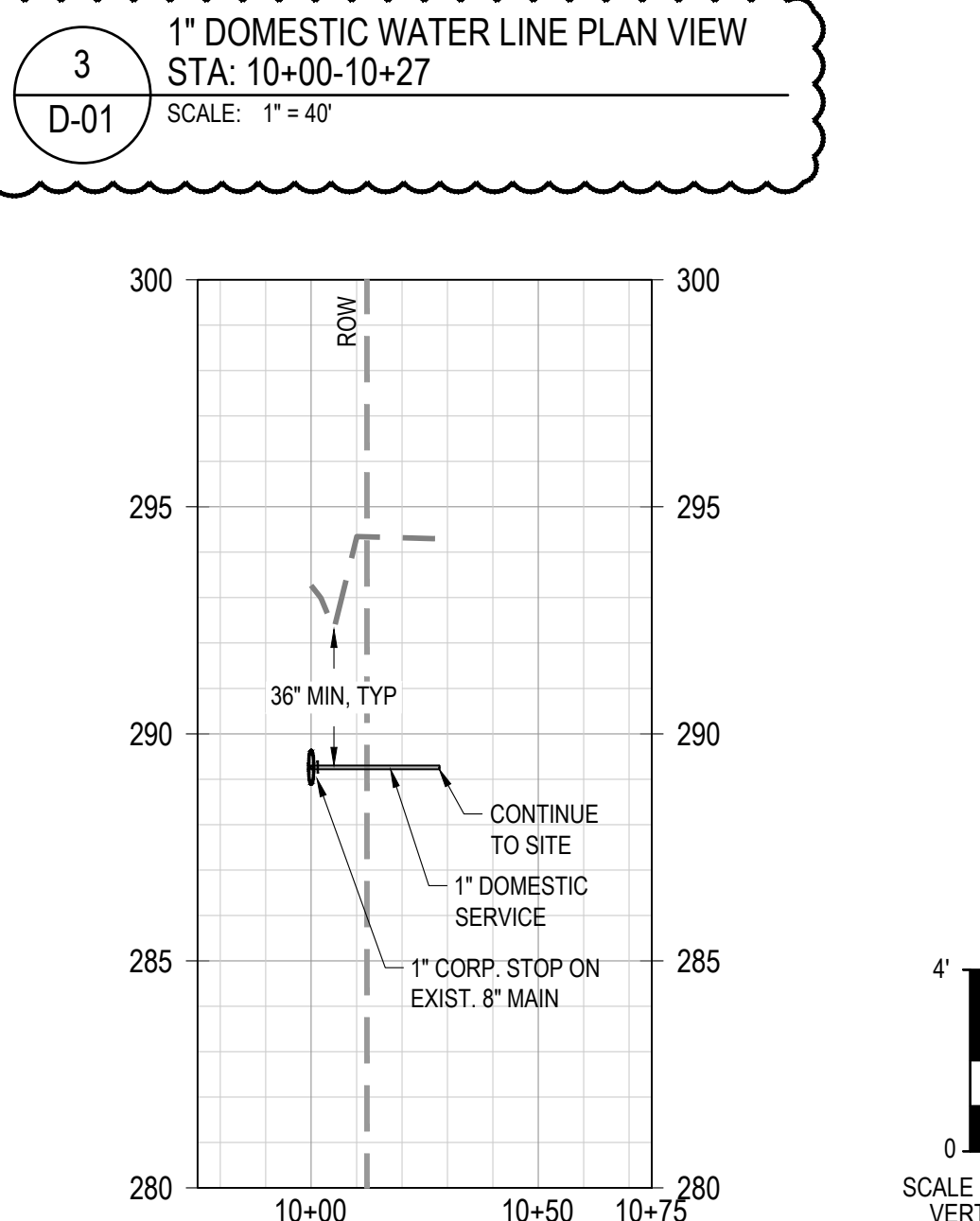
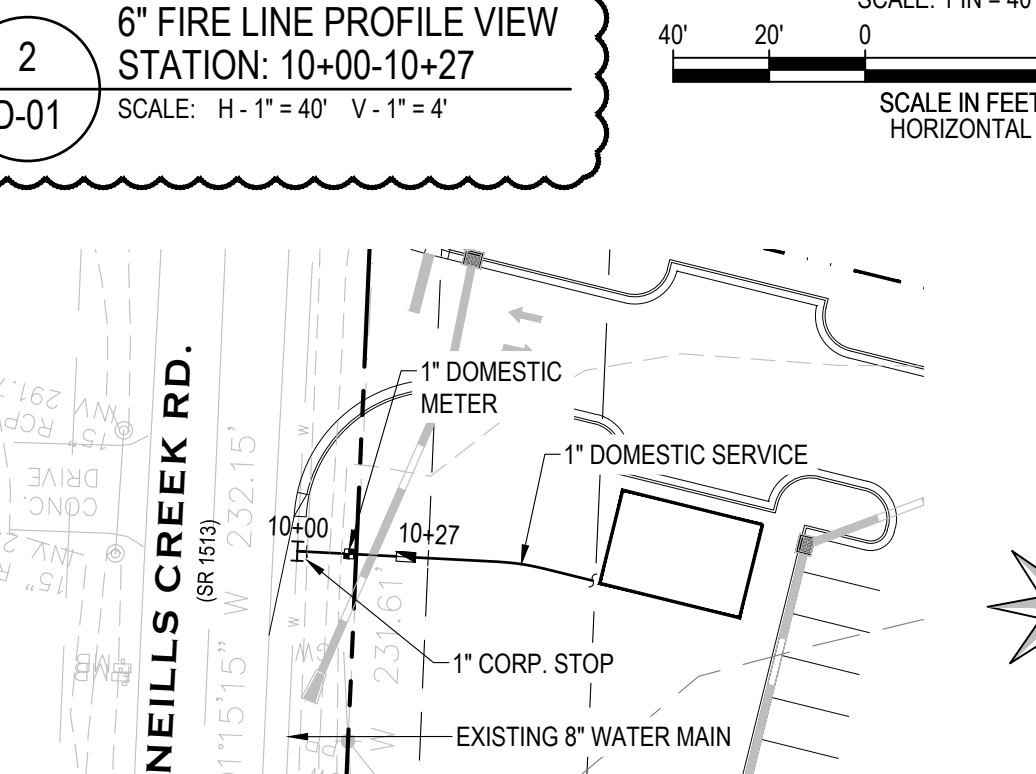
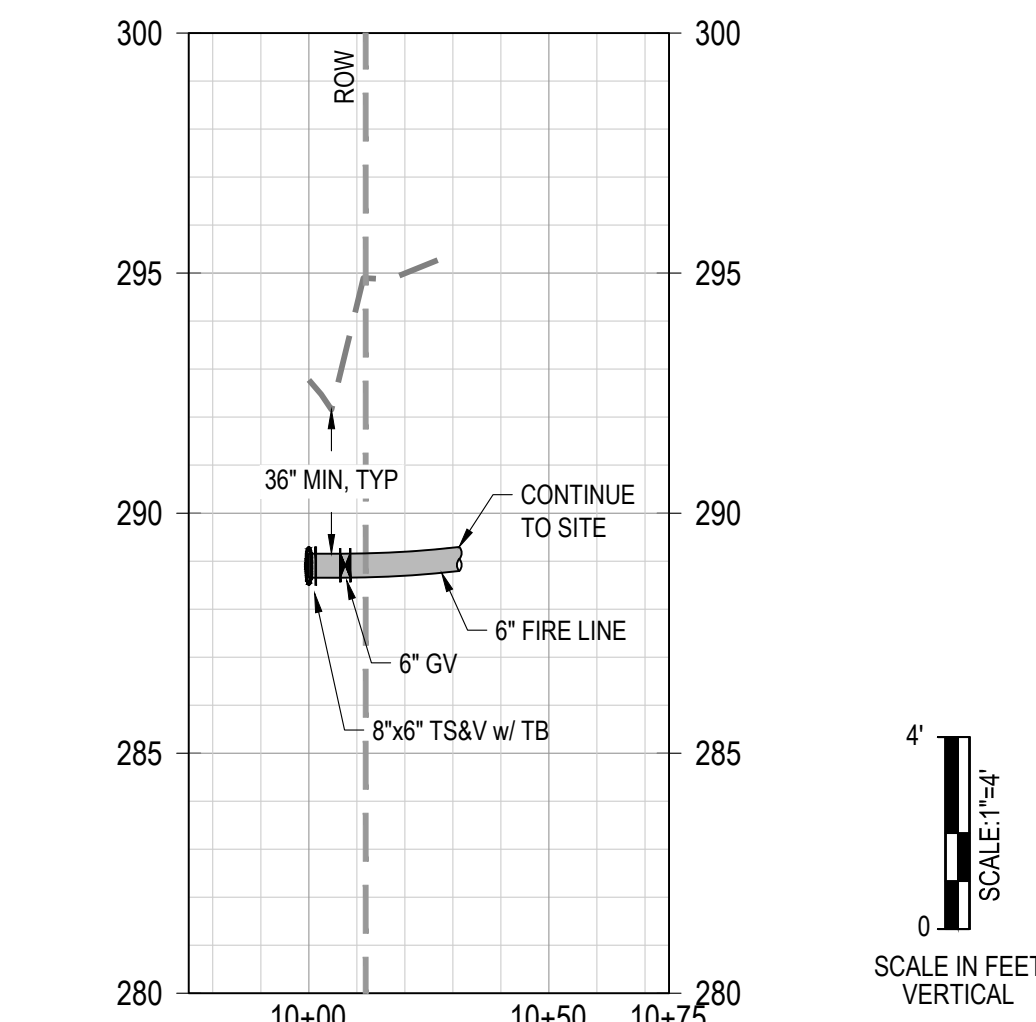
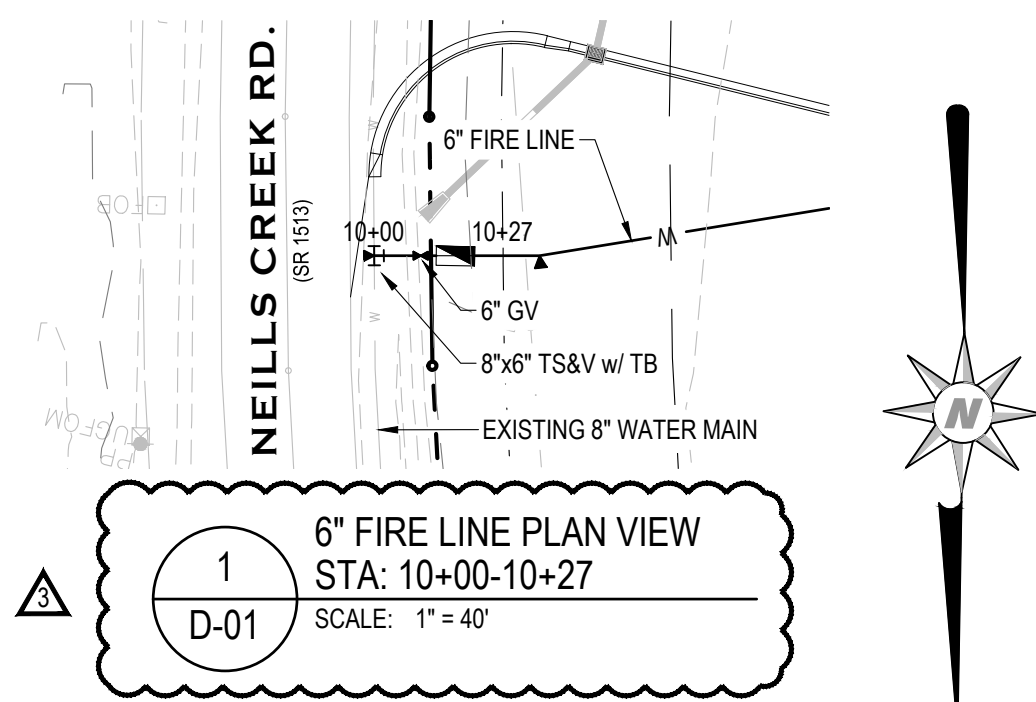
A. The Professional Engineer (PE) shall obtain and supply a copy of

the sewer permit for the construction and operation of the wastewater collection system to the Utility Contractor before the construction of the sanitary sewer line, sewer lift station and associated force main shall begin. The Utility Contractor must post a copy of the sewer permit issued by the North Carolina Department of Environmental Quality (NCDEQ) on site prior to the start of construction. The permit must be maintained on site during the construction of the sewer system improvements.

B. The Utility Contractor shall notify Harnett Regional Water (HRW) and the Professional Engineer (PE) at least two days prior to construction commencing. The Utility Contractor must schedule a pre-construction conference with Mr. Alan Moss, HRW Utility Construction Inspector at least two (2) days before construction will begin and the Utility Contractor must coordinate with HRW for any installation of new lines and structures and any new wastewater system(s). Construction work shall be performed only during the normal working hours of HRW which is 8:00 am - 5:00 pm Monday through Friday. Holiday and weekend work is not permitted by HRW.

C. The Professional Engineer (PE) shall provide HRW with a set of NCDEQ approved plans marked "Released for Construction" at least two days prior to construction commencing. HRW will stamp the approved plans as "Released for Construction" and provide copies to the utility contractor. The Registered Land Surveyor (RLS) shall stake out all lot corners and establish grade stakes for the proposed finish grade for each street and sewer line before the Utility Contractor begins construction or installation of the manholes, sanitary sewer gravity line(s), sewer lift stations and/or sanitary sewer force main(s). The

grade stakes should be set with a consistent offset from the street



LAKESIDE SELF-STORAGE - HARNETT COUNTY

UTILITY DETAILS I

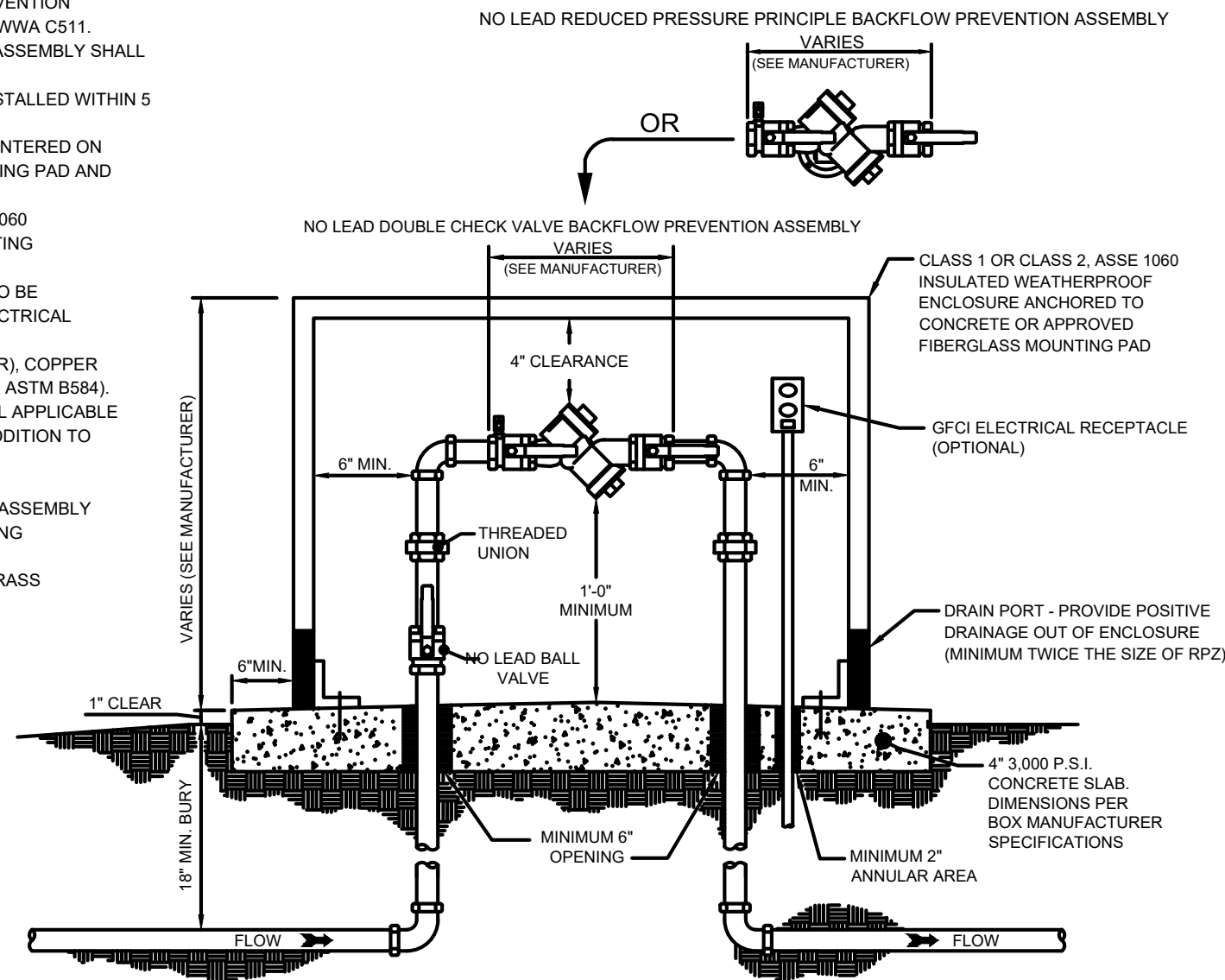
(919) 552-0849
(919) 552-2043

Curry
ENGINEERING

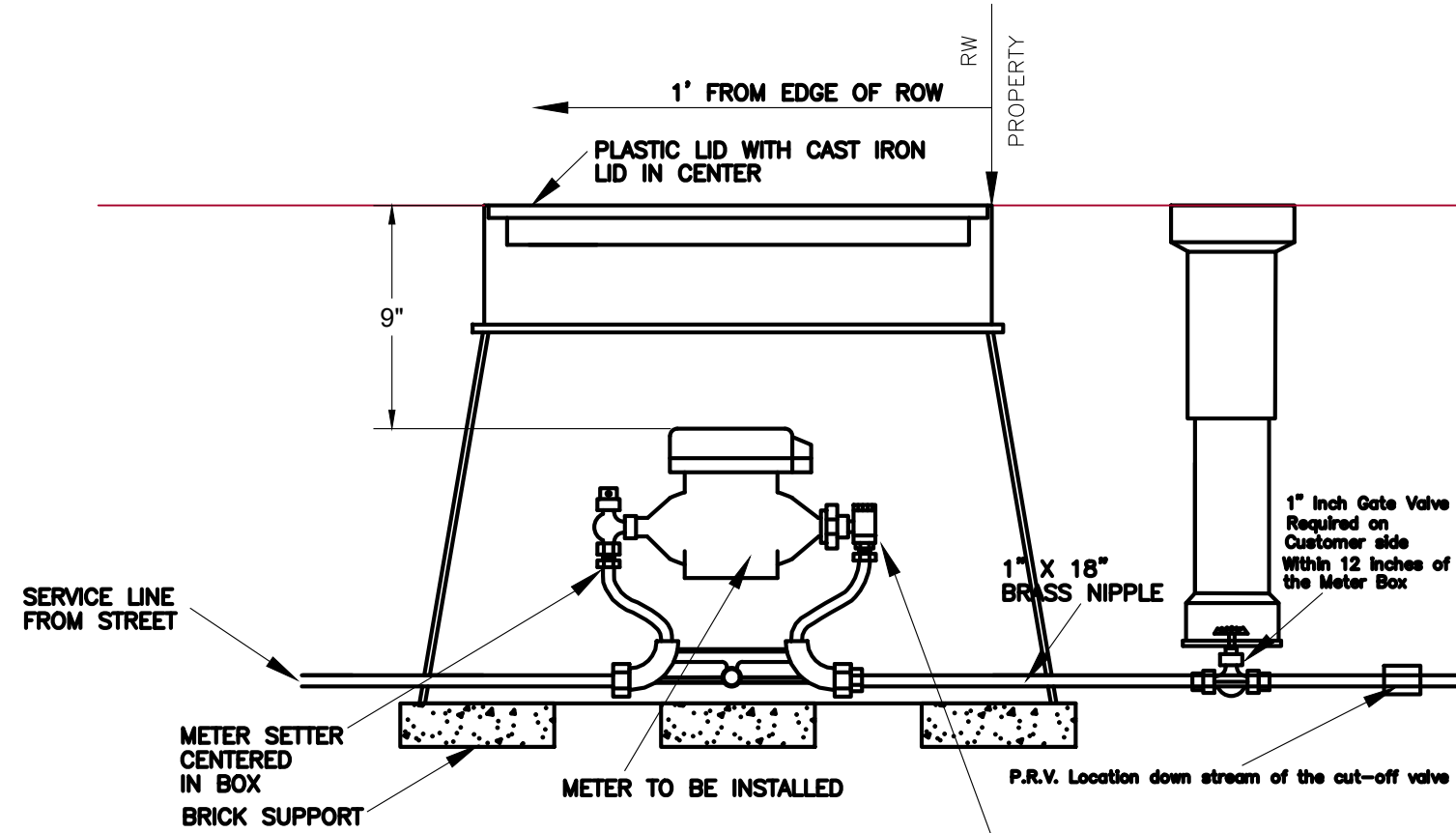
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- NOTES:
1. REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTION ASSEMBLY SHALL COMPLY WITH ASSE 1013 & AWWA C511.
 2. DOUBLE CHECK VALVE BACKFLOW PREVENTION ASSEMBLY SHALL COMPLY WITH ASSE 1015 & AWWA C510.
 3. BACKFLOW PREVENTION ASSEMBLY SHALL BE INSTALLED WITHIN 5 FEET OF THE METER BOX.
 4. BACKFLOW PREVENTION ASSEMBLY SHALL BE CENTERED ON CONCRETE OR APPROVED FIBERGLASS MOUNTING PAD AND CENTERED WITHIN ENCLOSURE.
 5. MINIMUM INSULATED CLASS I OR CLASS II, ASSE 1060 WEATHERPROOF ENCLOSURE REQUIRED (HEATING OPTIONAL).
 6. OPTIONAL 120V GFCI ELECTRICAL RECEPTACLE TO BE INSTALLED IN ACCORDANCE WITH THE N.C. ELECTRICAL CODE FOR OUTDOOR OPERATION.
 7. PIPE MATERIAL SHALL BE PVC (SCH. 80 OR BETTER), COPPER (TYPE K), OR NO LEAD BRASS (UNS C89833 PER ASTM B584).
 8. INSTALLATION SHALL BE IN COMPLIANCE WITH ALL APPLICABLE TOWN ORDINANCES AND SPECIFICATIONS IN ADDITION TO THE N.C. PLUMBING CODE.
 9. PROPERTY OWNER SHALL BE RESPONSIBLE FOR MAINTENANCE AND OPERATION OF BACKFLOW ASSEMBLY AND COMPLIANCE WITH REPORTING AND TESTING REQUIREMENTS.
 10. ALL BRASS COMPONENTS SHALL BE "NO LEAD" BRASS MEETING UNS C89833 AS PER ASTM B584.

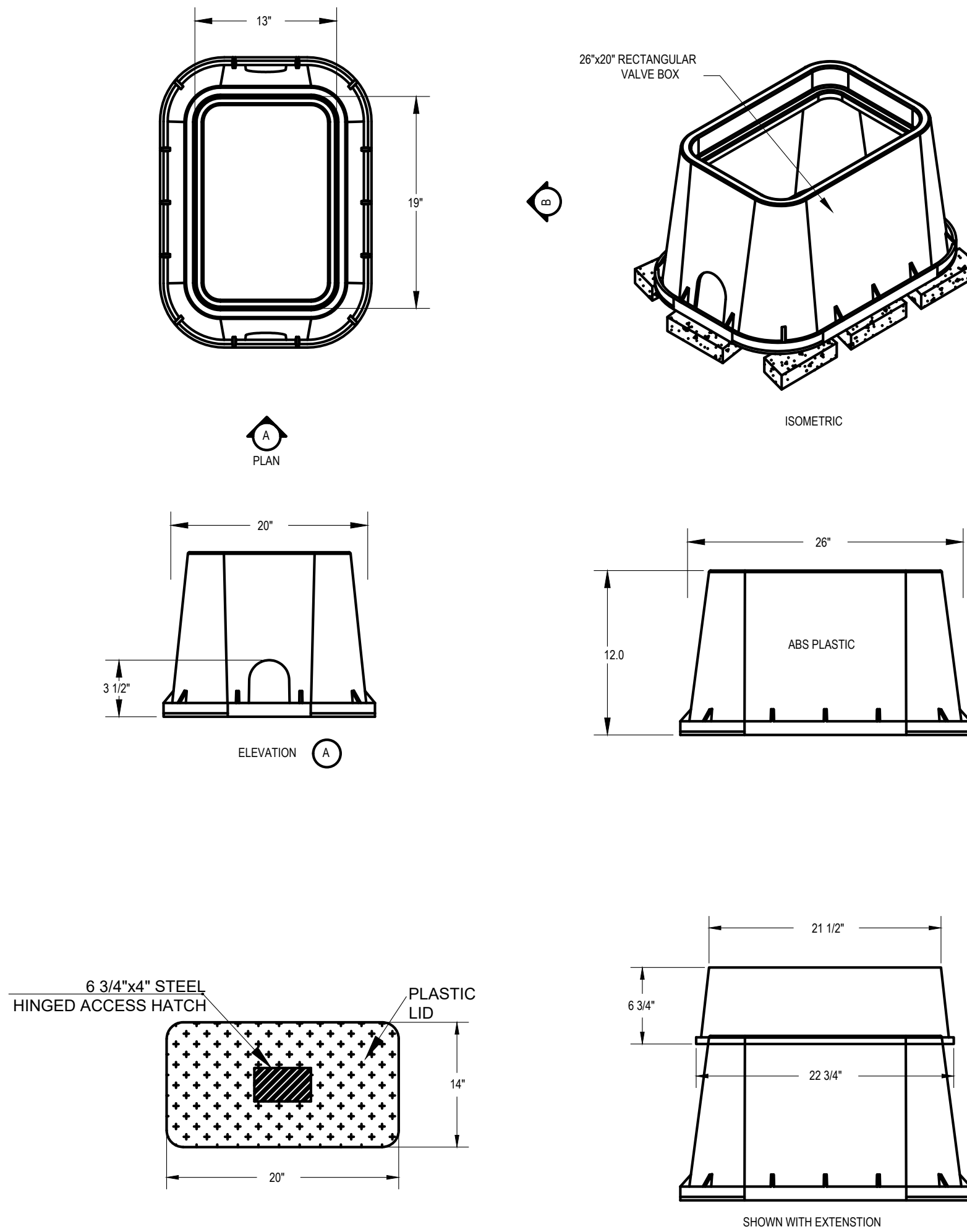


STANDARD 1" to 2" COMMERCIAL OUTDOOR BACKFLOW ASSEMBLY

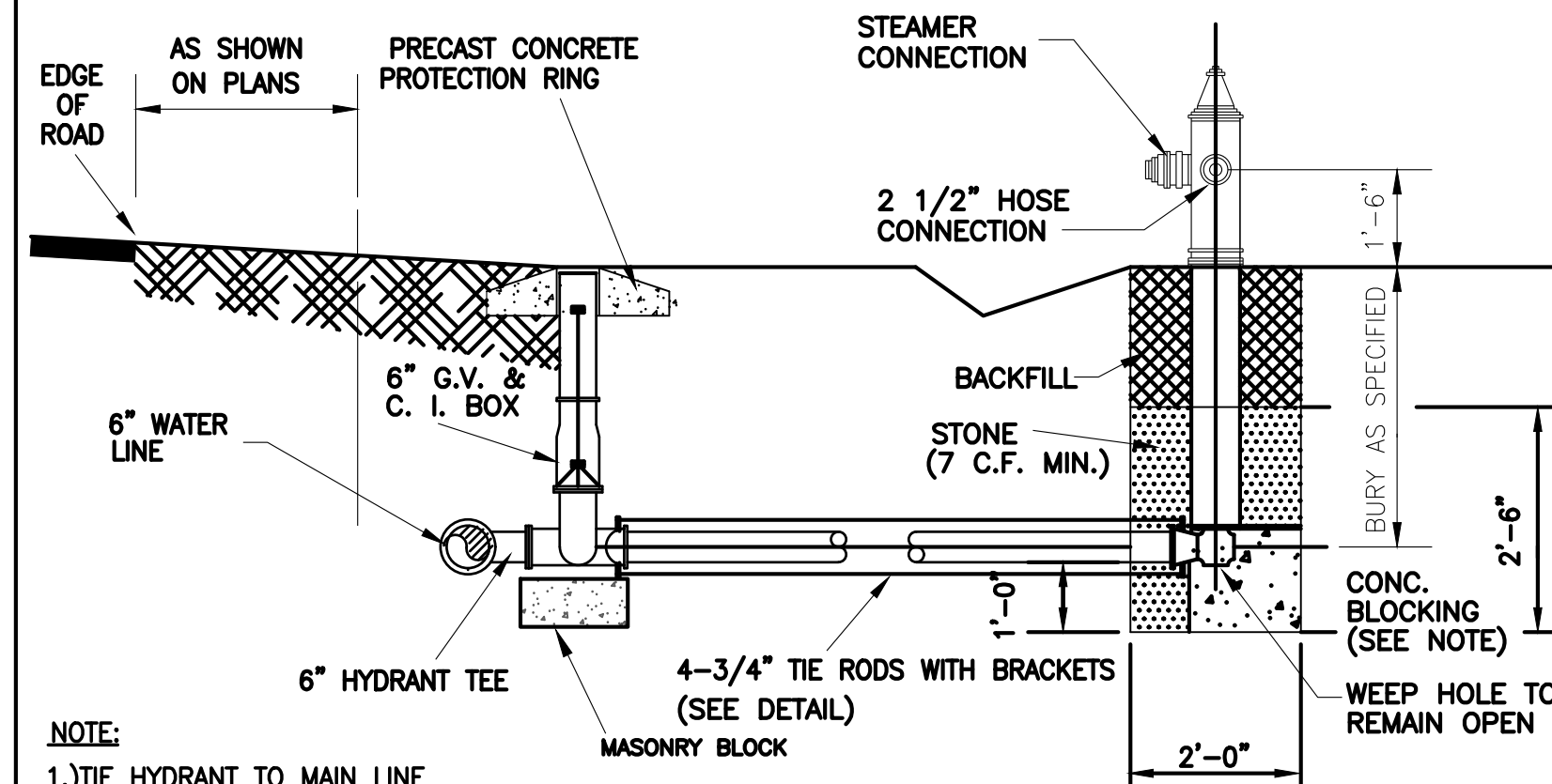


1. METER AND PRIVATE SERVICE LINE NOT IN CONTRACT UNLESS SPECIFIED METER SETTER WITH DOUBLE CHECK VALVE (BACKFLOW PREVENTER)
2. INCLUDE STONE IN PRICE OF METER BOX.
3. METER SETTER SIZE AS NOTED ON PLANS.
4. ALL BRASS FITTINGS SHALL BE COMPRESSION TYPE.

TYPICAL 1" METER SETTER INSTALLATION DETAIL W
NO SCALE 16



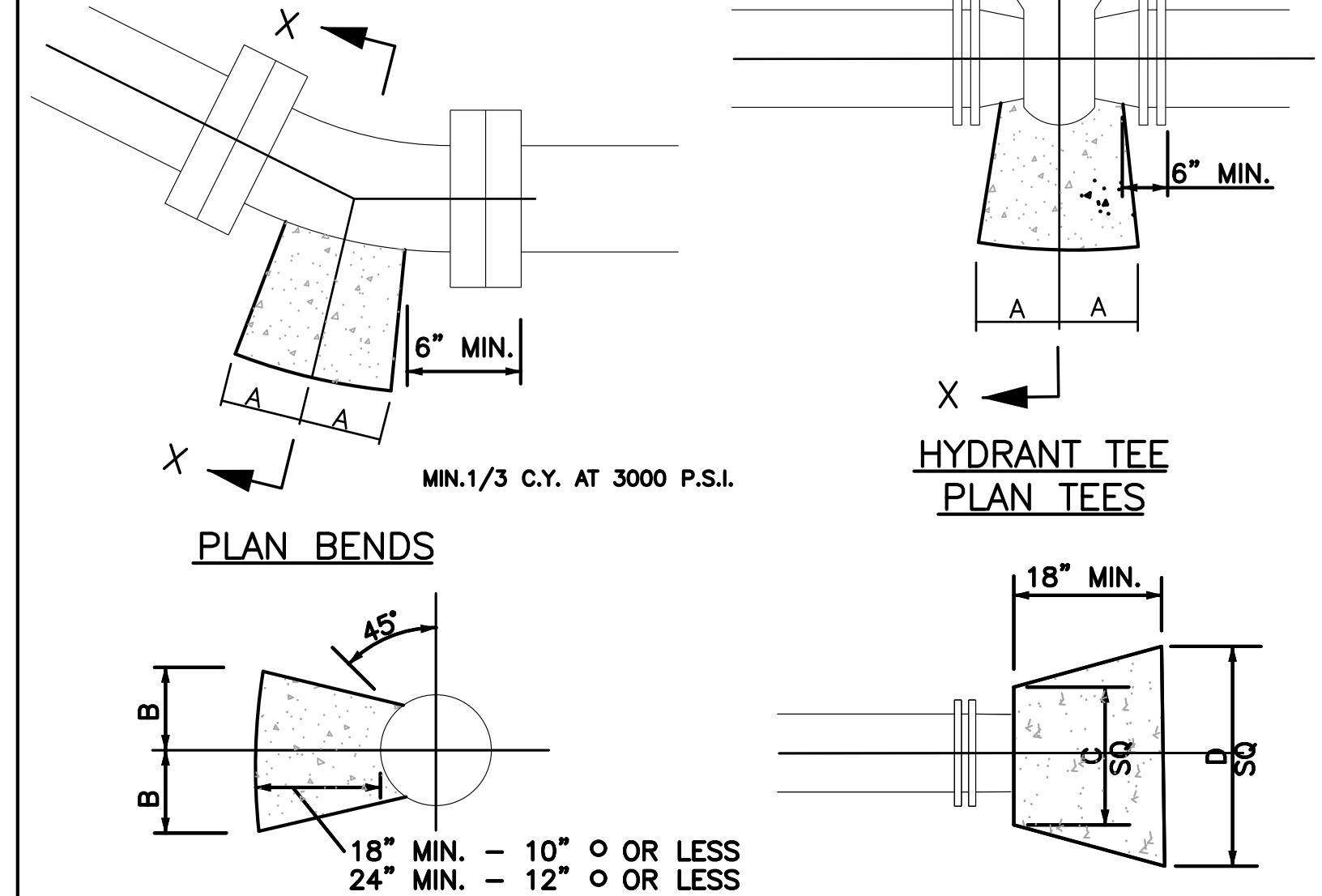
TYPICAL METER BOX DETAIL FOR 1" SERVICE W
NO SCALE 17



- NOTE:
- 1.) TIE HYDRANT TO MAIN LINE W/TIE RODS IN LIEU OF CONC. BLOCKING IN SANDY SOIL.
 - 2.) MECHANICAL JOINTS USED WITH GRIP RINGS

TYPICAL FIRE HYDRANT INSTALLATION DETAIL W
NO SCALE 6

- NOTES:
1. CONCRETE SHALL BE 3,000 PSI MIN.
 2. CONCRETE FOR THRUST BLOCKING SHALL BE KEPT FAIRLY DRY, THUS MAKING THE CONCRETE WEDGE SHAPE MORE EASILY FORMED WITH THE WIDEST PART (BLOCKING AREA) AGAINST UNDISTURBED SOIL.
 3. NO CONCRETE SHALL COVER ANY BOLTS OR GLANDS.
 4. ALL PIPING AND ACCESSORIES TO BE WRAPPED WITH 10 MIL. POLYETHYLENE PRIOR TO POURING BLOCKING.
 5. VOLUME OF THRUST BLOCKING SHALL BE AS SHOWN ON THE THRUST BLOCKING SCHEDULE.



PIPE SIZE	90° BEND		45° BEND		22 1/2° BEND		11 1/4° BEND		TEE		PLUG	
	A	B	A	B	A	B	A	B	A	B	C	D
4"	8"	12"	8"	8"	6"	6"	6"	6"	8"	9"	10"	16"
6"	10"	12"	8"	10"	8"	8"	8"	8"	10"	10"	12"	18"
8"	15"	13"	10"	10"	8"	8"	8"	8"	10"	12"	12"	24"
10"	16"	14"	10"	12"	6"	10"	6"	10"	11"	14"	14"	25"
12"	20"	16"	12"	14"	8"	12"	8"	12"	14"	16"	16"	30"
14"	22"	18"	14"	16"	10"	14"	10"	14"	16"	18"	18"	34"
16"	26"	20"	16"	18"	12"	16"	12"	16"	18"	20"	20"	36"

TYPICAL THRUST BLOCK DETAIL W
NO SCALE 7

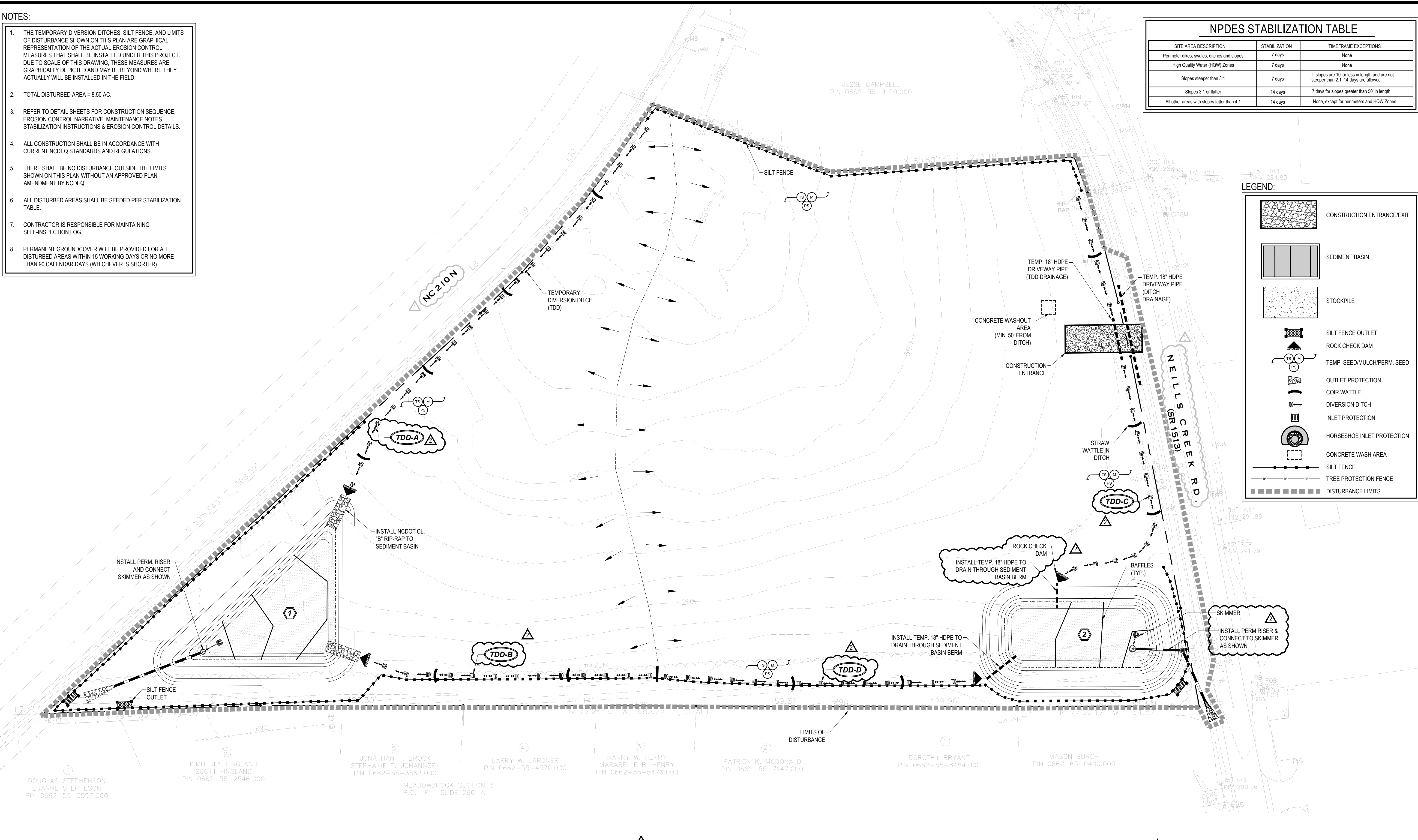
NOTES:

1. THE TEMPORARY DIVERSION DITCHES, SILT FENCE, AND LIMITS OF DISTURBANCE SHOWN ON THIS PLAN ARE GRAPHICAL REPRESENTATION OF THE ACTUAL EROSION CONTROL MEASURES THAT SHALL BE INSTALLED UNDER THIS PROJECT. DUE TO SCALE OF THIS DRAWING, THESE MEASURES ARE GRAPHICALLY DEPICTED AND MAY BE BEYOND WHERE THEY ACTUALLY WILL BE INSTALLED IN THE FIELD.
2. TOTAL DISTURBED AREA = 8.50 AC.
3. REFER TO DETAIL SHEETS FOR CONSTRUCTION SEQUENCE, EROSION CONTROL NARRATIVE, MAINTENANCE NOTES, STABILIZATION INSTRUCTIONS & EROSION CONTROL DETAILS.
4. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT NCDEQ STANDARDS AND REGULATIONS.
5. THERE SHALL BE NO DISTURBANCE OUTSIDE THE LIMITS SHOWN ON THIS PLAN WITHOUT AN APPROVED PLAN AMENDMENT BY NCDEQ.
6. ALL DISTURBED AREAS SHALL BE SEEDED PER STABILIZATION TABLE.
7. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING SELF-INSPECTION LOG.
8. PERMANENT GROUND COVER WILL BE PROVIDED FOR ALL DISTURBED AREAS WITHIN 15 WORKING DAYS OR NO MORE THAN 90 CALENDAR DAYS (WHICHEVER IS SHORTER).

NPDES STABILIZATION TABLE		
SITE AREA DESCRIPTION	STABILIZATION	TIMEFRAME EXCEPTIONS
Perimeter dikes, swales, ditches and slopes	7 days	None
High Quality Water (HQW) Zones	7 days	None
Slopes steeper than 3:1	7 days	If slopes are 10' or less in length and are not steeper than 2:1, 14 days are allowed
Slopes 3:1 or flatter	14 days	7 days for slopes greater than 50' in length
All other areas with slopes flatter than 4:1	14 days	None, except for perimeters and HQW Zones

LEGEND:

- CONSTRUCTION ENTRANCE/EXIT
- SEDIMENT BASIN
- STOCKPILE
- SILT FENCE OUTLET
- ROCK CHECK DAM
- TEMP. SEED/MULCH/PERM. SEED
- OUTLET PROTECTION
- COIR WATTLE
- DIVERSION DITCH
- INLET PROTECTION
- HORSESHOE INLET PROTECTION
- CONCRETE WASH AREA
- SILT FENCE
- TREE PROTECTION FENCE
- DISTURBANCE LIMITS



TEMPORARY DIVERSION DITCH SCHEDULE									
DITCH DESIGNATION	DRAINAGE AREA (AC)	RUNOFF COEFFICIENT	Q10 (CFS)	AVG. SLOPE (%)	FLOW DEPTH (FT)	VELOCITY (FPS)	SHAPE	GEOMETRY (FT)	LINING MATERIAL
A	0.61	0.50	2.18	2.7%	0.44	1.74	TRAPEZOIDAL	b=2', d=18", m=2:1	STRAW w/ NET
B	1.49	0.50	5.30	0.5%	0.76	1.99	TRAPEZOIDAL	b=2', d=18", m=2:1	STRAW w/ NET
C	2.30	0.50	8.15	0.5%	0.94	2.24	TRAPEZOIDAL	b=2', d=18", m=2:1	STRAW w/ NET
D	2.07	0.50	7.36	0.5%	0.89	2.18	TRAPEZOIDAL	b=2', d=18", m=2:1	STRAW w/ NET

SKIMMER SEDIMENT BASIN 1

MINIMUM DEPTH: 2'0"
VOLUME REQUIRED = 4,983 CF
SURFACE AREA REQUIRED = 4,275 SF
SURFACE AREA PROVIDED = 8,930 SF
TOP OF BASIN ELEVATION = 295.00
SURFACE AREA ELEVATION = 293.00
BOTTOM OF BASIN ELEVATION = 291.00
CLEANOUT ELEVATION = 292.00

EMERGENCY SPILLWAY LENGTH = 15'
EMERGENCY SPILLWAY ELEVATION = 294.00
SKIMMER SIZE = 2 INCH, 1.75 INCH ORIFICE
DEWATERING TIME = 3.05 DAYS

SKIMMER SEDIMENT BASIN 2

MINIMUM DEPTH: 2'0"
VOLUME REQUIRED = 8,773 CF
SURFACE AREA REQUIRED = 7,526 SF
SURFACE AREA PROVIDED = 7,744 SF
TOP OF BASIN ELEVATION = 296.00
SURFACE AREA ELEVATION = 294.00
BOTTOM OF BASIN ELEVATION = 292.00
CLEANOUT ELEVATION = 293.00

EMERGENCY SPILLWAY LENGTH = 20'
EMERGENCY SPILLWAY ELEVATION = 295.00
SKIMMER SIZE = 3 INCH, 1.75 INCH ORIFICE
DEWATERING TIME = 4.28 DAYS

SCALE: 1 IN = 40 FT
SCALE IN FEET HORIZONTAL

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DONALD L. CURRY
026970
7/20/2022

LAKESIDE SELF-STORAGE - HARNETT COUNTY
EROSION CONTROL PLAN - INITIAL PHASE

T (919) 562-9849
F (919) 562-9843
206 S. Fulsay Avenue
Fayetteville, NC 27506

ENGINEER
CURRY ENGINEERING
DONALD L. CURRY
026970
7/20/2022

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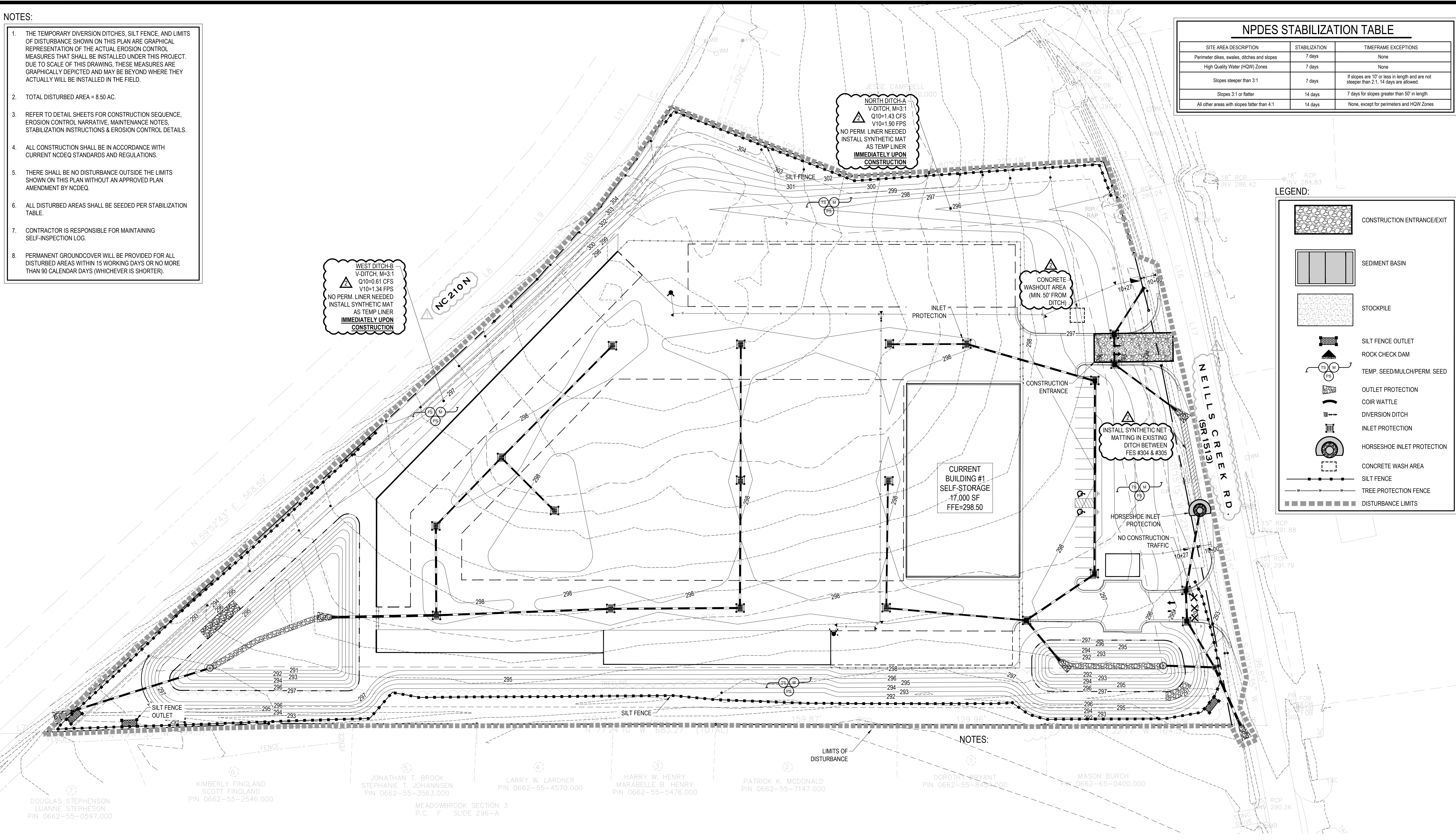
NOTES:

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2. TOTAL DISTURBED AREA = 8.50 AC.
3. REFER TO DETAIL SHEETS FOR CONSTRUCTION SEQUENCE, EROSION CONTROL NARRATIVE, MAINTENANCE NOTES, STABILIZATION INSTRUCTIONS & EROSION CONTROL DETAILS.
4. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT NCDEQ STANDARDS AND REGULATIONS.
5. THERE SHALL BE NO DISTURBANCE OUTSIDE THE LIMITS SHOWN ON THIS PLAN WITHOUT AN APPROVED PLAN AMENDMENT BY NCDEQ.
6. ALL DISTURBED AREAS SHALL BE SEEDED PER STABILIZATION TABLE.
7. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING SELF-INSPECTION LOG.
8. PERMANENT GROUND COVER WILL BE PROVIDED FOR ALL DISTURBED AREAS WITHIN 15 WORKING DAYS OR NO MORE THAN 90 CALENDAR DAYS (WHICHEVER IS SHORTER).

NPDES STABILIZATION TABLE		
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LEGEND:

- CONSTRUCTION ENTRANCE/EXIT
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- SILT FENCE OUTLET
- ROCK CHECK DAM
- TEMP. SEED/MULCH/PERM. SEED
- OUTLET PROTECTION
- COIR WATTLE
- DIVERSION DITCH
- INLET PROTECTION
- HORSESHOE INLET PROTECTION
- CONCRETE WASH AREA
- SILT FENCE
- TREE PROTECTION FENCE
- DISTURBANCE LIMITS



NOTES:

DOUGLAS STEPHENSON
LUANNE STEPHENSON
PIN 0662-55-0597.000

KIMBERLY FINGLAND
SCOTT FINGLAND
PIN 0662-55-2546.000

JONATHAN T. BROCK
STEPHANIE T. JOHANNSEN
PIN 0662-55-3563.000

Meadowbrook Section 3
P.C. F. SLIDE 296-A

LARRY W. LARDNER
PIN 0662-55-4570.000

HARRY W. HENRY
MARABELLE B. HENRY
PIN 0662-55-5478.000

PATRICK K. McDONALD
PIN 0662-55-7147.000

DOROTHY BRYANT
PIN 0662-55-8454.000

MASON BURCH
PIN 0662-65-0400.000

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SCALE: 1 IN = 40 FT
SCALE IN FEET
HORIZONTAL

Seal of the Engineer: *Donald L. Curry*
026970
ENGINEER
DONALD L. CURRY
7/20/2022

LAKESIDE SELF-STORAGE - HARNETT COUNTY
EROSION CONTROL PLAN - CONSTRUCTION PLAN

Curry
ENGINEERING

EC-02

206 S. Fumery Avenue
Fayetteville, NC 27808
T (919) 562-9849
F (919) 562-9843

NC LIC. NO. P-4798

EROSION CONTROL NOTES

1. THE CONTRACTOR SHALL AT A MINIMUM IMPLEMENT THE CONTRACTOR'S REQUIREMENTS OUTLINED BELOW AND THOSE MEASURES SHOWN ON THE EROSION AND SEDIMENT CONTROL PLAN. IN ADDITION THE CONTRACTOR SHALL UNDERTAKE ADDITIONAL MEASURES REQUIRED TO BE IN COMPLIANCE WITH APPLICABLE PERMIT CONDITIONS AND STATE WATER QUALITY STANDARDS.
2. TOTAL DISTURBANCE LIMITS = 8.50 ACRES.
3. ANY GRADING BEYOND THE DENUDED LIMITS SHOWN IN THE PLAN IS A VIOLATION OF THE NORTH CAROLINA SEDIMENTATION CONTROL LAW & IS SUBJECT TO A FINE.
4. GRADING MORE THAN 1 ACRE WITHOUT AN APPROVED EROSION CONTROL PLAN IS A VIOLATION OF THE THE NORTH CAROLINA SEDIMENTATION CONTROL LAW AND IS SUBJECT TO A FINE.
5. ALL EROSION CONTROL PRACTICES SHALL BE IN ACCORDANCE WITH ALL NCDENR STANDARDS AND SPECIFICATIONS.
8. CONSTRUCTION ENTRANCES SHALL BE MAINTAINED THROUGHOUT THE ENTIRE CONSTRUCTION PROJECT. A MINIMUM OF ONE CONSTRUCTION ENTRANCE SHALL BE INSTALLED AND UTILIZED. THIS ENTRANCE SHALL BE BETWEEN THE LIMITS OF DISTURBANCE AND ANY ROAD RIGHT OF WAY.
9. ADJACENT PROPERTIES AND RIGHT-OF-WAY SHALL BE KEPT FREE OF MUD AND/OR SEDIMENT-LADEN RUNOFF.
10. THE EROSION CONTROL MEASURES SHOWN ON THIS PLAN ARE RECOMMENDED AS A MINIMUM IN ORDER TO CONTROL RUN-OFF. IT IS POSSIBLE THAT MORE STRINGENT MEASURES MAY BE NEEDED AS DETERMINED BY THE CONTRACTOR, PROJECT ENGINEER, AND/OR EROSION CONTROL INSPECTOR. IF IT IS DETERMINED THAT ADDITIONAL RUN-OFF CONTROL IS NEEDED, SUCH MEASURES SHALL BE INSTALLED IMMEDIATELY.
11. SHOULD MAINTENANCE ISSUES ARISE, PLEASE CONTACT JOHN AUTON AT 919-369-9872.
12. CONTRACTOR SHALL LOCATE AND VERIFY LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO BEGINNING WORK.

EROSION & SEDIMENT CONTROL NARRATIVE

PROJECT DESCRIPTION

THE PURPOSE OF THIS PROJECT IS TO CLEAR & GRUB AND MASS GRADING FOR A SELF-STORAGE FACILITY. THE PROPERTY IS PRIVATELY OWNED. SEE OWNER INFORMATION ON EXISTING CONDITIONS PLANS. THE SITE IS CURRENTLY UNDEVELOPED.

APPROXIMATELY 8.50 ACRES WILL BE DISTURBED DURING CONSTRUCTION. THE MAXIMUM FILL WILL BE APPROX. 6 FEET AND THE MAXIMUM CUT WILL BE APPROX. 6 FEET. THIS PROJECT WILL INVOLVE REMOVAL OF TOPSOIL AND WIDESPREAD EARTHWORK TO FACILITATE INFRASTRUCTURE INSTALLATION TO SERVE THE FACILITY. AN UNDERGROUND STORM DRAINAGE SYSTEM WILL BE INSTALLED TO CONVEY STORMWATER TO PERMANENT STORMWATER MANAGEMENT AREAS.

THE PROJECT IS SCHEDULED TO BEGIN CONSTRUCTION IN LATE FALL 2021 WITH PROJECT COMPLETION AND FINAL STABILIZATION BY SPRING 2022. THE EROSION AND SEDIMENT CONTROL PROGRAM FOR THIS PROJECT WILL INCLUDE THE INSTALLATION OF A SUITABLE CONSTRUCTION ENTRANCE, TEMPORARY SILT FENCING, SILT FENCE OUTLETS, DIVERSION DITCHES, INLET PROTECTION MEASURES AND SEDIMENT BASINS.

ADJACENT PROPERTY
ADJACENT PROPERTY OWNERS ARE NOTED ON THE EXISTING CONDITIONS PLANS.

NATIVE SOILS

THE SOILS AT THIS SITE ARE PREDOMINATELY LOAMY SANDS. SOILS ARE MOSTLY WELL DRAINED WITH Ksat RANGES FROM MODERATELY HIGH TO HIGH. SLOPES ARE LARGELY BETWEEN 0 TO 6%. SOILS ONSITE ARE FUQUAY (FaB) AND DOTHAM LOAMY SANDS (DoB).

CONSTRUCTION SEQUENCE:

1. OBTAIN A LAND-DISTURBING PERMIT FROM NCDENR.
2. SCHEDULE A PRECONSTRUCTION CONFERENCE WITH NCDENR AT LEAST ONE WEEK PRIOR TO START OF LAND DISTURBANCE.
3. CLEAR THE AREA NEEDED TO CONSTRUCT THE PROPOSED CONSTRUCTION ENTRANCE.
4. CONSTRUCT THE ENTRANCE AS SHOWN ON THE PLANS. MAINTAIN THE CONSTRUCTION ENTRANCE DAILY TO ENSURE THAT MUD AND SILT WILL NOT BE TRACKED ONTO THE PAVED SURFACE. IF MUD IS TRACKED ONTO THE SURFACE, IT IS TO BE REMOVED IMMEDIATELY.
5. CLEAR THE AREA NEEDED TO CONSTRUCT THE REMAINDER OF PERIMETER EROSION CONTROL MEASURES INCLUDING SILT FENCE, ROCKS CHECK DAMS, TEMPORARY DIVERSIONS, SKIMMER BASIN, AND OTHER MEASURES AS SHOWN ON THE APPROVED PLAN. INSTALL PROPOSED DEVICES. SEED TEMPORARY DIVERSIONS, BERMS AND BASINS IMMEDIATELY AFTER CONSTRUCTION.
6. CLEAR AND INSTALL THE SKIMMER SEDIMENT BASIN. INSTALL COIR MESH Baffles, SKIMMER DEVICES, AND OTHER FEATURES AND STABILIZE IMMEDIATELY AFTER CONSTRUCTION. THE PERMANENT RISER STRUCTURES FOR THE FUTURE WET DETENTION BASINS SHALL BE INSTALLED AT THIS TIME.
7. CALL NCDENR FOR AN ONSITE INSPECTION BY THE ONSITE INSPECTOR TO OBTAIN A CERTIFICATE OF COMPLIANCE.
8. BEGIN CLEARING AND GRUBBING. MAINTAIN DEVICES AS NEEDED.
9. ROUGH GRADE PARKING LOT, DRIVEWAY, AND GENERAL SITE.
10. CONSTRUCT UTILITIES THROUGHOUT PROJECT.
11. INSTALL STORM SEWER, AND PROTECT INLETS WITH BLOCK AND GRAVEL INLET CONTROLS, SEDIMENT TRAPS OR OTHER APPROVED MEASURES AS SHOWN ON THE PLAN.
12. CONTINUE WITH MASS GRADING OF SITE AND BEGIN CONSTRUCTION, BUILDING, ETC.
13. STABILIZE SITE AS AREAS ARE BROUGHT UP TO FINISH GRADE WITH VEGETATION, PAVING, DITCH LININGS, ETC. SEED AND MULCH DENUDED AREAS WITHIN 7 OR 14 DAYS OF COMPLETION OF ANY PHASE OF CONSTRUCTION.
14. WHEN CONSTRUCTION IS COMPLETE AND ALL AREAS ARE STABILIZED COMPLETELY, CALL NCDENR ON SITE INSPECTOR.
15. IF SITE IS APPROVED AND ALL UPSTREAM AREAS ARE STABILIZED, REMOVE TEMPORARY DIVERSIONS, SILT FENCE, SEDIMENT BASINS, ETC., AND SEED OUT OR STABILIZE ANY RESULTING BARE AREAS. EXISTING STORM DRAINAGE SYSTEM SHALL BE CLEANED OF ANY SEDIMENT.
16. GRADE BMP AND REMOVE SKIMMER. STABILIZE ALL GRADING FROM BMP EXCAVATION.
17. WHEN VEGETATION HAS BECOME ESTABLISHED, CALL FOR A FINAL SITE INSPECTION BY THE ONSITE INSPECTOR. OBTAIN A CERTIFICATE OF COMPLETION.
18. SUBMIT NOTICE OF TERMINATION TO NCDENR.
 - INSPECTOR REFERS TO NORTH CAROLINA LAND QUALITY INSPECTOR OR HIS REPRESENTATIVE. FIELD INSPECTIONS MAY REQUIRE ADDITIONAL SEDIMENTATION AND EROSION CONTROL MEASURES AS DEEMED NECESSARY BY THE INSPECTOR.
 - CONSTRUCTION AND MAINTENANCE OF ALL EROSION CONTROL DEVICES SHALL CONFORM TO THE STANDARDS SET FORTH IN THE NORTH CAROLINA DEPARTMENT OF NATURAL RESOURCES LAND QUALITY SECTION: EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL.
 - THE CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE OF EROSION CONTROL MEASURES DURING CONSTRUCTION AND THE OWNER IS RESPONSIBLE FOR ALL PERMANENT EROSION CONTROL METHODS AFTER CONSTRUCTION IS COMPLETE, IF ANY PERMANENT METHODS ARE REQUIRED.

MAINTENANCE/INSPECTION PROCEDURES

THE FOLLOWING ARE INSPECTION AND MAINTENANCE PRACTICES THAT WILL BE USED TO MAINTAIN EROSION AND SEDIMENT CONTROLS.

- ALL CONTROL MEASURES WILL BE INSPECTED BY THE SUPERINTENDENT, THE PERSON RESPONSIBLE FOR THE DAY TO DAY SITE OPERATION OR SOMEONE APPOINTED BY THE SUPERINTENDENT, DAILY AND WITHIN 24 HOURS OF EVERY RAINFALL EVENT.
- SILT FENCE & FABRIC INLET PROTECTION: INSPECT FOR DEPTH OF SEDIMENT, TEARS, TO SEE IF THE FABRIC IS SECURELY ATTACHED TO THE FENCE POSTS, AND TO SEE THAT THE FENCE POSTS ARE FIRMLY IN THE GROUND. BUILT UP SEDIMENT WHEN IT HAS REACHED ONE-THIRD THE HEIGHT OF THE FENCE.
- DIVERSION DIKES/SWALES: INSPECT AND ANY BREACHES PROMPTLY REPAIRED. SEDIMENT SHALL BE REMOVED FROM THE FLOW AREA IMMEDIATELY AFTER EACH RAINFALL.
- TEMPORARY GRAVEL CONSTRUCTION ENTRANCE/EXIT: MAINTAIN THE GRAVEL PAD IN A CONDITION TO PREVENT MUD OR SEDIMENT FROM LEAVING THE CONSTRUCTION SITE. THIS MAY REQUIRE PERIODIC TOP-DRESSING WITH 2-3" STONE. AFTER A RAINFALL, IMMEDIATELY REMOVE ALL OBJECTIONABLE MATERIALS SPILLED, WASHED, OR TRACKED ONTO ROADWAYS.
- SEDIMENT BASIN: INSPECT AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (1/2 INCH OR GREATER) RAINFALL EVENT AND REPAIR IMMEDIATELY. REMOVE SEDIMENT AND RESTORE THE BASIN TO ITS ORIGINAL DIMENSIONS WHEN IT ACCUMULATES TO ONE-HALF THE DESIGN DEPTH. PLACE REMOVED SEDIMENT IN AN AREA WITH SEDIMENT CONTROLS. CHECK THE EMBANKMENT, SPILLWAYS, AND OUTLET FOR EROSION DAMAGE, AND INSPECT THE EMBANKMENT FOR PIPING AND SETTLEMENT. MAKE ALL NECESSARY REPAIRS IMMEDIATELY. REMOVE ALL TRASH AND OTHER DEBRIS FROM THE RISER AND POOL AREA. REPAIR Baffles AND SKIMMERS AS NEEDED.
- INLET PROTECTION: INSPECT INLETS AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (1/2 INCH OR GREATER) RAINFALL EVENT. CLEAR THE MESH WIRE OF ANY DEBRIS OR OTHER OBJECTS TO PROVIDE ADEQUATE FLOW FOR SUBSEQUENT RAINS. TAKE CARE NOT TO DAMAGE OR UNDERCUT THE WIRE MESH DURING SEDIMENT REMOVAL. REPLACE STONE AS NEEDED.
- SEEDING, FERTILIZING, AND MULCHING: INSPECT SEEDED AREAS FOR FAILURE AND NECESSARY REPAIRS AND RE-SEEDING SHALL BE MADE WITHIN THE SAME SEASON. TEMPORARY AND PERMANENT SEEDING AND PLANTING WILL BE INSPECTED FOR BARE SPOTS, WASHOUTS, AND HEALTHY GROWTH.
- MAINTAIN THE ON-SITE RAIN GAUGE & DATA AND STORMWATER INSPECTION LOG SHEETS. THIS PERMIT INFORMATION MUST BE COLLECTED AND MAINTAINED UNTIL NC DEMLR HAS CLOSED THE PROJECT & SURETY HAS BEEN RELEASED.
- THE CONTACT PERSON IS REQUIRED TO MAINTAIN A LOG OF SELF-INSPECTIONS PER REQUIREMENTS AS OUTLINED IN NCG01000 PERMIT. THE REPORTS WILL BE KEPT ON SITE DURING CONSTRUCTION AND AVAILABLE UPON REQUEST TO THE OWNER, ENGINEER OR ANY FEDERAL, STATE OR LOCAL AGENCY APPROVING SEDIMENT AND EROSION PLANS, OR STORMWATER MANAGEMENT PLANS. THIS PERMIT INFORMATION MUST BE COLLECTED AND MAINTAINED UNTIL NC DEMLR HAS CLOSED THE PROJECT.
- THE SITE SUPERINTENDENT WILL SELECT UP TO THREE INDIVIDUALS WHO WILL BE RESPONSIBLE FOR INSPECTIONS, MAINTENANCE AND REPAIR ACTIVITIES, AND FILLING OUT THE INSPECTION AND MAINTENANCE REPORT.
- PERSONNEL SELECTED FOR INSPECTION AND MAINTENANCE RESPONSIBILITIES WILL RECEIVE TRAINING FROM THE SITE. SUPERINTENDENT: THEY WILL BE TRAINED IN ALL THE INSPECTION AND MAINTENANCE PRACTICES NECESSARY FOR KEEPING THE EROSION AND SEDIMENT CONTROLS USED ONSITE IN GOOD WORKING ORDER.
- GROUND STABILIZATION: SOIL STABILIZATION SHALL BE ACHIEVED ON ANY AREA OF A SITE WHERE LAND-DISTURBING ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED ACCORDING TO THE FOLLOWING SCHEDULE:
 - ALL PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1) SHALL BE PROVIDED TEMPORARY OR PERMANENT STABILIZATION WITH GROUND COVER AS SOON AS PRACTICABLE BUT IN ANY EVENT WITHIN 7 CALENDAR DAYS FROM THE LAST LAND-DISTURBING ACTIVITY.
 - ALL OTHER DISTURBED AREAS SHALL BE PROVIDED TEMPORARY OR PERMANENT STABILIZATION WITH GROUND COVER AS SOON AS POSSIBLE BUT IN ANY EVENT WITHIN 14 CALENDAR DAYS FROM THE LAST LAND-DISTURBING ACTIVITY

SEDIMENT & EROSION CONTROLS

IT IS THE CONTRACTORS RESPONSIBILITY TO IMPLEMENT THE EROSION AND SEDIMENT CONTROLS AS SHOWN ON THE EROSION AND SEDIMENT CONTROL PLAN. IT IS ALSO THE CONTRACTORS RESPONSIBILITY TO ENSURE THESE CONTROLS ARE PROPERLY INSTALLED, MAINTAINED AND FUNCTIONING PROPERLY TO PREVENT POLLUTED WATER FROM LEAVING THE PROJECT SITE. THE CONTRACTOR WILL ADJUST THE EROSION CONTROLS SHOWN ON THE EROSION AND SEDIMENT CONTROL PLAN AND ADD ADDITIONAL CONTROL MEASURES, AS REQUIRED, TO ENSURE THE SITE MEETS ALL FEDERAL, STATE AND LOCAL EROSION AND SEDIMENT CONTROL REQUIREMENTS. ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES BE TO THE STANDARDS OF THE NC DEPT. OF ENVIRONMENTAL MANAGEMENT - LAND QUALITY SECTION, LATEST EDITION.

STRUCTURAL PRACTICES

1. **SILT FENCE (SEDIMENT FENCE):** SILT FENCE CAN BE USED BELOW DISTURBED AREAS SUBJECT TO SHEET AND RILL EROSION. SILT FENCES SHALL BE PROVIDED WHERE SHOWN AND AS NEEDED ON THE SITE PLAN. THESE BARRIERS SHALL BE USED TO CONTAIN SEDIMENT.
2. **SILT FENCE OUTLET:** GRAVEL SILT FENCE OUTLETS SHALL BE PROVIDED WHERE SHOWN AND AS NEEDED ON THE SITE PLAN. THESE OUTLETS SHALL BE LOCATED AT ALL LOW POINTS IN A RUN OF SILT FENCE AND USED TO DISCHARGE "CLEAN WATER" OFF-SITE.
3. **DIVERSION DITCHES:** USE DIVERSION DITCHES TO CONVEY SEDIMENT LADEN RUNOFF TO EROSION CONTROL BMPS AS SHOWN ON THE PLANS.
4. **CONSTRUCTION ENTRANCE:** CONSTRUCTION TRAFFIC SHALL BE LIMITED TO STABILIZED AREAS. AT A MINIMUM, A TEMPORARY GRAVEL CONSTRUCTION ENTRANCE SHALL BE PROVIDED AS SHOWN ON THIS DRAWING. VEHICLE WHEELS SHALL BE CLEAN WHEN LEAVING THE SITE TO PREVENT THE TRACKING OF MUD ON PAVED ROADS.
5. **ROCK CHECK DAMS:** ROCK CHECK DAMS CAN BE USED TO REDUCE EROSION IN A DRAINAGE CHANNEL TO LIMIT EROSION BY REDUCING VELOCITY IN OPEN CHANNELS.

6. **SEDIMENT BASINS:** SEDIMENT BASINS WITH SKIMMERS AND POROUS Baffles ARE USED TO RETAIN SEDIMENT ON THE CONSTRUCTION SITE, AND PREVENT SEDIMENTATION IN OFF-SITE STREAMS, LAKES, AND DRAINAGE WAYS

7. **INLET PROTECTION:** HARDWARE CLOTH AND GRAVEL INLET PROTECTION DEVICES CAN BE USED PREVENT SEDIMENT FROM ENTERING YARD INLETS, GRATED STORM DRAINS OR DROP INLETS DURING CONSTRUCTION. THIS PRACTICE ALLOWS EARLY USE OF THE STORM DRAIN SYSTEM

VEGETATIVE PRACTICES

1. **TEMPORARY SEEDING:** DISTURBED AREAS THAT ARE NOT ANTICIPATED TO BE BROUGHT TO FINAL GRADE FOR A PERIOD OF MORE THAN 7 OR 14 CALENDAR DAYS MUST RECEIVE TEMPORARY SEEDING (SEE NPDES TABLE). A QUICK GROWING GRASS SPECIES, WHICH WILL PROVIDE AN EARLY COVER DURING THE SEASON IN WHICH IT IS PLANTED AND WILL NOT LATER COMPETE WITH THE PERMANENT GRASSING, SHOULD BE USED. TEMPORARY SEEDING SHALL BE PER WAKE COUNTY REQUIREMENTS.
2. **TEMPORARY GRASSING:** THE SEEDED OR SEEDED AND MULCHED AREA(S) SHALL BE ROLLED AND WATERED OR HYDOMULCHED OR OTHER SUITABLE METHODS IF REQUIRED TO ASSURE OPTIMUM GROWING CONDITIONS FOR THE ESTABLISHMENT OF A GOOD GRASS COVER.
3. **TEMPORARY REGRASSING:** IF, AFTER 14 DAYS FROM SEEDING, THE TEMPORARY GRASSED AREAS HAVE NOT ATTAINED A MINIMUM OF 75 PERCENT GOOD GRASS COVER, THE AREA WILL BE REWORKED AND ADDITIONAL SEED APPLIED SUFFICIENT TO ESTABLISH THE DESIRED VEGETATIVE COVER. RESEED AND MULCH BARE SPOTS LARGER THAN 9 SQUARE FEET.
4. **PERMANENT SEEDING:** ALL AREAS WHICH HAVE BEEN DISTURBED BY CONSTRUCTION WILL, AS A MINIMUM, BE SEEDED. PERMANENT SEEDING SHALL BE PER WAKE COUNTY REQUIREMENTS. IF GROWTH IS NOT ESTABLISHED BY FINAL PROJECT INSPECTION, CONTINUE SPECIFIED ATTENTION UNTIL THE STAND OF GRASS IS ACCEPTABLE.

MANAGEMENT STRATEGIES

1. **STOCKPILING MATERIAL:** NO EXCAVATED MATERIAL SHALL BE STOCKPILED IN SUCH A MANNER AS TO DIRECT RUNOFF DIRECTLY OFF THE PROJECT SITE INTO ANY ADJACENT WATER BODY OR STORM WATER COLLECTION FACILITY. PER NCDWQ CONSTRUCTION GENERAL PERMIT REVISED AUGUST 4, 2011 ALL EARTHEN MATERIAL STOCKPILES MUST BE LOCATED 50' FROM STORM DRAINS AND STREAMS UNLESS NO OTHER REASONABLE ALTERNATIVE IS AVAILABLE.
2. **RIP-RAP OUTLET PROTECTION:** ALL RIP-RAP SHALL BE INSTALLED WITH FILTER FABRIC BENEATH.
3. **SOIL DISPOSAL:** DISPOSE OF ALL STOCKPILED MATERIAL TO AN APPROVED PERMITTED WAKE COUNTY DISPOSAL SITE.
4. **DEWATERING:** ALL TRENCH/PIT DEWATERING MUST DISCHARGE TO AN APPROVED S&EC MEASURE OR SILT SACK PRIOR TO LEAVING THE SITE.
5. **PERMANENT EROSION CONTROL:** THE EROSION CONTROL FACILITIES OF THE PROJECT SHOULD BE DESIGNED TO MINIMIZE THE IMPACT ON THE OFFSITE FACILITIES.

NOTIFICATION OF COMBINED SELF-MONITORING AND SELF-INSPECTION FORM:

THE SEDIMENTATION POLLUTION CONTROL ACT WAS AMENDED IN 2006 TO REQUIRE THAT PERSONS RESPONSIBLE FOR LAND-DISTURBING ACTIVITIES INSPECT A PROJECT AFTER EACH PHASE OF THE PROJECT TO MAKE SURE THAT THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN IS BEING FOLLOWED. RULES DETAILING THE DOCUMENTATION OF THESE INSPECTIONS TOOK EFFECT OCTOBER 1, 2010.

TO SIMPLIFY DOCUMENTATION OF SELF-INSPECTION REPORTS AND NPDES SELF-MONITORING REPORTS, DWQ AND DEMLR DEVELOPED A COMBINED FORM. THE SELF-INSPECTION PROGRAM IS SEPARATE FROM THE WEEKLY SELF-MONITORING PROGRAM OF THE NPDES STORMWATER PERMIT FOR CONSTRUCTION ACTIVITIES. THE FOCUS OF THE SELF-INSPECTION REPORT IS THE INSTALLATION AND MAINTENANCE OF EROSION AND SEDIMENTATION CONTROL MEASURES ACCORDING TO THE APPROVED PLAN. THE INSPECTIONS SHOULD BE CONDUCTED AFTER EACH PHASE OF THE PROJECT, AND CONTINUED UNTIL PERMANENT GROUND COVER IS ESTABLISHED. THE FORM CAN BE ACCESSSED AT: [HTTP://PORTAL.NCDENR.ORG/WEB/EROSION](http://portal.ncdenr.org/web/erosion)

IF YOU HAVE QUESTIONS OR CANNOT ACCESS THE FORM, PLEASE CONTACT THE FAYETTEVILLE REGIONAL OFFICE AT (910) 433-3300.

DUST CONTROL

VEGETATIVE COVER
FOR DISTURBED AREAS NOT SUBJECT TO TRAFFIC, VEGETATION PROVIDES THE MOST PRACTICAL METHOD OF DUST CONTROL.

MULCH
WHEN PROPERLY APPLIED, MULCH OFFERS A FAST, EFFECTIVE MEANS OF CONTROLLING DUST.

MAINTENANCE
MAINTAIN DUST CONTROL MEASURES THROUGH DRY WEATHER PERIODS UNTIL ALL DISTURBED AREAS HAVE BEEN STABILIZED.

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INSPECTION AND MONITORING RECORDS FOR ACTIVITIES UNDER STORMWATER GENERAL PERMIT NCG010000 AND SELF-INSPECTION RECORDS FOR LAND DISTURBING ACTIVITIES PER G.S. 113A-54.1

Project Name	Land Quality or Local Program Project/Permit #
Approving Authority	Expiration Date, if applicable
NCG010000 Certificate of Coverage Number	Date of COC Issuance
Coverage under the NCG010000 permit must be renewed annually, if issued after April 1, 2019 until Notice of Termination is filed and approved.	

PART 1A: Rainfall Data

	Rain Amount (inches) Daily Rainfall Required. If no rain, indicate with a "zero"
M	
T	
W	
Th	
F	
Sat (Inspection Optional)	
Sun (Inspection Optional)	

Are there any site or project conditions that limit completion of inspection?
If yes, explain conditions and areas of site that were inaccessible.

PART 1B: Phase(s) of the Plan

Check ALL applicable box(es) that apply to completed & current phases	X
Initial installation of erosion and sediment control measures	
Clearing and grubbing of existing ground cover	
Completion of any grading that requires ground cover	
Completion of all land-disturbing activity, construction or development	
Permanent ground cover sufficient to restrain erosion has been established	

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PART 2A: STORMWATER PLANS AND CONTROLS: For each question below, mark the corresponding box as Yes, No or N/A. For all items marked "No", note in Part 3A the Reference letter and provide the Corrective Action and location of the deficiency, the original date noted, and the date it was noted as being corrected. NOTE: Reference letters may be used multiple times.

Reference	Part 2A: Storm Water Plans and Related Documents	Yes	No	N/A
A	Is the approval letter or certificate, COC and a copy of the NPDES Construction General Permit (CGP) on site? (Readily available electronic copy of CGP is acceptable)			
B	Is the approved plan on site and current?			
Reference	Part 2B: Stormwater Pollutant Controls	Yes	No	N/A
C	Are erosion and sediment controls that are shown on the approved plan installed and operating properly with no repairs needed?			
D	Are stormwater controls that are shown on the approved plan installed and operating properly with no repairs needed?			
E	Vehicle Tracking: Are construction entrances operating properly with no repairs needed?			
F	Soil Stabilization: Are areas of the site where construction activities have ceased been properly stabilized within the required timeframes?			
G	Are earthen stockpiles stabilized or otherwise protected from sediment loss, and located at least 50 feet away or downhill from drain inlets and surface waters?			
Reference	Part 2C: Non-Storm Water Pollutant Controls	Yes	No	N/A
H	Concrete, stucco, paint, etc. washouts: Are washouts installed, properly located, posted and operating with no repairs needed?			
I	Solid & hazardous wastes: Are trash, debris, and hazardous materials properly managed?			
J	Sanitary waste: Are portable toilets properly located and operating with no visible repairs needed?			
K	Equipment and stored fluids: Are fuels, lubricants, hydraulic fluids, etc. contained so as not to enter surface and ground waters?			
Report oil spills and the release of hazardous substances to the appropriate DEQ Regional Office via phone call or location within 24 hours of discovery. https://des.nc.gov/contact/regional-offices				

For any items listed in the section below, a full description of sedimentation is required in Part 3A. This includes, but may not be limited to: location, estimated amount of sediment that has left the site and/or entered waters, apparent causes of the sediment loss, and what corrective actions need to be taken to prevent this from recurring.

Reference	Part 2D: Sedimentation	Yes	No	N/A
L	Are sediment or other pollutants noted beyond the approved or permitted limits of disturbance?			
M	Are BMPs detected as releasing sediment or other pollutants into receiving waters?			
Report visible sedimentation into streams or wetlands to the appropriate DEQ Regional Office via phone call or email within 24 hours of discovery. https://des.nc.gov/contact/regional-offices				

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PART 3A: EROSION AND SEDIMENTATION CONTROL MEASURES: Measures must be inspected at least ONCE PER 7 CALENDAR DAYS AND WITHIN 24 HOURS OF A RAINFALL EVENT EQUAL TO OR GREATER THAN 1.0 INCH PER 24 HOUR PERIOD. Add rows as needed.

Inspected	Describe Actions Needed	Date Previous Action(s) Observed as Corrected
Measure ID or Location and Description	Corrective actions should be performed as soon as possible and before the next storm event	
Report unanticipated bypasses, or non-compliance conditions that may endanger health or the environment, to the appropriate DEQ Regional Office via phone call or email within 24 hours of discovery. https://des.nc.gov/contact/regional-offices		

PART 3B: STORMWATER DISCHARGE OUTFALLS (SDOs): SDOs must be inspected at least ONCE PER 7 CALENDAR DAYS AND WITHIN 24 HOURS OF A RAINFALL EVENT EQUAL TO OR GREATER THAN 1.0 INCH PER 24 HOUR PERIOD. Add rows as needed.

Stormwater Discharge Outfalls Inspected	Describe Actions Needed	Date Previous Action(s) Observed as Corrected
Stormwater Discharge ID or Location	Corrective actions should be performed as soon as possible and before the next storm event	
Any Visible Sedimentation in Streams, Wetlands or Outside Site Limits? (Y/N)		
Any Increase in Stream Turbidity from Discharge? (Y/N)		
Any Visible Oil sheen, floating or suspended solids or discoloration? (Y/N)		

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PART 3C: GROUND STABILIZATION: Must be recorded, at a minimum, after each phase. Add rows as needed.

Site area description and location where construction activities have temporarily or permanently ceased	Time Limit for Ground Cover (see table below)	Have stabilization measures been installed? (Y/N)	Temporary or Permanent Stabilization (T/P)	Is Ground Cover Sufficient to Restrain Erosion? (Y/N)	Original Inspection Date	Describe Actions Needed	Date Previous Action(s) Observed as Corrected
						Corrective actions should be performed as soon as possible and before the next storm event	

GROUND STABILIZATION TIMEFRAMES	
Site Area Description	Stabilization
Perimeter dikes, swales and slopes	7 Days
High Quality Water (HWQ) Zones	7 Days
Slopes Steeper than 3:1	7 Days
Slopes 3:1 to 4:1	14 Days
All other areas with slopes flatter than 4:1	14 Days
	None
	7 days for perimeter dikes, swales, slopes and HWQ zones
	14 days for slopes 10 ft or less in length and not steeper than 2:1
	10 days for Falls Lake Watershed
	7 days for perimeter dikes, swales, slopes and HWQ zones
	7 days for slopes greater than 50 ft in length
	10 days for Falls Lake Watershed
	7 days for perimeter dikes, swales, slopes and HWQ zones
	10 days for Falls Lake Watershed

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PART 3D: NEW OR REVISED MEASURES: Erosion and sedimentation control measures omitted or installed, at a minimum since the last inspection, shall be documented here or by initiating and dating each measure or practice shown on a copy of the approved erosion and sedimentation control plan. Alterations and relocations of measures shall also be documented if they significantly deviate from the approved plan. The removal of measures should also be documented. List dimensions of measures such as Sediment Basins and Dissipator Pads. Add rows as needed. Corrective actions should be included in Part 3A.

Measure ID or Location and Description	Proposed Dimensions (ft.)	Actual Dimensions (ft.)	Significant Deviation* from Plan? (Y/N)	Date measure observed as installed, altered, relocated or removed.	Installed (I) Altered (A) Relocated (R) Removed (X)

*Significant deviation means any omission, alteration or relocation of an erosion or sedimentation control measure that prevents it from performing as intended.

PART 4: Signature of Inspector

Financially Responsible Party (FRP) / Permittee	Name	Employer	County
INSPECTOR			
Inspector Type (Mark)	X	Address	
FRP/Permittee			
Agent/Designee	Phone Number	Email Address	
By this signature, I certify in accordance with the NCG010000 permit & G.S. 113A-54.1 that this report is accurate and complete to the best of my knowledge.			
Financially Responsible Party / Permittee or Agent / Designee		Date & Time of Inspection	

SEAL

206 S. Fidelity Avenue
Fayetteville, NC 27508
T (919) 562-5849
F (919) 562-5843

LAKESIDE SELF-STORAGE - HARNETT COUNTY
EROSION CONTROL DETAILS I

206 S. Fidelity Avenue
Fayetteville, NC 27508
T (919) 562-5849
F (919) 562-5843

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Curry
ENGINEERING
EC-03

7/20/2022

1. UNIFORMLY GRADE A SHALLOW DEPRESSION APPROACHING THE INLET.
2. DRIVE 5-FOOT STEEL POSTS 2 FEET INTO THE GROUND SURROUNDING THE INLET. SPACE POSTS EVENLY AROUND THE PERIMETER OF THE INLET, A MAXIMUM OF 4 FEET APART.
3. SURROUND THE POSTS WITH WIRE MESH HARDWARE CLOTH. SECURE THE WIRE MESH TO THE STEEL POSTS AT THE TOP, MIDDLE, AND BOTTOM. PLACING A 2-FOOT FLAP OF THE WIRE MESH UNDER THE GRAVEL FOR ANCHORING IS RECOMMENDED.
4. PLACE CLEAN GRAVEL (NC DOT #5 OR #57 STONE) ON A 2:1 SLOPE WITH A HEIGHT OF 16 INCHES AROUND THE WIRE, AND SMOOTH TO AN EVEN GRADE.
5. ONCE THE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED, REMOVE ACCUMULATED SEDIMENT, AND ESTABLISH FINAL GRADING ELEVATIONS.
6. COMPACT THE AREA PROPERLY AND STABILIZED IT WITH GROUNDCOVER.

INSPECT INLETS DAILY AND AFTER EACH SIGNIFICANT ($\frac{1}{2}$ INCH OR GREATER) RAINFALL EVENT. CLEAR THE MESH WIRE OF ANY DEBRIS OR OTHER OBJECTS TO PROVIDE ADEQUATE FLOW FOR SUBSEQUENT RAINS. TAKE CARE NOT TO DAMAGE OR UNDERCUT THE WIRE MESH DURING SEDIMENT REMOVAL. REPLACE STONE AS NEEDED.



1. PLACE STONE TO THE LINES AND DIMENSIONS SHOWN IN THE PLAN ON A FILTER FABRIC FOUNDATION.
2. MAKE THE CENTER STONE SECTION AT LEAST 9 INCHES BELOW NATURAL GROUND LEVEL WHERE THE DAM ABUTS THE DITCH BANKS.
3. EXTEND STONE AT LEAST 1.5 FEET BEYOND THE DITCH BANK TO KEEP WATER FROM CUTTING AROUND THE ENDS OF THE CHECK DAM.
4. SET SPACING BETWEEN DAMS TO ASSURE THAT THE ELEVATION AT THE TOP OF THE LOWER DAM IS THE SAME AS THE ELEVATION OF THE UPPER DAM.
5. PROTECT THE CHANNEL AROUND THE LOWEST CHECK DAM FROM HEAVY FLOW THAT COULD CAUSE EROSION.
6. MAKE SURE THAT THE CHANNEL REACH ABOVE THE MOST UPSTREAM DAM IS STABLE.
7. REMEMBER THAT OTHER DAMS AND THE CHECK DAMS AT THE CULVERT ENTRANCES BELOW THE CHECK DAMS ARE NOT SUBJECT TO DAMAGE OR BLOCKAGE FROM DISPLACED STONES.

INSPECT CHECK DAMS AND CHANNELS DAILY AND REPAIR, AS NECESSARY FOLLOWING EVERY RAINFALL EVENT OF GREATER THAN 1/2" WITHIN A 24HR PERIOD. CLEAN OUT SEDIMENT, STRAW, LIMBS, OR OTHER DEBRIS THAT COULD CLOG THE CHANNEL WHEN NEEDED.

ANTICIPATE SUBMERGENCE AND DEPOSITION ABOVE THE CHECK DAM AND EROSION FROM HIGH FLOWS AROUND THE EDGES OF THE DAM. CORRECT ALL DAMAGE IMMEDIATELY. IF SIGNIFICANT EROSION OCCURS BETWEEN DAMS, ADDITIONAL MEASURES CAN BE TAKEN SUCH AS, INSTALLING A PROTECTIVE RIPRAP LINER IN THAT PORTION OF THE CHANNEL (PRACTICE 6.31, RIPRAP—LINE AND PAVED CHANNELS).

REMOVE SEDIMENT ACCUMULATED BEHIND THE DAMS AS NEEDED TO PREVENT DAMAGE TO CHANNEL VEGETATION, ALLOW THE CHANNEL TO DRAIN THROUGH THE STONE CHECK DAM, AND PREVENT LARGE FLOWS FROM CARRYING SEDIMENT OVER THE DAM. ADD STONES TO DAMS AS NEEDED TO MAINTAIN DESIGN HEIGHT AND CROSS SECTION.



1. REMOVE AND PROPERLY DISPOSE OF ALL TREES, BRUSH, STUMPS, AND OTHER OBJECTABLE MATERIAL.
2. ENSURE THAT THE MINIMUM CONSTRUCTED CROSS SECTION MEETS ALL DESIGN REQUIREMENTS.
3. ENSURE THAT THE TOP OF THE DIKE IS NOT LOWER AT ANY POINT THAN THE DESIGN ELEVATION PLUS THE SPECIFIED SETTLEMENT.
4. PROVIDE SUFFICIENT ROOM AROUND DIVERSIONS TO PERMIT MACHINE REGRADING AND CLEANOUT.
5. VEGETATE THE RIDGE AND CHANNEL IMMEDIATELY AFTER COMPLETION, UNLESS IT WILL REMAIN IN PLACE LESS THAN 30 WORKING DAYS.

1. DIVERSION TO BE USED TO CONVEY SEDIMENT LADEN WATER INTO AN APPROVED EROSION AND SEDIMENT CONTROL BMP.
2. IMMEDIATELY LINE AND STABILIZE BEFORE ANY DOWNSLOPE GRADING BEGINS (STABILIZATION MUST OCCUR BEFORE ISSUANCE OF A CERTIFICATE OF COMPLIANCE). STABILIZATION METHOD IS BASED ON VELOCITY OF DRAINAGE.
3. DIVERSIONS SHOULD ONLY BE USED FOR DRAINAGE AREAS 5 ACRES OR LESS.
4. MINIMUM LONGITUDINAL SLOPE OF DIVERSION SHALL BE 1%.
5. DIVERSION DITCHES ARE FINAL SLOTTED SETTLEMENT. CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING DITCHES IN FIELD TO MEET DESIGN CRITERIA IF SETTLEMENT OCCURS.
6. REFER TO SKIMMER BASIN DETAIL FOR DIVERSION DITCH/SKIMMER BASIN ENTRANCE.

INSPECT TEMPORARY DIVERSIONS DAILY AND REPAIR, AS NECESSARY AND FOLLOWING EVERY RAINFALL EVENT OF GREATER THAN 1/2" WITHIN A 24HR PERIOD. IMMEDIATELY REMOVE SEDIMENT FROM THE FLOW AREA AND REPAIR THE DIVERSION RIDGE. CAREFULLY CHECK OUTLETS AND MAKE TIMELY REPAIRS AS NEEDED. WHEN THE AREA PROTECTED IS PERMANENTLY STABILIZED, MOVE THE RIDGE AND CHANNEL TO BLEND WITH THE NATURAL GROUND LEVEL AND APPROPRIATELY INSTALL IT.



2 6 HORSESHOE INLET PROTECTION
EC-04 SCALE: NTS



1. ALL PARTIALLY COMPLETED STORM DRAINS SHALL BE PROTECTED AT THE END OF EACH DAY IN ACCORDANCE WITH THESE DETAILS.
2. THIS IS NOT AN APPROVED NC METHOD OF INLET PROTECTION AND WILL ONLY BE USED TO PROTECT THE CONTRACTORS WORK OVERNIGHT. LONGER PERIODS OF PROTECTION WILL REQUIRE THE STONE INLET PROTECTION DETAIL PER THE NCDENR ESCPDM.



1. ENSURE THAT THE SUBGRADE FOR THE FILTER AND RIPRAP FOLLOWS THE REQUIRED LINES AND GRADES SHOWN IN THE PLAN. COMPACT ANY FILL REQUIRED IN THE SUBGRADE TO THE DENSITY OF THE SURROUNDING UNDISTURBED MATERIAL. LOW AREAS IN THE SUBGRADE ON UNDISTURBED SOIL MAY ALSO BE FILLED BY INCREASING THE RIPRAP THICKNESS.
2. THE RIPRAP AND GRAVEL FILTER MUST CONFORM TO THE SPECIFIED GRADING LIMITS SHOWN ON THE PLANS.
3. FILTER CLOTH, WHEN USED, MUST MEET DESIGN REQUIREMENTS AND BE PROPERLY PROTECTED FROM PUNCHING OR TEARING DURING INSTALLATION. REPAIR ANY DAMAGE BY REMOVING THE RIPRAP AND PLACING ANOTHER PIECE OF FILTER CLOTH OVER THE DAMAGED AREA. ALL CONNECTING JOINTS SHOULD OVERLAP SO THE TOP LAYER IS ABOVE THE DOWNSTREAM LAYER A MINIMUM OF 1 FOOT. IF THE DAMAGE IS EXTENSIVE, REPLACE THE ENTIRE FILTER CLOTH.
4. RIPRAP MAY BE PLACED BY EQUIPMENT, BUT TAKE CARE TO AVOID DAMAGING THE FILTER.
5. THE MINIMUM THICKNESS OF THE RIPRAP SHOULD BE 1.5 TIMES THE MAXIMUM STONE DIAMETER.
6. RIPRAP MAY BE FIELD STONE OR ROUGH QUARRY STONE. IT SHOULD BE HARD, ANGULAR, HIGHLY WEATHER-RESISTANT AND WELL GRADED.
7. CONSTRUCT THE APRON ON ZERO GRADE WITH NO OVERFILL AT THE END. MAKE THE TOP OF THE RIPRAP AT THE DOWNSTREAM END LEVEL WITH THE RECEIVING AREA OR SLIGHTLY BELOW IT.
8. ENSURE THAT THE APRON IS PROPERLY ALIGNED WITH THE RECEIVING STREAM AND PREFERABLY STRAIGHT THROUGHOUT ITS LENGTH. IF A CURVE IS NEEDED TO FIT SITE CONDITIONS, PLACE IT IN THE UPPER SECTION OF THE APRON.
9. IMMEDIATELY AFTER CONSTRUCTION, STABILIZE ALL DISTURBED AREAS WITH VEGETATION

INSPECT RIP-RAP OUTLET STRUCTURES DAILY AND AFTER SIGNIFICANT (1/2 INCH OR GREATER) RAINFALL EVENTS TO SEE IF ANY EROSION AROUND OR BELOW THE RIPRAP HAS TAKEN PLACE. OR IF STONES HAVE BEEN DISLODGED. IMMEDIATELY MAKE ALL NEEDED REPAIRS TO PREVENT FURTHER DAMAGE

- 1) L = THE LENGTH OF THE RIPRAP APRON.
- 2) d = 1.5 TIMES THE MAXIMUM STONE DIAMETER BUT NOT LESS THAN 6" (inches).
- 3) IN A WELL-DEFINED CHANNEL EXTEND THE APRON UP THE CHANNEL BANKS TO AN ELEVATION OF 6" (inches) ABOVE THE MAXIMUM TAILWATER DEPTH OR TO THE TOP OF THE BANK, WHICHEVER IS LESS.
- 4) A FILTER BLANKET OR FILTER FABRIC SHOULD BE INSTALLED BETWEEN THE RIPRAP AND SOIL FOUNDATION.

SEAL

026970

7/20/2022

REVIEWS	
1	10/23/2021
2	2/11/2022
3	5/16/2022
4	5/27/2022
HARNETT COUNTY COMMENTS	
HARNETT & ANGLES EDC COMMENTS	
NGDOT COMMENTS #1	
NGDOT COMMENTS #2	
DATE: 7/20/21	
HORIZ SCALE: NONE	
EFILE NO. 00000 002	
ORIG. SHEET SIZE: 24 x 36	

LAKESIDE SELF-STORAGE - HARNETT COUNTY
EROSION CONTROL DETAILS II

205 S. Fuquay Avenue
Fuquay-Varina NC 27526

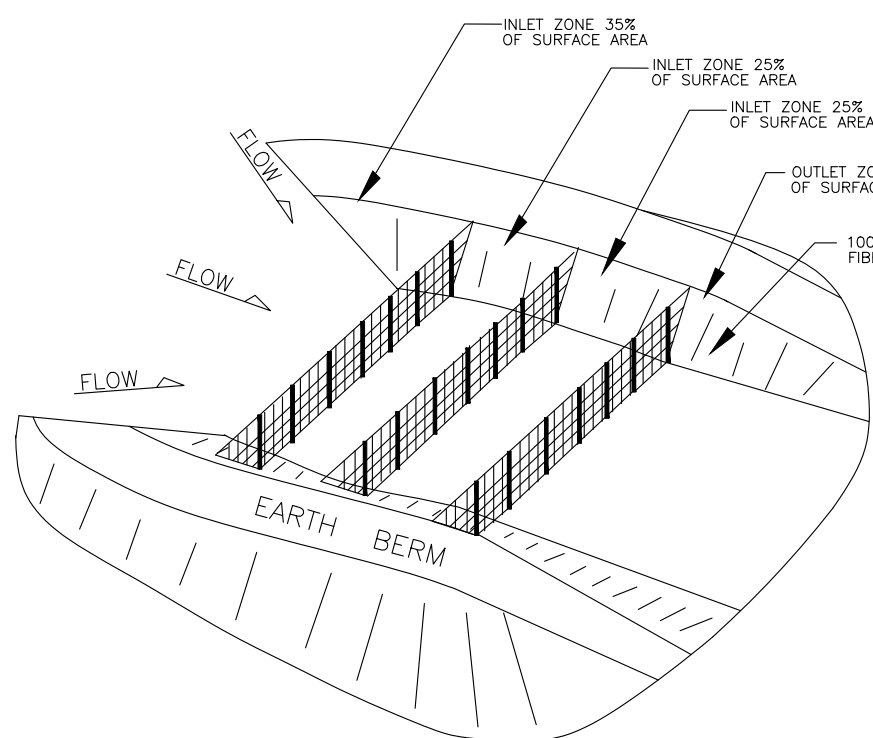
T (919) 552-0849
F (919) 552-2043
205 S. Fuquay Avenue
Fuquay-Varina, NC 27526



CLIC NO. D 0700

The logo for Curry Engineering, featuring the word "Curry" in a large, black, serif font, and the word "ENGINEERING" in a smaller, black, sans-serif font, positioned below "Curry". A red vertical bar is located to the right of the word "ENGINEERING".

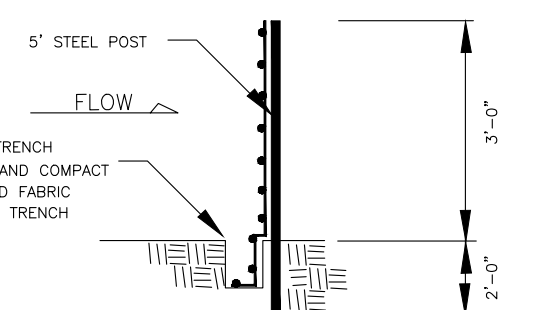
EC-04



1. DRIVE 5" STEEL POST AT LEAST 24" INTO SOLID GROUND.
2. USE STAPLES 1' APART HORIZONTALLY AND VERTICALLY TO ATTACH THE FILTER FABRIC TO THE WIRE FENCE.
3. MINIMUM BAFFLE SPACING IS 10'.
4. THE FLOOR OF THE BASIN IN THE OUTLET ZONE AND BERMS SHOULD BE SEEDED IMMEDIATELY AFTER THE BASIN IS CONSTRUCTED.
5. REFER TO NCSCPD SECTION #6.65 FOR ADDITIONAL SPECIFICATIONS

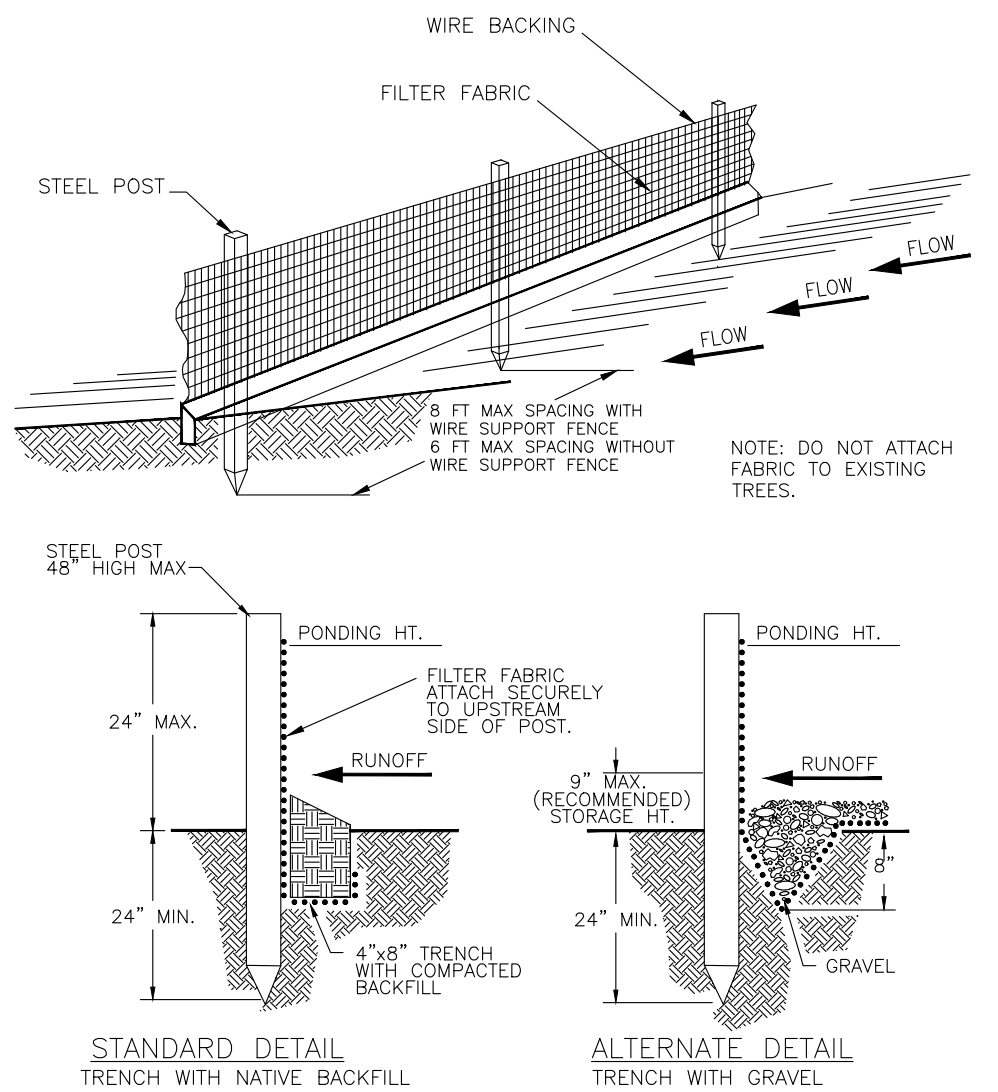
AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED, REMOVE ALL BAFFLE MATERIALS AND UNSTABLE SEDIMENT DEPOSITS, BRING THE AREA TO GRADE, AND STABILIZE IT.

1. GRADE THE BASIN SO THAT THE BOTTOM IS LEVEL FRONT TO BACK AND SIDE TO SIDE.
2. INSTALL POSTS OR SAW HORNS ACROSS THE WIDTH OF THE SEDIMENT TRAP (PRACTICE 6.62, SEDIMENT FENCE).
3. STEEL POSTS SHOULD BE SPACED AT A DEPTH OF 24 INCHES, SPACED A MAXIMUM OF 10 FEET APART AND INSTALLED UP THE SIDES OF THE BASIN AS WELL. THE TOP OF THE FABRIC SHOULD BE 6 INCHES HIGHER THAN THE INVERT OF THE SPILLWAYS. TOPS OF BAFFLES SHOULD BE 2 INCHES LOWER THAN THE TOP OF THE BERMS.
4. INSTALL AT LEAST THREE ROWS OF BAFFLES BETWEEN THE INLET AND OUTLET DISCHARGE POINT. BASINS LESS THAN 20 FEET IN LENGTH MAY USE 2 BAFFLES.
5. WHEN USING POSTS, ADD SUPPORT WIRE OR ROPE ACROSS THE TOP OF THE MEASURE TO PREVENT SAGGING.
6. WRAP POROUS MATERIAL, LIKE JUTE BACKED BY COIR MATERIAL, OVER A SAWHORE OR THE TOP WIRE. HAMMER REBAR INTO THE SAWHORE LEGS FOR ANCHORING. THE FABRIC SHOULD HAVE FIVE TO TEN PERCENT OPENINGS IN THE WEAVE. ATTACH FABRIC TO A ROPE OR A SUPPORT STRUCTURE WITH ZIP TIES, WIRE, OR STAPLES.
7. THE BOTTOM AND SIDES OF THE FABRIC SHOULD BE ANCHORED IN A TRENCH OR PINNED WITH 8-INCH EROSION CONTROL MATTING STAPLES.
8. DO NOT PULL THE FABRIC, BUT USE A CONTINUOUS PILE ACROSS THE BASIN.



2 POROUS BAFFLE
EC-05 SCALE: NTS

1 SKIMMER SEDIMENT BASIN
C-05 SCALE: NTS

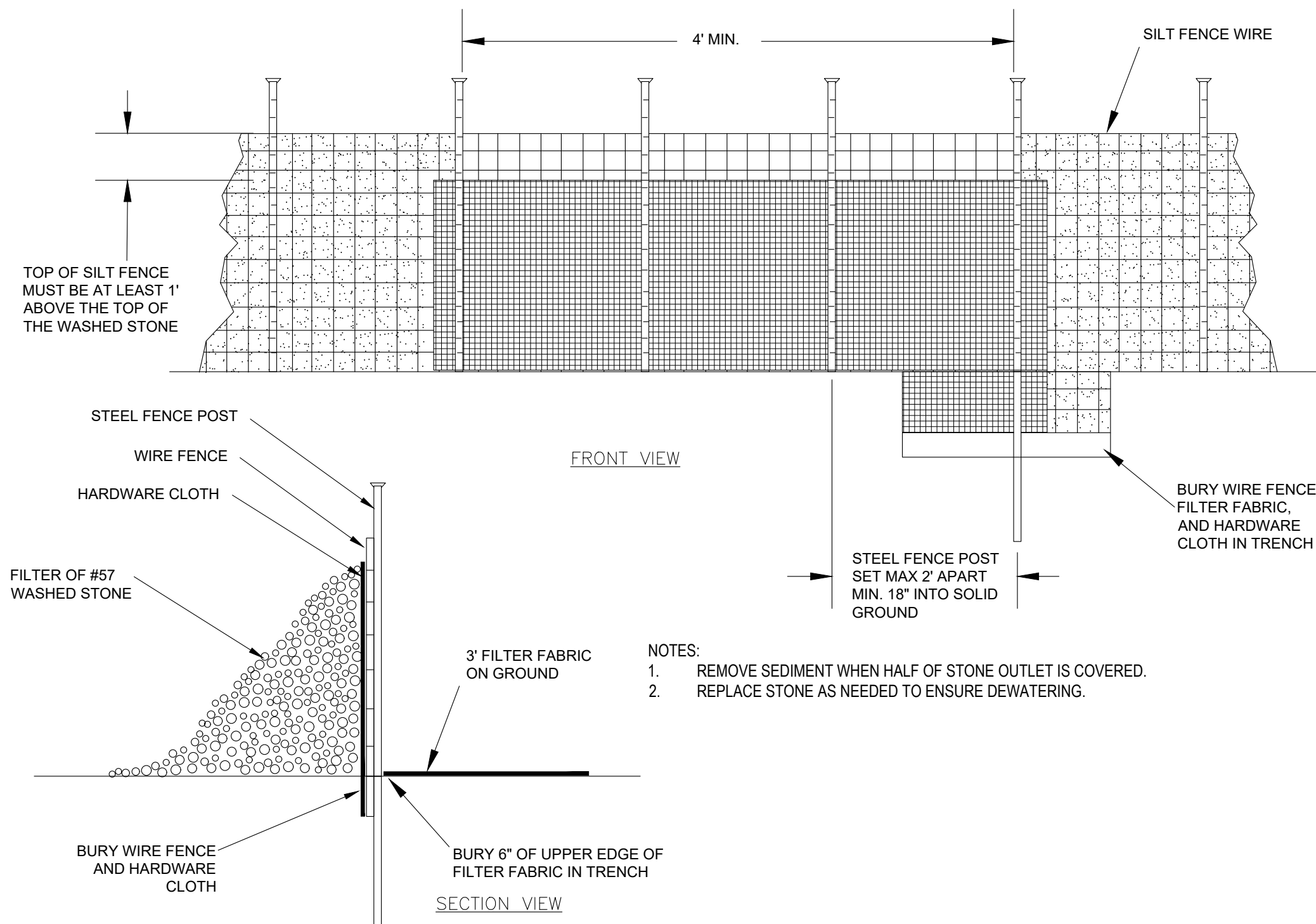


4 STANDARD CONSTRUCTION ENTRANCE
EC-05 SCALE: NTS

DETAIL REFERENCE 6.06 NC ESCPDM

INSPECT SEDIMENT FENCES DAILY AND AFTER EACH RAINFALL EVENT. MAKE ANY REQUIRED REPAIRS IMMEDIATELY. SHOULD THE FABRIC OF A SEDIMENT FENCE COLLAPSE, TEAR, DECOMPOSE OR BECOME INEFFECTIVE, REPLACE IT PROMPTLY. REMOVE SEDIMENT DEPOSITS AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON THE FENCE. TAKE CARE TO AVOID UNDERMINING THE FENCE DURING CLEANOUT. REMOVE ALL FENCING MATERIALS AND UNSTABLE SEDIMENT DEPOSITS AND BRING THE AREA TO GRADE AND STABILIZE IT AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

5 STANDARD TEMPORARY SILT FENCE
FC-05 SCALE: NTS



6 STANDARD SILT FENCE OUTLET
EC-05 SCALE: NTS

Diagram illustrating the assembly of a flexible joint (radiator hose) to a barrel pipe. The diagram shows the flexible joint connected to the barrel pipe, with labels indicating the 'FLEXIBLE JOINT (RADIATOR HOSE)', 'OUTLET END CONNECTION', 'FLOAT', 'SCREEN ACCESSIBLE THROUGH DOOR', and 'BARREL PIPE LONGER THAN SHOWN'.

DETAIL REFERENCE 6.64 NC ESCPDM

3 DEWATERING SKIMMER
EC-05 SCALE: NTS

LAKESIDE SELF-STORAGE - HARNETT COUNTY
EROSION CONTROL DETAILS III

T (919) 552-0849
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205 S. Fuquay Avenue
Fuquay-Varina, NC 27526



EC-05

U.S. PUBLIC LAW 86-360

Donald L. Curry, Jr.

7/29/2022

GROUND STABILIZATION AND MATERIALS HANDLING PRACTICES FOR COMPLIANCE WITH THE NCG01 CONSTRUCTION GENERAL PERMIT
Implementing the details and specifications on this plan sheet will result in the construction activity being considered compliant with the Ground Stabilization and Materials Handling sections of the NCG01 Construction General Permit (Sections E and F, respectively). The permittee shall comply with the Erosion and Sediment Control plan approved by the delegated authority having jurisdiction. All details and specifications shown on this sheet may not apply depending on site conditions and the delegated authority having jurisdiction.

SECTION E: GROUND STABILIZATION		
Required Ground Stabilization Timeframes		
Site Area Description	Stabilize within this many calendar days after ceasing land disturbance	Timeframe variations
(a) Perimeter dikes, swales, ditches, and perimeter slopes	7	None
(b) High Quality Water (H2O) Zones	7	None
(c) Slopes steeper than 3:1	7	If slopes are 10' or less in length and are not steeper than 2:1, 14 days are allowed. - 7 days for slopes greater than 50' in length and with slopes steeper than 4:1 - 7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones - 10 days for Falls Lake Watershed
(d) Slopes 3:1 to 4:1	14	- 7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones - 10 days for Falls Lake Watershed unless there is zero slope
(e) Areas with slopes flatter than 4:1	14	

Note: After the permanent cessation of construction activities, any areas with temporary ground stabilization shall be converted to permanent ground stabilization as soon as practicable but in no case longer than 90 calendar days after the last land disturbing activity. Temporary ground stabilization shall be maintained in a manner to render the surface stable against accelerated erosion until permanent ground stabilization is achieved.

GROUND STABILIZATION SPECIFICATION		
Stabilize the ground sufficiently so that rain will not dislodge the soil. Use one of the techniques in the table below:		
Temporary Stabilization	Permanent Stabilization	
- Temporary grass seed covered with straw or other mulches and tackifiers - Hydroseeding - Roll-on erosion control products with or without temporary grass seed - Appropriately applied straw or other mulch - Plastic sheeting	- Permanent grass seed covered with straw or other mulches and tackifiers - Geotextile fabrics such as permanent soil reinforcement matting - Hydroseeding - Shrubs or other permanent plantings covered with mulch - Uniform and evenly distributed ground cover sufficient to restrain erosion - Structural methods such as concrete, asphalt or retaining walls - Roll-on erosion control products with grass seed	

- POLYACRYLAMIDES (PAMS) AND FLOCCULANTS**
- Select flocculants that are appropriate for the soils being exposed during construction, selecting from the NC DWR List of Approved PAMS/Flocculants.
 - Apply flocculants at or before the inlets to Erosion and Sediment Control Measures.
 - Apply flocculants at the concentrations specified in the NC DWR List of Approved PAMS/Flocculants and in accordance with the manufacturer's instructions.
 - Provide ponding area for containment of treated Stormwater before discharging offsite.
 - Store flocculants in leak-proof containers that are kept under storm-resistant cover or surrounded by secondary containment structures.

- EQUIPMENT AND VEHICLE MAINTENANCE**
- Maintain vehicles and equipment to prevent discharge of fluids.
 - Provide drip pans under any stored equipment.
 - Identify leaks and repair as soon as feasible, or remove leaking equipment from the project.
 - Collect all spent fluids, store in separate containers and properly dispose as hazardous waste (recycle when possible).
 - Remove leaking vehicles and construction equipment from service until the problem has been corrected.
 - Bring used fuels, lubricants, coolants, hydraulic fluids and other petroleum products to a recycling or disposal center that handles these materials.

- LITTER, BUILDING MATERIAL AND LAND CLEARING WASTE**
- Never bury or burn waste. Place litter and debris in approved waste containers.
 - Provide a sufficient number and size of waste containers (e.g. dumpster, trash receptacle) on site to contain construction and domestic wastes.
 - Locate waste containers at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
 - Locate waste containers on areas that do not receive substantial amounts of runoff from upland areas and does not drain directly to a storm drain, stream or wetland.
 - Cover waste containers at the end of each workday and before storm events or provide secondary containment. Repair or replace damaged waste containers.
 - Anchor all lightweight items in waste containers during times of high winds.
 - Empty waste containers as needed to prevent overflow. Clean up immediately if containers overflow.
 - Dispose waste off-site at an approved disposal facility.
 - On business days, clean up and dispose of waste in designated waste containers.

- PAINT AND OTHER LIQUID WASTE**
- Do not dump paint and other liquid waste into storm drains, streams or wetlands.
 - Locate paint washouts at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
 - Contain liquid wastes in a controlled area.
 - Containment must be labeled, sized and placed appropriately for the needs of site.
 - Prevent the discharge of soaps, solvents, detergents and other liquid wastes from construction sites.

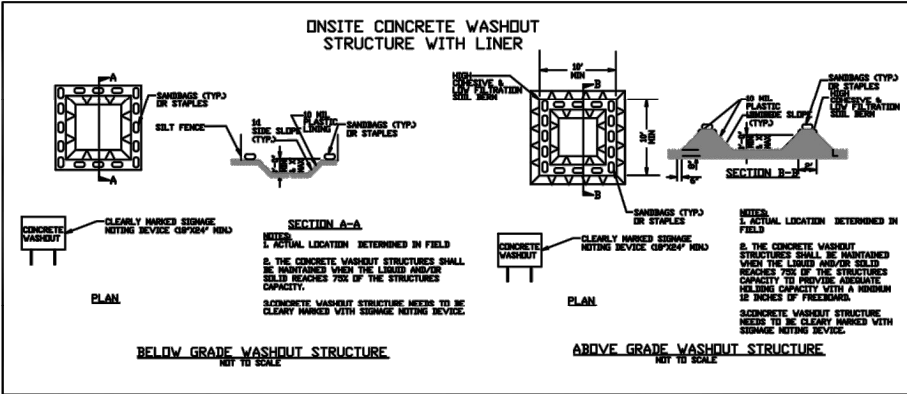
- PORTABLE TOILETS**
- Install portable toilets on level ground, at least 50 feet away from storm drains, streams or wetlands unless there is no alternative reasonably available. If 50 foot offset is not attainable, provide relocation of portable toilet behind silt fence or place on a gravel pad and surround with sand bags.
 - Provide staking or anchoring of portable toilets during periods of high winds or in high foot traffic areas.
 - Monitor portable toilets for leaking and properly dispose of any leaked material. Utilize a licensed sanitary waste hauler to remove leaking portable toilets and replace with properly operating unit.

- EARTHEN STOCKPILE MANAGEMENT**
- Show stockpile locations on plans. Locate earthen-material stockpile areas at least 50 feet away from storm drain inlets, sediment basins, perimeter sediment controls and surface waters unless it can be shown no other alternatives are reasonably available.
 - Protect stockpile with silt fence installed along toe of slope with a minimum offset of five feet from the toe of stockpile.
 - Provide stable stone access point when feasible.
 - Stabilize stockpile within the timeframes provided on this sheet and in accordance with the approved plan and any additional requirements. Soil stabilization is defined as vegetative, physical or chemical coverage techniques that will restrain accelerated erosion on disturbed soils for temporary or permanent control needs.



NCG01 GROUND STABILIZATION AND MATERIALS HANDLING

EFFECTIVE: 04/01/19



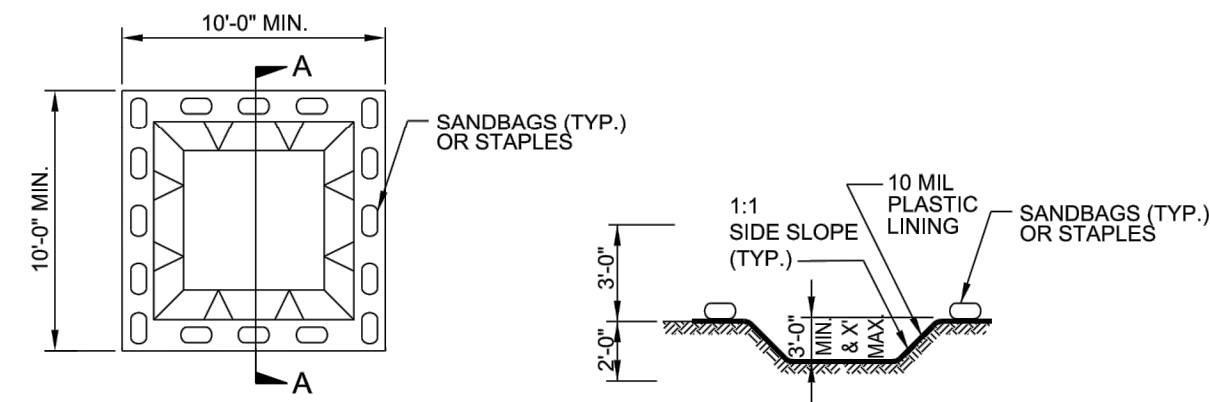
- CONCRETE WASHOUTS**
- Do not discharge concrete or cement slurry from the site.
 - Dispose of, or recycle/strengthen, hardened concrete residue in accordance with local and state solid waste regulations and at an approved facility.
 - Locate waste containers on areas that do not receive substantial amounts of runoff from upland areas and does not drain directly to a storm drain, stream or wetland.
 - Cover waste containers at the end of each workday and before storm events or provide secondary containment. Repair or replace damaged waste containers.
 - Anchor all lightweight items in waste containers during times of high winds.
 - Empty waste containers as needed to prevent overflow. Clean up immediately if containers overflow.
 - Dispose waste off-site at an approved disposal facility.
 - On business days, clean up and dispose of waste in designated waste containers.
- PAINT AND OTHER LIQUID WASTE**
- Do not dump paint and other liquid waste into storm drains, streams or wetlands.
 - Locate paint washouts at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
 - Contain liquid wastes in a controlled area.
 - Containment must be labeled, sized and placed appropriately for the needs of site.
 - Prevent the discharge of soaps, solvents, detergents and other liquid wastes from construction sites.
- PORTABLE TOILETS**
- Install portable toilets on level ground, at least 50 feet away from storm drains, streams or wetlands unless there is no alternative reasonably available. If 50 foot offset is not attainable, provide relocation of portable toilet behind silt fence or place on a gravel pad and surround with sand bags.
 - Provide staking or anchoring of portable toilets during periods of high winds or in high foot traffic areas.
 - Monitor portable toilets for leaking and properly dispose of any leaked material. Utilize a licensed sanitary waste hauler to remove leaking portable toilets and replace with properly operating unit.

- HERBICIDES, PESTICIDES AND RODENTICIDES**
- Store and apply herbicides, pesticides and rodenticides in accordance with label restrictions.
 - Store herbicides, pesticides and rodenticides in their original containers with the label, which lists directions for use, ingredients and first aid steps in case of accidental poisoning.
 - Do not store herbicides, pesticides and rodenticides in areas where flooding is possible or where they may spill or leak into wells, stormwater drains, ground water or surface water. If a spill occurs, clean area immediately.
 - Do not stockpile these materials on-site.

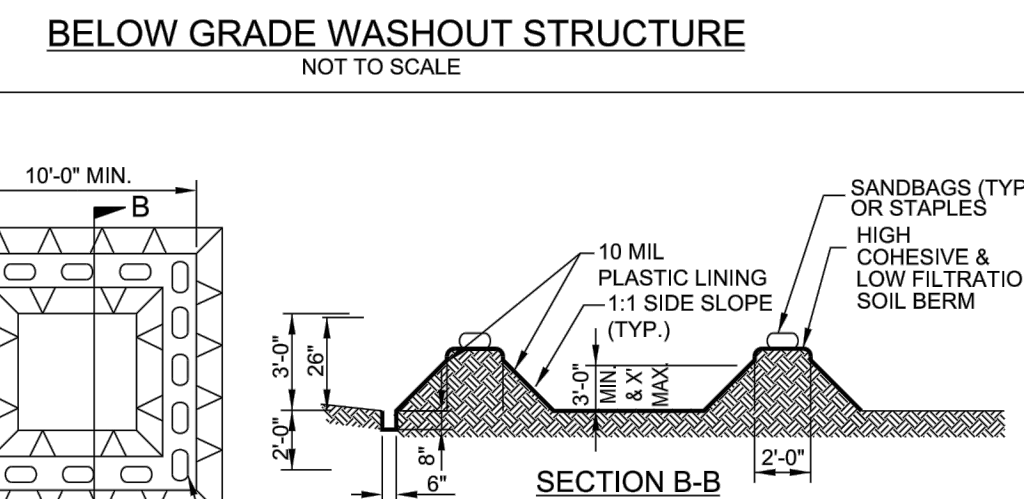
- HAZARDOUS AND TOXIC WASTE**
- Create designated hazardous waste collection areas on-site.
 - Place hazardous waste containers under cover or in secondary containment.
 - Do not store hazardous chemicals, drums or bagged materials directly on the ground.

WITH LINER, NO GRAVEL APPROACH

ONSITE CONCRETE WASHOUT STRUCTURE WITH LINER



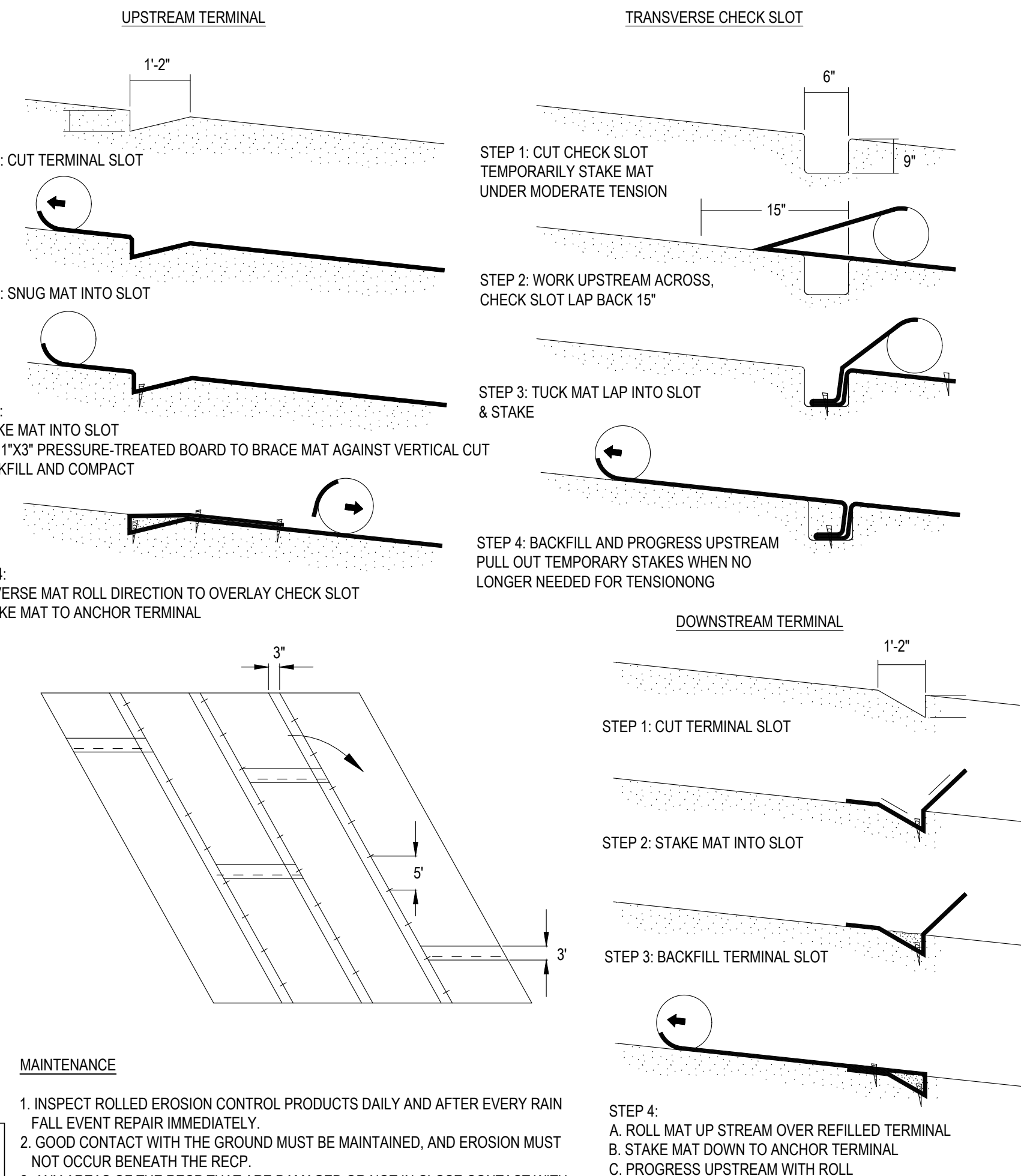
- SECTION A-A**
- NOTES:**
- ACTUAL LOCATION DETERMINED IN FIELD
 - THE CONCRETE WASHOUT STRUCTURES SHALL BE MAINTAINED WHEN THE LIQUID AND/OR SOLID REACHES 75% OF THE STRUCTURES CAPACITY.
 - CONCRETE WASHOUT STRUCTURE NEEDS TO BE CLEARLY MARKED WITH SIGNAGE NOTING DEVICE.



- SECTION B-B**
- NOTES:**
- ACTUAL LOCATION DETERMINED IN FIELD
 - THE CONCRETE WASHOUT STRUCTURES SHALL BE MAINTAINED WHEN THE LIQUID AND/OR SOLID REACHES 75% OF THE STRUCTURES CAPACITY TO PROVIDE ADEQUATE HOLDING CAPACITY WITH A MINIMUM 12 INCHES OF FREEBOARD.
 - CONCRETE WASHOUT STRUCTURE NEEDS TO BE CLEARLY MARKED WITH SIGNAGE NOTING DEVICE.

ABOVE GRADE WASHOUT STRUCTURE

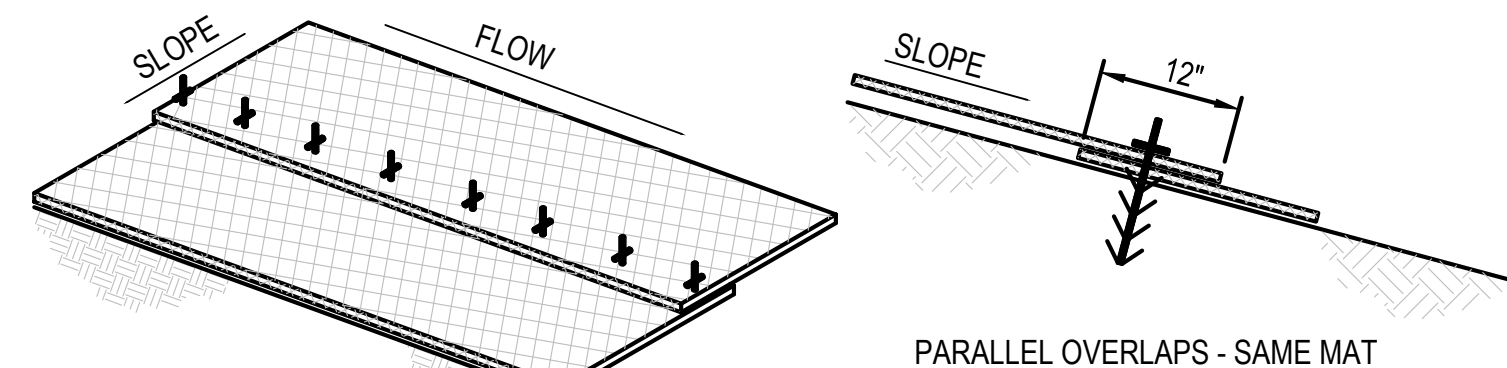
PRELIMINARY DESIGN
NOT FOR CONSTRUCTION



- MAINTENANCE**
- INSPECT ROLLED EROSION CONTROL PRODUCTS DAILY AND AFTER EVERY RAIN
 - GOOD CONTACT WITH THE GROUND MUST BE MAINTAINED, AND EROSION MUST NOT OCCUR BENEATH THE RECP.
 - ANY AREAS OF THE RECP THAT ARE DAMAGED OR NOT IN CLOSE CONTACT WITH THE GROUND SHALL BE REPAIRED AND STAPLED.
 - IF EROSION OCCURS DUE TO POORLY CONTROLLED DRAINAGE, THE PROBLEM SHALL BE FIXED AND THE ERODED AREA PROTECTED.
 - MONITOR AND REPAIR THE RECP AS NECESSARY UNTIL GROUND COVER IS ESTABLISHED.

ROLLED EROSION CONTROL PRODUCT
DETAIL REFERENCE 6.17 NC ESCPDM

INSTALLATION OF EROSION CONTROL BLANKET ON SLOPES



- NOTES**
- INSTALLATION OF EROSION CONTROL MAT/BLANKETS SHALL COMPLY WITH MANUFACTURER'S SPECIFICATIONS.
 - TEMPORARY EROSION CONTROL BLANKET USE ONE 9" BIO-STAKE OR SOD PIN (SEE DETAIL).
 - PERMANENT EROSION CONTROL BLANKETS USE 12" SOD PIN (SEE DETAIL)

EROSION CONTROL MAT

PART III SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION A: SELF-INSPECTION
Self-inspections are required during normal business hours in accordance with the table below. When adverse weather or site conditions would cause the safety of the inspection personnel to be in jeopardy, the inspection may be delayed until the next business day on which it is safe to perform the inspection. In addition, when a storm event of equal to or greater than 1.0 inch occurs outside of normal business hours, the self-inspection shall be performed upon the commencement of the next business day. Any time when inspections were delayed shall be noted in the Inspection Record.

Inspect	Frequency (during normal business hours)	Inspection records must include:
(1) Rain gauge maintained in good working order	Daily	Daily rainfall amounts. If no daily rain gauge observations are made during weekend or holiday periods, and no individual day rainfall information is available, record the cumulative rain measurement for those unattended days (and this will determine if a site inspection is needed). Days on which no rainfall occurred shall be recorded as "zero". The permittee may use another rain-monitoring device approved by the Division.
(2) E&S Measures	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	1. Identification of the measures inspected. 2. Date and time of the inspection. 3. Name of the person performing the inspection. 4. Indication of whether the measures were operating properly. 5. Description of maintenance needs for the measure. 6. Description, evidence, and date of corrective actions taken.
(3) Stormwater discharge outfalls (SDCO)	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	1. Identification of the discharge outfalls inspected. 2. Date and time of the inspection. 3. Name of the person performing the inspection. 4. Evidence of indicators of stormwater pollution such as oil shims, floating or suspended solids or discoloration. 5. Indication of visible sediment leaving the site. 6. Description, evidence, and date of corrective actions taken.
(4) Perimeter of site	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	If visible sedimentation is found outside site limits, then a record of the following shall be made: 1. Actions taken to clean up or stabilize the sediment that has left the site limits. 2. Description, evidence, and date of corrective actions taken, and 3. An explanation as to the actions taken to control future releases.
(5) Streams or wetlands on-site or off-site (where accessible)	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	If the stream or wetland has increased visible sedimentation or a stream has visible increased turbidity from the construction activity, then a record of the following shall be made: 1. Description, evidence and date of corrective actions taken. 2. Records of the required reports to the appropriate Division Regional Office per Part III, Section C, Item (2)(d) of this permit.
(6) Ground stabilization measures	After each phase of grading	1. The phase of grading (installation of perimeter E&S measures, clearing and grubbing, installation of storm drainage facilities, completion of all land-disturbing activity, construction or redevelopment, permanent ground cover). 2. Documentation that the required ground stabilization measures have been provided within the required timeframe or an assurance that they will be provided as soon as possible.

NOTE: The rain inspection resets the required 7 calendar day inspection requirement.

PART II, SECTION 6, ITEM (4) DRAW DOWN OF SEDIMENT BASINS FOR MAINTENANCE OR CLOSE OUT

Sediment basins and traps that receive runoff from drainage areas of one acre or more shall use outlet structures that withdraw water from the surface when these devices need to be drawn down for maintenance or close out unless this is infeasible. The circumstances in which it is not feasible to withdraw water from the surface shall be rare (for example, times with extended cold weather). Non-surface withdrawals from sediment basins shall be allowed only when all of the following criteria have been met:

- The E&S plan authority has been provided with documentation of the non-surface withdrawal and the specific time periods or conditions in which it will occur. The non-surface withdrawal shall not commence until the E&S plan authority has approved these items.
- The non-surface withdrawal has been reported as an anticipated bypass in accordance with Part III, Section C, Item (2)(c) and (d) of this permit.
- Dewatering discharges are treated with controls to minimize discharges of pollutants from stormwater that is removed from the sediment basin. Examples of appropriate controls include properly sized, designed and maintained dewatering tanks, weir tanks, and filtration systems.
- Vegetated, upland areas of the site or a properly designed stone pad is used to the extent feasible at the outlet of the dewatering treatment devices described in item (c) above.
- Velocity dissipation devices such as check dams, sediment traps, and riprap are provided at the discharge points of all dewatering devices, and
- Sediment removed from the dewatering treatment devices described in item (c) above is disposed of in a manner that does not cause deposition of sediment into waters of the United States.



NCG01 SELF-INSPECTION, RECORDKEEPING AND REPORTING

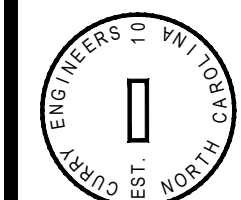
EFFECTIVE: 04/01/19

CONCRETE WASHOUT STRUCTURE

SCALE: NTS

LAKESIDE SELF-STORAGE - HARNETT COUNTY EROSION CONTROL DETAILS IV

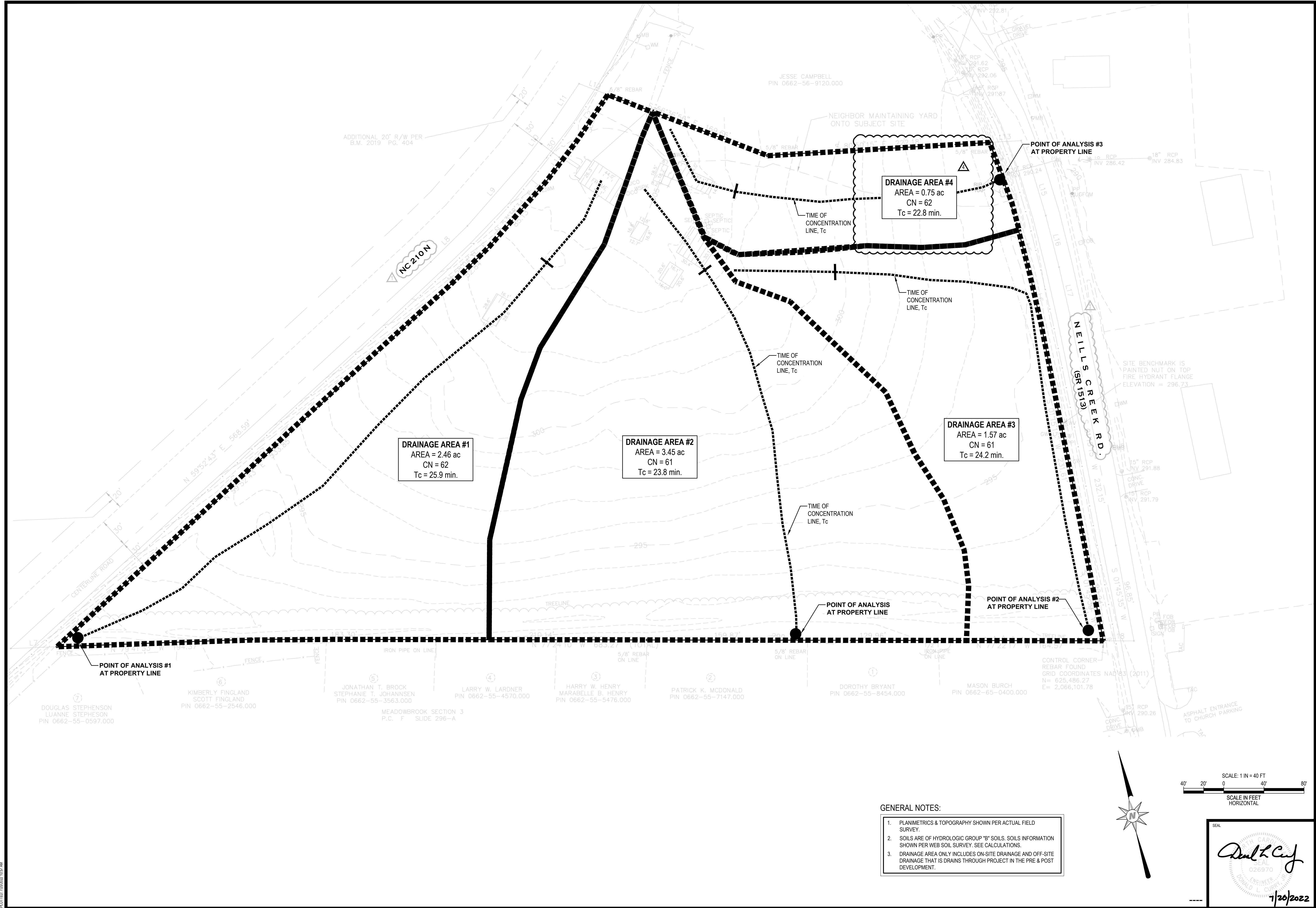
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Curry
ENGINEERING
EC-06

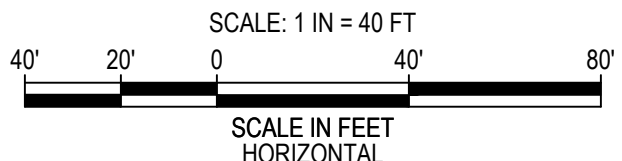
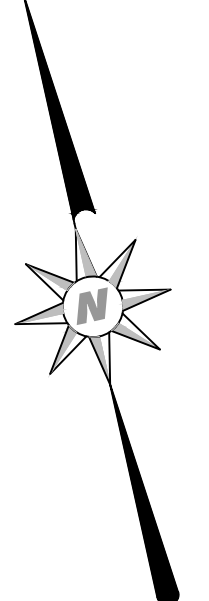
1/20/2022

PROJECT: LAKESIDE SELF-STORAGE - HARNETT COUNTY PRE-DEVELOPMENT DA MAP
DRAWN BY: J. L. CURRY
CHECKED BY: J. L. CURRY
DATE: 7/20/2022
PLOT: 7/20/2022 10:57 AM



GENERAL NOTES:

1. PLANIMETRICS & TOPOGRAPHY SHOWN PER ACTUAL FIELD SURVEY.
2. SOILS ARE OF HYDROLOGIC GROUP "B" SOILS. SOILS INFORMATION SHOWN PER WEB SOIL SURVEY. SEE CALCULATIONS.
3. DRAINAGE AREA ONLY INCLUDES ON-SITE DRAINAGE AND OFF-SITE DRAINAGE THAT IS DRAINS THROUGH PROJECT IN THE PRE & POST DEVELOPMENT.



SEAL
J. L. Curry
ENGINEER
026970
7/20/2022

REVISIONS

1	10/03/2021	HARNETT COUNTY COMMENTS
2	20/07/2022	HARNETT COUNTY COMMENTS
3	20/07/2022	HARNETT COUNTY COMMENTS
4	20/07/2022	HARNETT COUNTY COMMENTS

DATE: 7/20/21

FILE NO: 2020-023

HQ#2 SCALE: 1"=40'

ORIG. SHEET SIZE: 24x36

LAKESIDE SELF-STORAGE - HARNETT COUNTY

PRE-DEVELOPMENT DA MAP

T (019) 562-9849
F (019) 562-2043
206 S. Fulsom Avenue
Fayetteville, NC 27506

ENGINEERING
CURRY
ENGINEERING

SW-01

POA #1 (HYD #1, 17)				
Storm Event	Pre-Development Peak Flow (cfs)	Post-Development Peak Flow w/SCM (cfs)	Net Change (cfs)	Net Change (%)
1 yr	0.69	0.76	0.07	10%
2 yr	1.09	1.02	-0.07	-6%
10 yr	3.33	2.34	-0.99	-30%
25 yr	4.94	3.25	-1.69	-34%
50 yr	7.16	4.47	-2.69	-38%
100 yr	7.76	4.80	-2.96	-38%

POA #2 (HYD #5, 16)				
Storm Event	Pre-Development Peak Flow (cfs)	Post-Development Peak Flow w/SCM (cfs)	Net Change (cfs)	Net Change (%)
1 yr	1.27	1.07	-0.20	-16%
2 yr	2.08	1.56	-0.52	-25%
10 yr	6.65	4.38	-2.27	-34%
25 yr	9.99	6.35	-3.64	-36%
100 yr	15.84	9.77	-6.07	-38%

POA #3 (HYD #4, 15)				
Storm Event	Pre-Development Peak Flow (cfs)	Post-Development Peak Flow w/SCM (cfs)	Net Change (cfs)	Net Change (%)
1 yr	0.23	0.25	0.02	9%
2 yr	0.36	0.41	0.05	14%
10 yr	1.10	1.29	0.19	17%
25 yr	1.63	1.92	0.29	18%
100 yr	2.56	3.02	0.46	18%

ENTIRE SITE (HYD #6, 18)				
Storm Event	Pre-Development Peak Flow (cfs)	Post-Development Peak Flow w/SCM (cfs)	Net Change (cfs)	Net Change (%)
1 yr	2.18	2.38	0.20	9%
2 yr	3.53	3.19	-0.34	-10%
10 yr	11.04	7.80	-3.24	-29%
25 yr	16.52	11.68	-4.84	-29%
100 yr	26.11	27.88	1.77	7%

1 SW-02 SCM RUNOFF SUMMARY SCALE: N.T.S.

DRAINAGE AREA #5
BYPASS
AREA = 0.70 ac
CN = 61
Tc = 5 min.

DRAINAGE AREA #6
TO SCM #1
AREA = 3.12 ac
CN = 86
Tc = 7 min.

FUTURE
BUILDING #3
SELF-STORAGE
17,000 SF
FFE=298.50

FUTURE
BUILDING #2
SELF-STORAGE
17,000 SF
FFE=298.50

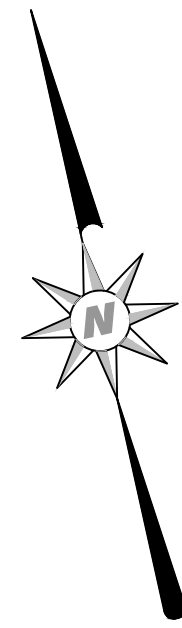
DRAINAGE AREA #7
TO SCM #2
AREA = 1.98 ac
CN = 91
Tc = 7 min.

DRAINAGE AREA #8
BYPASS
AREA = 0.95 ac
CN = 70
Tc = 22 min.

DRAINAGE AREA #9
BYPASS
AREA = 0.73 ac
CN = 61
Tc = 10 min.

GENERAL NOTES:

1. PLANIMETRICS & TOPOGRAPHY SHOWN PER ACTUAL FIELD SURVEY.
2. SOILS ARE OF HYDROLOGIC GROUP "B" SOILS. SOILS INFORMATION SHOWN PER WEB SOIL SURVEY. SEE CALCULATIONS.
3. DRAINAGE AREA ONLY INCLUDES ON-SITE DRAINAGE AND OFF-SITE DRAINAGE THAT IS DRAINS THROUGH PROJECT IN THE PRE & POST DEVELOPMENT.

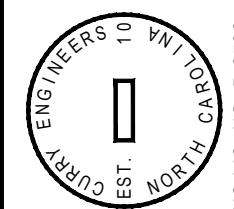


SCALE: 1 IN = 40 FT
SCALE IN FEET
HORIZONTAL

SEAL
DONALD L. CURRY
ENGINEER
026970
7/20/2022

LAKESIDE SELF-STORAGE - HARNETT COUNTY POST-DEVELOPMENT DA MAP

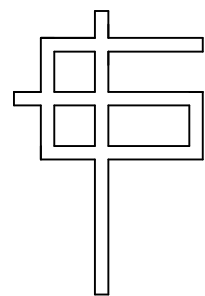
208 S. FURNACE AVENUE
FURNACE, NC 27506
T (919) 562-9849
F (919) 562-9843



Curry
ENGINEERING
SW-02

REVISIONS			
1	10/03/2021	HARNETT COUNTY COMMENTS	
2	2/10/2022	HARNETT & WOODS COMMENTS	
3	5/10/2022	WOODS COMMENTS #2	
4	5/27/2022	WOODS COMMENTS #2	
DATE: 7/20/21			PROJECT SCALE: 1"=40'
FILE NO: 2020-023			ORIG. SHEET SIZE: 24x36

LAKESIDE STORAGE



G. CLEVELAND PATE, PLLC
Architecture • Planning
6013 Fordland Drive, Raleigh, NC 27606
919-851-0052

4271 NEILLS CREEK ROAD, ANGIER NC 27501

BLDG. B

INDEX OF SHEETS

CIVIL DRAWINGS SUBMITTED PREVIOUS & UNDER SEPARATE COVER

ARCHITECTURAL

APPENDIX B

A1-FLOOR PLAN
A2-LIFE SAFETY PLAN
A3-ELEVATIONS
A4-SCHEDULES
A5-BUILDING SECTIONS

MEP

M1-NOTES SCHEDULE
M2-MECH. PLAN
E1-NOTES SCHEDULES
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E3-POWER
E4-PANELS

STRUCTURAL

SN1-PROJECT DATA/SPECS
SN2-SPECIAL INSPECTIONS
SN1.2- FOUNDATION PLAN
S2.2- ROOF FRAMING
S2.2A- ROOF PLAN
S2.4- ROOF DETAILS
S3.2- ELEVATIONS
S4- SLAB/FOOTINGS
S5- DETAILS
S6- DETAILS

FLOOR PLANS REQUIRE COOR. WITH ELEVATIONS, SECTIONS, & STRUCTURAL FRAMING FOR EXTERIOR MATERIALS.

170'-0"

LAKESIDE STORAGE

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GENERAL NOTES:

REV.	DATE:	REVISION	DESCRIPTION
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SEALS:



/27/22

FLOOR PLAN

1 FLOOR PLAN
A-1 1/8" = 1'-0"



5% ADA UNITS
7 TOTAL ADA UNITS

TOTAL BLDG. 17,000 SF

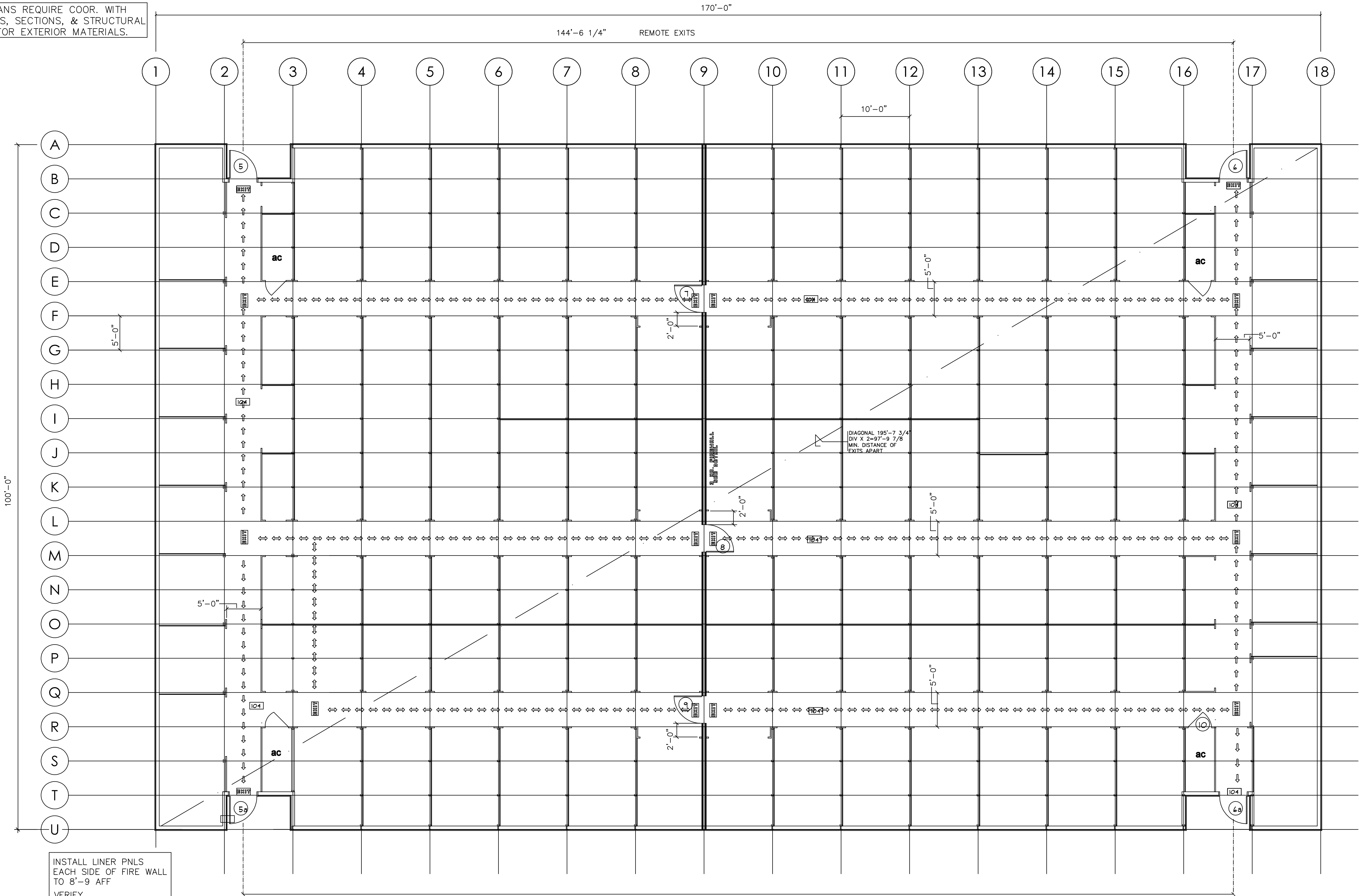
OFFICE/TOILET SPACE 568 SF DIV. X 100 SF
PER OCCUPANT= 6 OCCUPANTS

STORAGE SPACE 16,432 SF DIV. X 500 SF
PER OCCUPANT= 33 OCCUPANTS

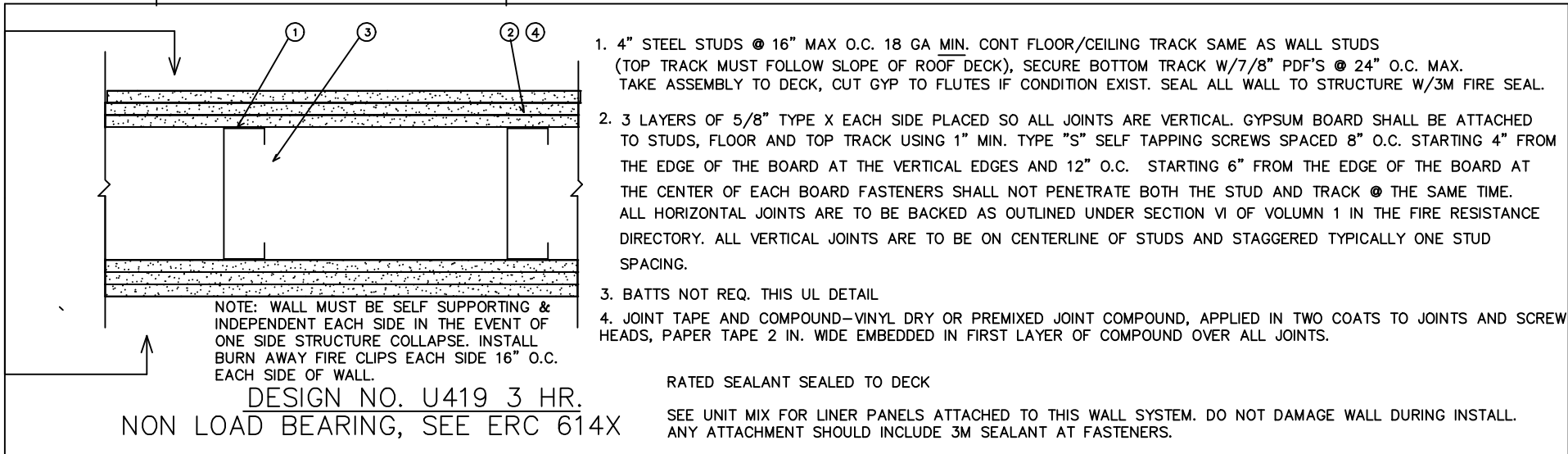
4'-0 DOORS @ .2" PER PERSON WILL ACCOMODATE 235 PEOPLE
3'-0 DOORS @ .2" PER PERSON WILL ACCOMODATE 175 PEOPLE
ALL DOORS THIS BUILDING INDIVIDUALLY GREATLY EXCEED THE
STATED OCCUPANCY LOAD AND AND REQUIRED EGRESS SIZING
.2" IS USED AS EXCEPTION 1 (1005.3.2) NOT FULLY MET FOR .15"

GCP	GCP	SHEET: 
DESIGNED BY:	DRAWN BY:	
GCP	GCP	
CHECKED BY:	APPROVED BY:	
LAKESIDE	LAKESIDEANG	6/27/22
CAD FILE NAME:	PROJECT #	DATE:

FLOOR PLANS REQUIRE COOR. WITH ELEVATIONS, SECTIONS, & STRUCTURAL FRAMING FOR EXTERIOR MATERIALS.



INSTALL LINER PNLS EACH SIDE OF FIRE WALL TO 8'-9 AFF VERIFY



FIRE CLIPS: INSTALL BREAK AWAY (MELT) CLIPS EACH SIDE OF FIRE WALL @ 5' O.C. MAX. CLIPS BREAK AWAY UNDER INTENSE HEAT, ALLOWING THE FIRE DAMAGES STRUCURE TO COLLAPSE ONE SIDE WHILE KEEPING THE FIRE WALL IN PLACE FOR OPP SIDE PROTECTION.

GEN NOTE: WRAP ANY STRUCTURAL STUD MEMBERS IN RATED WALL LINE TO MATCH REQ. UL DETAILS.

NOTE: COOR ACTUAL FIRE WALL THICKNESS WITH UNIT MIX FINAL LAYOUT ON SITE.

ALT. DETAIL: 3 HR. UL263 DESIGN #455

144'-6 1/4" REMOTE EXITS

1 LIFE SAFETY PLAN
A-2 1/8" = 1'-0"

MAXIMUM TRAVEL DISTANCE TO EXIT- 154'-11 1/2"
MAXIMUM TRAVEL DISTANCE ALLOWED- 200'
UNSPRINKLED

TOTAL BLDG. 17,000 SF

STORAGE SPACE 17,000 SF DIV. X 500 SF
PER OCCUPANT= 34 OCCUPANTS

4'-0 DOORS @ .2" PER PERSON WILL ACCOMODATE 235 PEOPLE

3'-0 DOORS @ .2" PER PERSON WILL ACCOMODATE 175 PEOPLE

ALL DOORS THIS BUILDING INDIVIDUALLY GREATLY EXCEED THE STATED OCCUPANCY LOAD AND AND REQUIRED EGRESS SIZING .2" IS USED AS EXCEPTION 1 (1005.3.2) NOT FULLY MET FOR .15"

LAKESIDE STORAGE

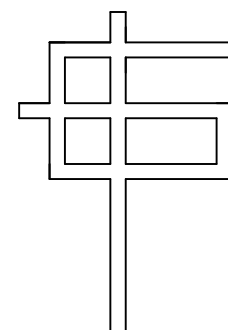
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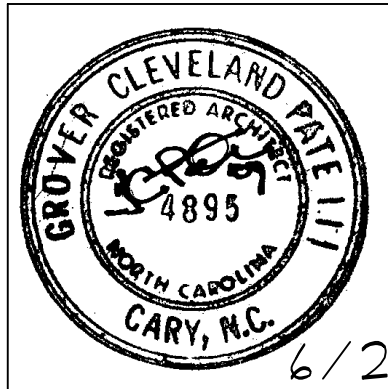
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SEALS:



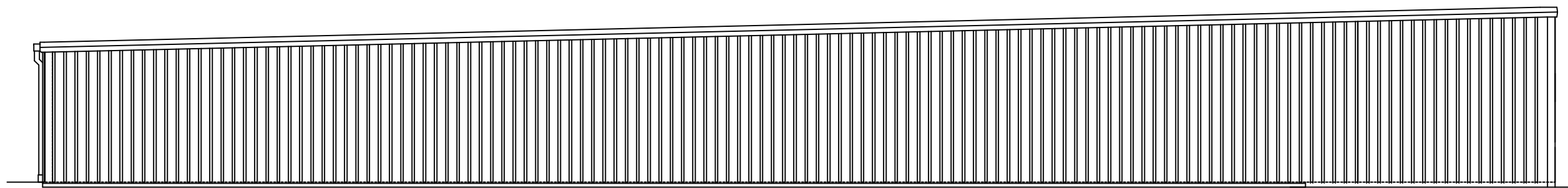
6/27/22

LIFE SAFETY
FLOOR PLAN

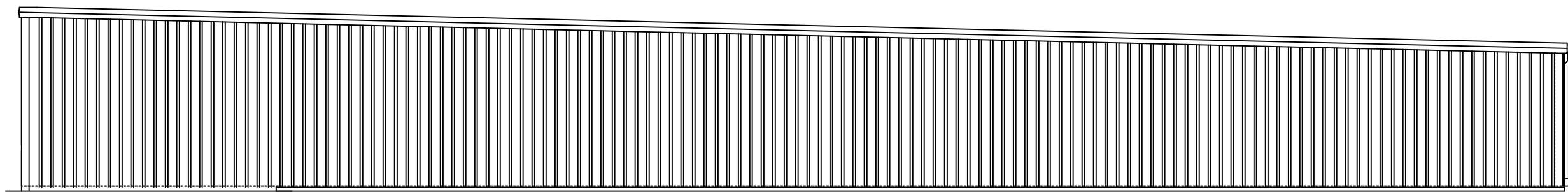
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DESIGNED BY:	DRAWN BY:	A-2
GCP	GCP	
CHECKED BY:	APPROVED BY:	OF:
LAKESIDE	LAKESIDEANG	6/27/22
CAD FILE NAME:	PROJECT #	DATE:



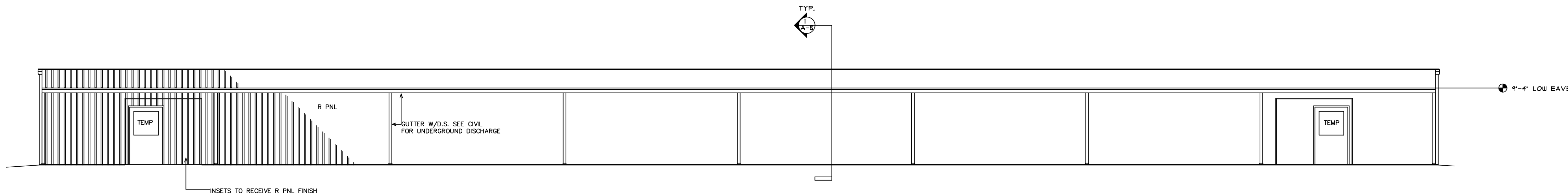
1 FRONT ELEVATION
A-3 1/8" = 1'-0"



2 LEFT SIDE ELEVATION
A-3 1/8" = 1'-0"



3 RIGHT SIDE ELEVATION
A-3 1/8" = 1'-0"



4 REAR ELEVATION
A-3 1/8" = 1'-0"

LAKESIDE STORAGE

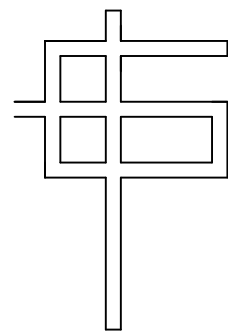
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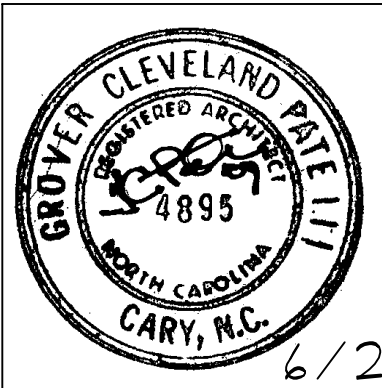
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REV. DATE:	REVISION DESCRIPTION



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SEALS:



ELEVATIONS

GCP	GCP	SHEET:
DESIGNED BY:	DRAWN BY:	A-3
GCP	GCP	OF:
CHECKED BY:	APPROVED BY:	6/27/22
LAKESIDE	LAKESIDEANG	DATE:
CAD FILE NAME:	PROJECT #	

DOOR SCHEDULE							(ALL EXTERIOR DOORS TO HAVE WEATHER STRIPS) (SEE PLANS FOR ADA/ANSI IIT ALL ACCESSIBLE UNITS) SEE ACCESSIBILITY NOTE THIS SHEET)		ON STORAGE ACCESS DOORS COOR. W/OWNER ANY CARD READERS		
MARK	WIDTH	HEIGHT	THICK	TYPE	FRAME	HDWR	REMARKS				
BUILDING A	1	3'-0	7'-0	1 3/4"	ALUMINUM STOREFRONT FULL GLASS TEMP	ALUMINUM	ACTIVE PUSH BAR/LEVER HNDL. CLSR. LOCKSET, ADA THRESH RCE, WEATHER STRIP		KAWNEER MED STILE STOREFRONT KAWNEER TRIFAB 451		
	2	3'-0	7'-0	1 3/4"	SOLID CORE WOOD	HOLLOW MTL.	LEVER HANDLE, OFFICE LOCK SET, CLSR				
	3	3'-0	7'-0	1 3/4"	SOLID CORE WOOD	HOLLOW MTL.	LEVER HANDLE, THUMB LATCH, CLSR.		TILE OR MARBLE ADA THRESH		
	4	3'-0	7'-0	1 3/4"	SOLID CORE WOOD 3X33 VP VISIBLE(TEMP)	HOLLOW MTL.	LEVER HANDLE, OFFICE LOCK SET, CLSR				
	5, 6	4'-0	7'-0	1 3/4"	H.M. INSULATED 1/2 GLASS TEMP.	HOLLOW MTL.	PUSH BAR, SS KICK, CLSR LOCK SET (COOR W/OWNER)		WEATHER STRIP ALL EXT. DOORS 1/8" H. BEVELED THRESH RCE		
	7,8,9	4'-0	7'-0	1 3/4"	SOLID CORE WOOD 3 HR	HOLLOW MTL WRAP AROUND 3 HR.	PANIC DEVICE, CLOSER, OFFSET HINGES, SS KICK		VERIFY W/OWNER 7'-0 HT IS ACCEP		
BUILDING B											
	5, 6 5a,6a	4'-0	7'-0	1 3/4"	H.M. INSULATED 1/2 GLASS TEMP.	HOLLOW MTL.	PUSH BAR, SS KICK, CLSR LOCK SET (COOR W/OWNER)		WEATHER STRIP ALL EXT. DOORS 1/8" H. BEVELED THRESH RCE		
	7,8,9	4'-0	7'-0	1 3/4"	SOLID CORE WOOD 3 HR	HOLLOW MTL WRAP AROUND 3 HR.	PANIC DEVICE, CLOSER, OFFSET HINGES, SS KICK		VERIFY W/OWNER 7'-0 HT IS ACCEP		
NOTE: OTHER DOORS ARE BY JANUS AND TO BE APPROVED PER SHOP DRAWINGS. JANUS SWING DOORS ARE SHOWN AND OTHERS ARE ROLL UP. SEE PLAN FOR ACCESSIBLE DOORS AND ACCESSIBLE DOOR DETAILS THIS SHEET. SEE ELECTRICAL											

DOOR & HARDWARE NOTES:

- D1. COOR. ALL DOORS WITH FRAMES AND ALL HARDWARE TO MEET ANSI IIT/ADA ACCESSIBILITY REQ.
D2. INTERIOR DOORS TO BE EQ. TO EGGERS SOLID CORE (STAIN PER TENANT/OWN) 1 1/2 PAIR OF BUTTS TYP.
HARDWARE TO BE SCHLAGE ELAN COMMERCIAL GRADE, FINISH PER FRANCHISE, ALL LEVER
HANDLES OR OTHER IF CALLED. CLOSERS LCN. ALL HARDWARE TO MEET ANSI IIT/ADA. MASTER KEY PER
PER OWNER'S CONSULTATION AS INITIATED BY HARDWARE SUPPLIER. PROVIDE TWO KEY SETS EA. DOOR
D3. CONTACT ARCHITECT OF DISCREPENCIES PRIOR TO ORDER.
D4. ALL FRAMES TO HAVE MUTES
ALL DOORS TO HAVE WALL OR BUTT STOPS
D5. HARDWARE SHOULD BE PURCHASED FROM EXPERIENCE HARDWARE CONSULTANT/SUPPLIER. OWNER/TENANT
SHOULD REVIEW LOCKING AND FUNCTION PRIOR TO ORDER.
D6. STUD FRAMING AT DOORS TYPICAL; INSTALL PER MANUF. SPECIFICATIONS.
D7. ALL HARDWARE THOUGH LOCKED SHOULD BE OPERABLE FROM INSIDE (TO EXIT AS REQ.)
TYPICAL: MIN. REQ. & FRAMING THIS PROJECT MAY EXCEED -SEE STRUCTURAL
A. DOOR JAMB FRAMING MIN. DOUBLE STUDS PER FRAMING PACKAGE BY STRUCTURAL.
B. DOOR HEAD FRAMING PER FRAMING PACKAGE BY STRUCTURAL. NOTE LINTEL LOCATIONS BY STRUCT.
C. INSTALL JAMB AND FLOOR ANCHORS PER HOLLOW FRAME MANUF. AND SHOP DRAWING APPROVAL.

GENERAL CONSTRUCTION NOTES FOR DOOR, WINDOW FRAMES, JAMBS/HEADS

1. TYPICAL ROUGH OPENINGS. TYPICAL ALL FRAMES TO HAVE MIN. ROUGH OPNG 1/4" BUT NOT LESS THAN 3/16" FOR EA. JAMB/HEAD.
SHIM AS REQ (TREATED SHIMS @ MASONRY OR CONCRETE CONTACT.
2. REVIEW FULL DRAWING SET WHEN DOING TAKE OFFS FOR FRAMES AND DOORS. CONTACT A-E IF ANY DISCREPENCIES EXIST PRIOR
TO SUBMITTING PRICING AND/OR SHOP DRAWINGS.
3. SEE SCHEDULES AND SHOP DWGS FOR FRAME SIZES. IN MASONRY COURSING TAKE ANY STEEL LINTELS INTO ACCOUNT W/DOORS,
WINDOW FRAMES. SEE SECTIONS AND STRUCTURAL AS ALL NOTES MAY NOT APPLY AND ARE GENERAL IN NATURE.
4. SEE PLAN FOR ACCESSIBLE UNITS. SEE DOOR ELEVATIONS THIS SHEET
5. PRIME AND PAINT ALL HOLLOW METAL. SEMIGLOSS FINISH.

ROOM FINISH SCHEDULE

SEE PLANS AND WALL SECTIONS

	SPACE	FLOOR	BASE	WALLS	CEILING	CLG HGT	SPEC NOTE	REMARKS
BUILDING A	101	LUX. VT	4" RUB COVE ROPPE	GYP. PRIME/PT.	PAINT STRUCT. & NON FACT.FIN. PME-BLACK	9'-0 VERIFY	PER MANUF	VERIFY ALL MECH/ELEC/PLUMB HTS W/LAY IN CEIL
	102	LUX. VT	4" RUB COVE ROPPE	GYP. PRIME/PT.	ACCOUST. LAY IN CORTEGA WHITE	9'-0 VERIFY		
	103	CT 12X12	CT	GYP. PRIME PT. CT. WAINSCOAT ON TILE BACKER *	ACCOUST. LAY IN TILE CORTEGA WHITE	9'-0 VERIFY		OWNER ALT. WALLS-FRP OVER GYP. * SEE INTERIOR TOILET ELEVATIONS
	104	SEALED CONC	_____	SEE JANUS FOR LINER PANELS	EXPOSED STRUCT.	EXPOSED STRUCT.		
	ALL UNITS	SEALED CONC	_____	↓	EXPOSED STRUCT.	EXPOSED STRUCT.		
BLDG. B	104	SEALED CONC	_____	SEE JANUS FOR LINER PANELS	EXPOSED STRUCT.	EXPOSED STRUCT.		
	ALL UNITS	SEALED CONC	_____	↓	EXPOSED STRUCT.	EXPOSED STRUCT.	↓	

(GFSN) GENERAL FINISH SCHED. NOTES

1. ALL INTERIOR PARTITIONS AND EXTERIOR WALL INTERIOR GYP. TO BE
PAINTED, ONE PRIME COAT AND TWO FINISH COATS MIN. (LATEX EGGSHELL)
PAINT TO BE SHERWIN WILLIAMS PREMIUM INTERIOR. SUBMIT COLOR CHOICES
TO OWNER. NOTE ALL PAINT TO BE WASHABLE PER MANUF. GYP LOC. ONLY.
--FRAMES/TRIM ONE PRIME COAT & TWO FIN. COATS SEMIGLOSS
2. SUBMIT ALL COLORS/FINISHES TO OWN/TENANT FOR APPROVAL
3. PATCH ALL MISC. HOLES IN WALLS OR FLOORS TO MATCH ADJ. CONST.
4. COOR WITH ALL PME DWGS AND ALL TRADES PRIOR TO ADVANCING WORK.
5. CONTACT ARCHITECT/ENGINEER OF CONFLICTS PRIOR TO WORK.
6. INSTALL ALL FINISHES/MATERIALS PER MANUF. SPECIFICATIONS
7. PROVIDE FULL RANGE OF FINISH PRODUCT FOR OWNER SELECTION.
8. VERIFY PREFINISHED LINER PANELS AND EXPOSED STRUCTURE. VERIFY
WITH OWNER/GC IS ADDITIONAL FINISHING OF EXPOSED STRUCTURE IS REQ.
9. WHERE NON FACTORY FIN. PME IS CALLED TO PAINT, DO NOT PT. GALV.
METALS. VERIFY PAINTING WITH OWNER/GC.
10. WHERE EXPOSED CEILINGS ARE CALLED TO BE PAINTED, PAINT ALL DUCT, CONDUIT,
HANGERS ETC..

GENERAL LINER PANEL NOTES FOR JANUS PANELS

-
LINER PANELS WITH STORAGE FACILITY TO BE INSTALLED IN LOCATIONS AS INDICATED ON PLANS GRAPHICALLY AND
EXTERIOR WALLS UNLESS CALLED OTHERWISE. REVIEW ALL SPACES AND CONTACT A-E WITH QUESTIONS WHEN DETERMINING
SCOPE. SUBMIT SHOP DWG FOR FINAL APPROVAL

LAKESIDE STORAGE

ANGIER, NC
BLDG. B

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GENERAL NOTES:

REV. DATE: REVISION DESCRIPTION

AUTOMATIC ROLL UP W/
BATTERY BACK-UP

SIGN HT. IS 48" TO 60"C.L. ABFF. REF ADA CH.2 SECTION 103
ACCESSIBLE SIGNAGE AT ALL ACCESSIBLE STORAGE UNITS

SWING DOOR

(MECH & ELEC. RMS)
(DESIGNATED STORAGE
UNITS WITH 3'-0/180 DEG.SWING)

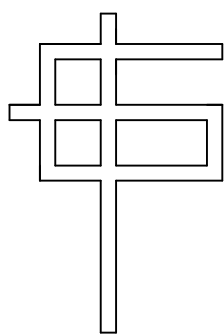
ALL DOORS REQ. MAX.5# FORCE TO OPERATE
SIGN HT. IS 48" TO 60"C.L. ABFF. REF ADA CH.2 SECTION 103
STORAGE REQUIRED ADA / ANSI IIT SIGNAGE

*

ADA COMPLIANT DOORS

INTERIOR STORAGE/MECH/ELEC

(JANUS SHOP DRAWING PACKAGE APPROVAL REQUIRED)



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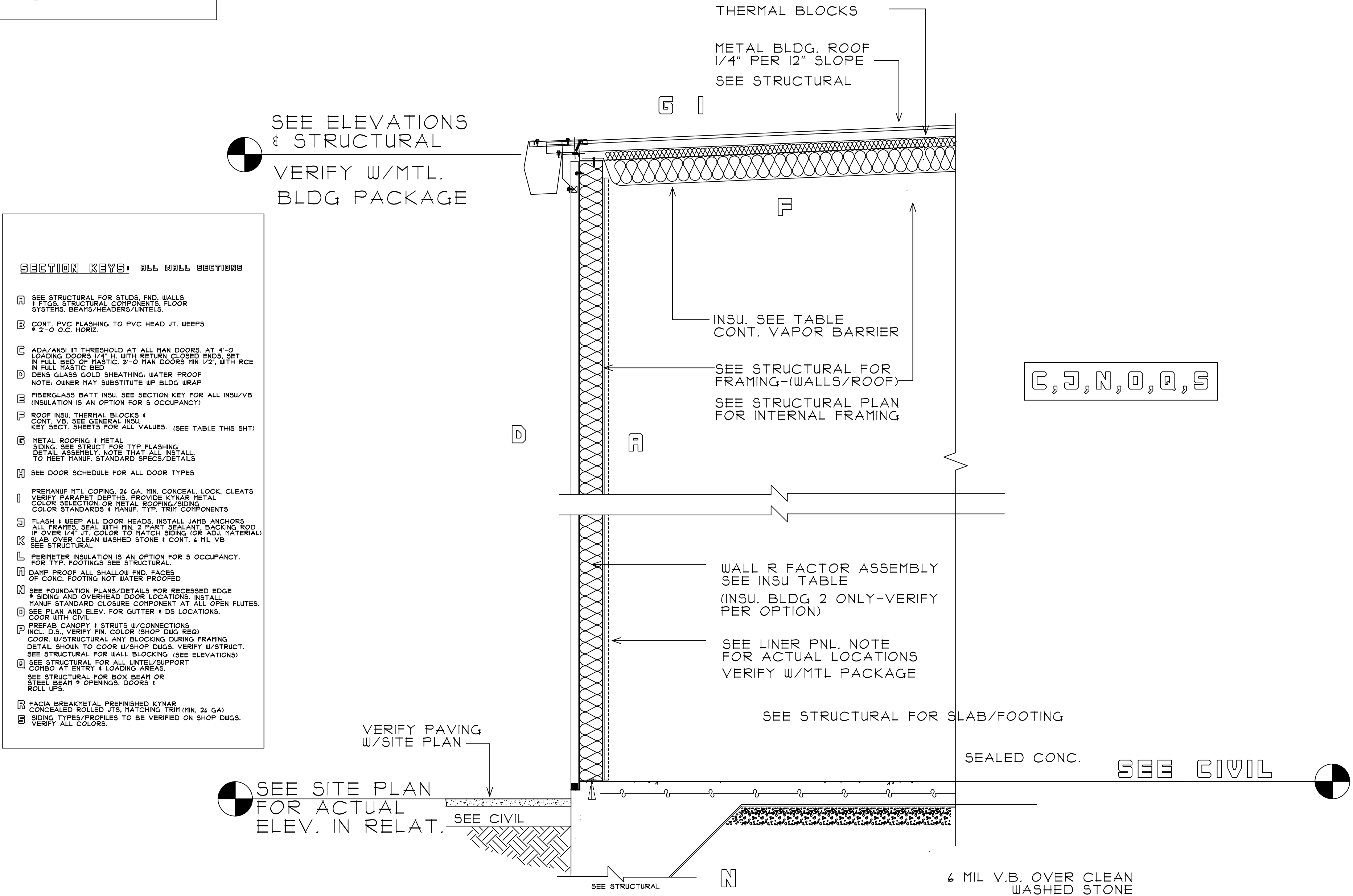
SEALS:



DOOR/FIN.
SCHEDULE

GCP	GCP	SHEET:	
DESIGNED BY:	DRAWN BY:	A - 4	
GCP	GCP		
CHECKED BY:	APPROVED BY:	OF:	
LAKESIDE	LAKESIDEANG	6/27/22	
CAD FILE NAME:	PROJECT #	DATE:	

COOR. W/STRUCTURAL



1 SECTION REAR OF BLDG.
A-S DO NOT SCALE

FRONT ELEVATION/HIGH EAVE
SIMILAR. SEE BUILDING ELEV.

INSULATION TABLE-ALL BLDGS.

STORAGE NON CONDITIONED:

ROOF-2" INSULATION, INTEGRAL VAPOR BARRIER, THERMAL BLOCKS.
WALLS- NO INSULATION WITH VAPOR BARRIER INSTALLED. OWNER OPTION- RII BATTS
FOUNDATION- NO PERIMETER INSULATION. INSTALL 4 MIL V.B.

STORAGE CONDITIONED:

ROOF- R30 (R19 + RII LS (LINER SYSTEM USING R3 MIN. THERMAL BLOCKS)
WALLS- RII BATTS WITH VAPOR BARRIER
FOUNDATION- R15 24" FLAT SLAB, TURN DN. * LUG UNDER SLAB (VERIFY) W/4MIL VB

NOTE: * BELOW GRADE CONDITION NO PERIMETER FOUNDATION REQ. WHERE
4'-0" OR MORE BELOW GRADE. VERIFY GRADES * FOUNDATION.

OFFICE:

ROOF- R30 (R19 + RII LS (LINER SYSTEM USING R3 MIN. THERMAL BLOCKS)
WALLS- R13 + R1.5 CI (CONT. INSULATION) WITH VAPOR BARRIER ON OUTSIDE W.B.F.
FOUNDATION- R15 24" FLAT SLAB. TURN DN * LUG UNDER SLAB. SEE SECTIONS
INSTALL 4 MIL VB

LAKESIDE STORAGE

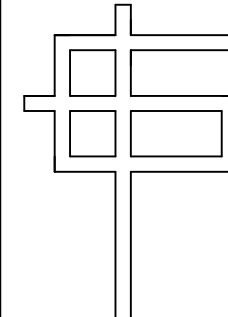
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GENERAL NOTES:

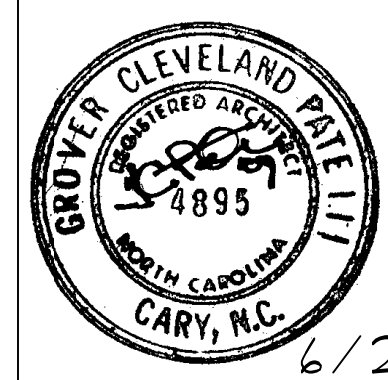
REV. DATE: REVISION DESCRIPTION

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G. CLEVELAND PATE, PLLC
Architecture • Planning
6013 Fordland Drive, Raleigh, NC 27606
919-851-0052

SEALS:



6/27/22

BUILDING SECTIONS

GCP	GCP	SHEET:
DESIGNED BY:	DRAWN BY:	A-5
GCP	GCP	
CHECKED BY:	APPROVED BY:	OF:
LAKESIDE	LAKESIDEANG	6/27/222
CAD FILE NAME:	PROJECT #	DATE:

SPLIT SYSTEM HEAT PUMP SCHEDULE															
MARK	MFG / MODEL #	NOMINAL CAPACITY	REF LINES		MOTORS		EFFICIENCIES			ELECTRICAL			WEIGHT LBS	REMARKS	
			GAS	L10	COMPRESSOR	COND. FAN	SEER	COF @ 17"	HSPF	V/PH	MCA	MDCP			
					NL	NL									
HP-C1-40	TRANE 3TWR4048	4	7/8	3/8	1	1	15/12.5	2.50	8.50	208/1	26	45	266	1, 4, 9-11	

SPLIT SYSTEM AIR HANDLER SCHEDULE																	
MARK	MFG / MODEL #	NOMINAL CAPACITY	AIR FLOW		FAN MOTORS		HEATING CAPACITY		COOLING CAPACITY		ELECTRICAL			WEIGHT	REMARKS		
			SUPPLY	MIN. OA	SUPPLY	ESP	OUTPUT	AUX ELEC HEAT	EAT WB/OB	TOTAL	SENSIBLE	V/PH	MCA			MOCP	
		TONS	CFM	CFM	NL	in wg	MBH	kW	STAGES	*F	MBH	MBH				LBS	
AH-(1-4)	TRANS. GANSA00C48M41SA	4	1600	375	1	.25	29.2	2.88	1	67/80	48.2	35.4	208/1	25	25	166	2, 3, 5-11

1. PROVIDE CONCRETE PAD FOR UNIT TO SIT ON
2. PROVIDE HEAT STRIP OUTDOOR THERMISTAT LOCKOUT TO PREVENT SUPPLEMENTAL HEAT OPERATION IN RESPONSE TO THE THERMISTAT BEING CHANGED TO A WARMER SETTING. SET NO LOWER THAN 35°F AND NO HIGHER THAN 40°F
3. PROVIDE HINGED ACCESS DOORS
4. PROVIDE HALL GARDIS FOR COIL
5. REPLACE ALL FILTERS AT PROJECT'S COMPLETION
6. PROVIDE 7-DAY PROGRAMMABLE THERMISTAT WITH NIGHT-TIME SET BACK
7. CONSULT MANUFACTURER ON LINE SET LENGTHS EXCEEDING 50FT
8. HEATER RATED AT 200V
9. OR EQUIV BY CARRIER, LENOX, OR YORK
10. ANY EQUIPMENT SUBSTITUTIONS MUST EQUAL OR EXCEED EFFICIENCIES LISTED (RATINGS PER ARI)
11. MAINTAIN MANUFACTURER'S RECOMMENDED CLEARANCES

Ventilation Calculation									
Room Name(s)		Zone Type	Area (sq.ft.)	Rp	Ra	Default Occupancy	Pz	Ez	Airflow to Zone (cfm)
		Storage	16731	0	0.12	0	0.00	0.8	6400
		N/A		0	0	0	0.00	0.8	0
		N/A	0	0	0	0	0.00	0.8	0
		N/A	0	0	0	0	0.00	0.8	0
		N/A	0	0	0	0	0.00	0.8	0
K-12 School?	No		Maximum Zp:	0.392133					
			Ev:	0.7					
			Actual System Population:	0					
Uncorrected Intake	2008	cfm							
Outdoor Air Intake	2868	cfm							
Percent of Unit Air	45%								

RECTANGULAR/SQUARE TO ROUND DUCT EQUIVALENT	
RECTANGULAR DUCT	ROUND DUCT
30" X26"	30" Ø
20" X26"	24" Ø
18" X18"	20" Ø
18" X20"	20" Ø
20" X16"	18" Ø
16" X16"	16" Ø
10" X16"	14" Ø
10" X20"	16" Ø
16" X14"	16" Ø
16" X12"	14" Ø

REGISTER & GRILLE SCHEDULE						
MARK	NFG	MODEL #	SIZE	MOUNTING	DESCRIPTION	NOTES
A	HART & COOLEY	VHD	10X6	SURFACE	ALUMINUM DOUBLE DEFLECTION REGISTER	1,3
R	HART & COOLEY	RH45	28X14	SURFACE	ALUMINUM SURFACE MOUNT RETURN GRILLE	1

1. OR OWNER APPROVED EQUAL.
2. PROVIDE WITH FOIL LINED, MOLDED INSULATION BLANKET.
3. PROVIDE WITH ADJUSTABLE DAMPER.
4. PROVIDE WITH BIRD SCREEN

- ① THERMOSTAT LOCATION MOUNT AT 48" A.F.F.
- ② AUDIO VISUAL ANNUNCIATOR WITH RESET FOR DUCT DETECTOR, WALL MOUNT.
- ③ --- DUCT DETECTOR
- ④ CO₂ SENSOR LOCATION. INSTALL NEXT TO THERMOSTAT

MECHANICAL NOTES AND SCHEDULES	1
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GENERAL MECHANICAL NOTES

ADMINISTRATIVE:

- THE FOLLOWING ABBREVIATIONS SHALL APPLY TO NOTES AND PLANS:
P – PUMPING CONTRACTOR, EC – ELECTRICAL CONTRACTOR,
MC – MECHANICAL CONTRACTOR, GC – GENERAL CONTRACTOR,
FAS – FIRE ALARM SYSTEM CONTRACTOR, AU – AUTHORITY HAVING JURISDICTION
- "FURNISH" MEANS TO FURNISH AND INSTALL. MC SHALL ALSO INSTALL MATERIALS PROVIDED BY OTHERS AND GENERAL CONTRACTOR AS SHOWN ON THE PLANS OR NECESSARY FOR A COMPLETE INSTALLATION.
- THE MC SHALL BE RESPONSIBLE FOR A COMPLETE AND OPERATING SYSTEM AS DESCRIBED BY THESE PLANS AND SPECIFICATIONS.
- ALL MATERIALS AND EQUIPMENT SHALL BE DELIVERED TO THE SITE AND UNLOADED BY THE CONTRACTOR AT AN APPROVED LOCATION. THE MC SHALL PROTECT ALL MATERIALS AND EQUIPMENT FROM BREAKAGE, THEFT, AND THE ELEMENTS. ALL MATERIALS AND EQUIPMENT SHALL REMAIN THE PROPERTY OF THE MC UNTIL THE PROJECT HAS BEEN COMPLETED AND TURNED OVER TO THE OWNER.
- THE MC SHALL INSTALL ALL MATERIALS AND EQUIPMENT IN ACCORDANCE WITH THE 2018 NORTH CAROLINA MECHANICAL AND BUILDING CODES AND ANY APPLICABLE LOCAL CODES. WHERE A CONFLICT EXISTS BETWEEN THE ABOVE REQUIREMENTS, THE MC SHALL OBTAIN CLARIFICATION FROM THE ENGINEER OR IN THE EVENT ANY PART OF THESE PLANS CONFLICTS WITH THE ABOVE REQUIREMENTS.
- THE MC SHALL OBTAIN AND PAY FOR ALL PERMITS, FEES, AND INSPECTIONS NECESSARY FOR THE COMPLETION OF THE WORK UNDER THIS AGREEMENT.
- DO NOT SCALE THESE DRAWINGS—REFER TO ARCHITECTURAL SHEETS FOR DIMENSIONS.
- THE MC SHALL VISIT THE SITE PRIOR TO BEING TO BECOME TO FAMILIAR WITH EXISTING CONDITIONS. THE MC SHALL CONTACT THE ENGINEER TO RESOLVE ANY DISCREPANCIES BETWEEN EXISTING CONDITIONS AND THESE PLANS. THE MC SHALL CONTACT THE OTHER TRADES TO DETERMINE THE LOCATION OF EXISTING UTILITIES.
- ALL MECHANICAL MATERIALS SHALL BE NEW AND FREE OF DEFECT AND LABELED BY UL OR AN APPROVED THIRD PARTY AGENCY. ANY MATERIALS FOUND TO BE DEFECTIVE SHALL BE REPLACED BY THE MC WITHOUT ADDITIONAL COST TO THE OWNER. WHERE A MANUFACTURER AND MODEL NUMBER IS GIVEN, THE CITY EXAMPLE IS INTENDED TO ESTABLISH A STANDARD OF QUALITY AND NOT TO RESTRICT TO THAT MANUFACTURER. SUCH EXAMPLES ARE USED TO CONVEY A GENERAL STYLE, TYPE, CHARACTER, AND QUALITY OF THE PRODUCT. DIMENSIONS PERTAINING TO BE EQUAL TO THE ENGINEER WILL BE ACCEPTED.
- THESE PLANS ARE DIAGRAMATIC. THE MC SHALL ADJUST THE LOCATIONS OF EQUIPMENT, DUCTS, REGISTER, GRILLES, ETC. TO ACCOMMODATE PLANNED AND EXISTING DIFFERENCES IN MECHANICAL SYSTEMS. DO NOT SHOW ALL GENSES, FITTINGS, AND FITTINGS THAT MAY BE REQUIRED FOR A COMPLETE AND OPERATIONAL SYSTEM. THE MC SHALL MAKE ALLOWANCES FOR SUCH DEVIATIONS AND CONTINGENCIES IN BID TO IMPLEMENT THEM WITHOUT ADDITIONAL COST TO THE OWNER.
- ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL POWER CONNECTIONS TO MECHANICAL EQUIPMENT. MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONTROL WIRING.
- IT IS THE MC'S RESPONSIBILITY TO VERIFY THAT ITEMS FURNISHED FOR THIS PROJECT WILL FIT IN THE SPACE AVAILABLE. THE MC SHALL MAKE FIELD MEASUREMENTS AS NECESSARY TO DETERMINE SPACE REQUIREMENTS. IF THE MC MUST ALTER EQUIPMENT DUE TO SPACE CONSIDERATIONS, THE MC SHALL PROVIDE SIZES AND SHAPES THAT FIT THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS.
- MC SHALL COORDINATE WITH THE ELECTRICAL CONTRACTOR REGARDING THE ELECTRICAL REQUIREMENTS OF ALL EQUIPMENT BEING PROVIDED.
- MAINTAIN CLEARANCES FOR ALL EQUIPMENT ACCORDING TO MANUFACTURER'S RECOMMENDATIONS FOR SERVICEABILITY. ALL ROOFTOP EQUIPMENT MUST BE A MINIMUM OF 10 FEET FROM ROOF DECK.
- MC SHALL FURNISH A BOUND SET OF OPERATING AND MAINTENANCE INSTRUCTIONS FOR ALL EQUIPMENT TO THE OWNER UPON COMPLETION OF THE PROJECT. MC SHALL PROVIDE ALL DOCUMENTATION TO THE OWNER AS NECESSARY TO SUBMIT FOR FACTORY WARRANTIES.
- CONTRACTOR SHALL PROTECT ALL HVAC EQUIPMENT FROM CONSTRUCTION AND SHEET ROCK DUST DURING CONSTRUCTION. ALL FILTERS SHALL BE REPLACED WITH CARTRIDGE AT THE COMPLETION OF THE PROJECT.
- ALL EQUIPMENT INSTALLED WITHIN THE ROOF SHALL BE WITHIN THE ROOF SCREEN. IF A ROOF PENETRATION IS REQUIRED AND THE ROOF IS UNDER WARRANTY, THE AUTHORIZED ROOFER, PROVIDE DOCUMENTATION.
- ALL PIPING, WIRING, CONDUIT, INSULATION, EQUIPMENT, SUPPORTS, ETC. SHALL BE SUITABLE FOR INSTALLATION IN A RETAIN PLACEMENT AS NECESSARY. COORDINATE WITH OTHER TRADES ON LOCATIONS OF ALL PLUMBING.
- MC SHALL COORDINATE WITH THE OTHER TRADES CONTRACTOR TO ENSURE ALL APPLICABLE CONSTRUCTION WASTE IS RECYCLED DURING THE CONSTRUCTION PHASE OF THE PROJECT.

MATERIALS

1. THE MC SHALL PROVIDE ALL DX UNITARY HEATING AND COOLING EQUIPMENT AS SCHEDULED ON THE DRAWINGS. AIR-COOLED SPLIT SYSTEM HEAT PUMPS AND AIR-CONDITIONERS SHALL BE BY TRANE, CARROLL, OR YORK. AIR-COOLED ROOFTOP PACKAGE HEAT PUMPS, GAS-ELECTRIC UNITS, AND AIR-CONDITIONERS SHALL BE BY TRANE, CARROLL, OR YORK. GAS FURNACES SHALL BE BY TRANE, CARROLL, OR YORK. THE MC SHALL PROVIDE FACTORY AND FIELD INSTALLED ACCESSORIES AS SCHEDULED OR AS NECESSARY FOR A COMPLETE AND OPERATIONAL HVAC SYSTEM.
2. THE MC SHALL PROVIDE ALL EXHAUST AND SUPPLY FANS AS SCHEDULED. FANS SHALL BE BY GREENECHE, LOREN COOK, TWIN CITY, OR PENNBARRY.
3. DUCTWORK IS SOWN WITH FREE FAN DIMENSIONS. ALL DUCTWORK SHALL BE FABRICATED AND INSTALLED IN ACCORDANCE WITH SMACNA LOW PRESSURE DUCT STANDARD, 2 INCH SP.
4. EXTERNAL DUCT INSULATION AND FACTORY-INSULATED FLEXIBLE DUCT SHALL BE LEGIBLY PRINTED OR IDENTIFIED AT INTERVALS NOT GREATER THAN 36 INCHES WITH THE NAME OF THE MANUFACTURER, THE THERMAL RESISTANCE R-VALUE AT THE SPECIFIED INSTALLED THICKNESS AND THE FLAME SPREAD AND SMOKE-DEVELOPED INDEXES OF THE COMPOSITE MATERIALS.
5. EXTERIOR DUCT INSULATION SHALL BE BASED ON FACTORY-INSULATED INSULATION PRODUCT R-VALUES SHALL BE BASED ON FACTORY DATA. EXCLUDING JOINTS, FILMS, VAPOR RETARDERS OR OTHER DUCT COMPONENTS, AND SHALL BE BASED ON TESTED C-VALUES AT 75°F MEAN TEMPERATURE AT THE INSTALLED THICKNESS, IN ACCORDANCE WITH RECOGNIZED INDUSTRY PROCEDURES. THE INSTALLED THICKNESS OF DUCT INSULATION USED TO DETERMINE ITS R-VALUES SHALL BE DETERMINED AS FOLLOWS:
 - 4.1. FOR DUCT SHAFTS AND FACTORY-MADE RIGID DUCTS NOT NORMALLY SUBJECTED TO COMPRESSION, THE NOMINAL INSULATION THICKNESS SHALL BE USED.
 - 4.2. FOR DUCT WRAP, THE INSTALLED THICKNESS SHALL BE ASSUMED TO BE 75 PERCENT (25-PERCENT COMPRESSION) OF NOMINAL THICKNESS.
 - 4.3. FOR FACTORY-MADE FLEXIBLE AIR DUCTS, THE INSTALLED THICKNESS SHALL BE DETERMINED BY DIVING THE DIFFERENCE BETWEEN THE ACTUAL OUTSIDE DIAMETER AND NOMINAL INSIDE DIAMETER BY TWO.
 5. DUCT LINEER SHALL BE SUBSTITUTED FOR EXTERIOR DUCT WRAP. DUCT LINEER INSULATION MATERIALS SHALL MEET THE REQUIREMENTS OF ASTM C 1071, AND ASTM G 21. EXTERIOR DUCT R-VALUE SHALL BE R-8 AND INTERIOR R-VALUE SHALL BE R-6 IN ACCORDANCE WITH THE 2018 NORTH CAROLINA ENERGY CONSERVATION CODE. NOMINAL DUCT SIZES SHALL BE ADJUSTED AS NECESSARY SO THAT FREE AREA DIMENSIONS ARE PRESERVED AS SHOWN ON THE PLANS. FABRICATION AND INSTALLATION SHALL CONFORM TO THE REQUIREMENTS OF THE LATEST EDITION OF THE NORTH AMERICAN INSULATION MANUFACTURERS ASSOCIATION FIBROUS GLASS DUCT LINEER STANDARDS AND/OR SMACNA HVAC DUCT CONSTRUCTION STANDARDS. DUCT LINEER SHALL HAVE A BLACK PIGMENTED MAT ON THE AIRSTREAM SIDE TO RESIST DAMAGE DURING INSTALLATION AND SERVICE. EDGES SHALL BE FACTORY COATED WITH BLACK PIGMENTED COATING TO COMPLY WITH SMACNA DCS REQUIREMENTS. ALL PORTIONS OF DUCT DESIGNATED TO RESIST DUCT LINEER SHALL BE COATED WITH BLACK PIGMENTED COATING. TRANSVERSE JOINTS SHALL BE NEATLY BUTTED AND THERE SHALL BE NO INTERRUPTIONS OR GAPS. THE BLACK PIGMENTED OR MAT FACED SURFACES SHALL FACE THE AIRSTREAM. DUCT LINEER SHALL BE ADHERED TO THE SHEET METAL WITH 90 PERCENT COVERAGE OF ADHESIVE COMPLYING WITH REQUIREMENTS OF ASTM C 916. ALL EXPOSED LEADING EDGES AND TRANSVERSE JOINTS SHALL BE FACTORY COATED OR COVERED WITH ADHESIVE DURING FABRICATION. DUCT LINEER SHALL BE ADDED TO EXISTING MECHANICAL SYSTEMS EITHER WELD-SOURCED OR IMPACT DROWN, WHICH SHALL COMPRESS THE DUCT LINEER SUFFICIENTLY TO HOLD IT FIRMLY IN PLACE. ADHESIVE BONDED PINS ARE NOT
6. THE DUCT WITH MECHANICAL FASTENERS SPACED 18 INCHES ON CENTER TO PREVENT SAGGING OF INSULATION. ADJACENT SECTIONS OF DUCT WRAP SHALL BE TIGHTLY BUTTED WITH THE 2 INCH TAP FLAP OVERLAPPING ALL TEARS, PUNCTURES, ETC. OF THE DUCT WRAP INSULATION SHALL BE SEALED WITH TAPE OR MASTIC TO PROVIDE A WEATHER TIGHT JOINT. THE WRAP SHALL BE KNOWN INSULATION, OWENS CORNING CORP. OR CERTAINTED CORPORATION.
7. VERIFY THAT DUCTS HAVE BEEN TESTED BEFORE APPLYING INSULATION MATERIALS. VERIFY THAT DUCT SURFACES ARE CLEAN, DRY AND FREE OF FOREIGN MATERIAL PRIOR TO INSULATING. DUCT COVERINGS SHALL NOT PENETRATE A WALL OR FLOOR REQUIRED TO HAVE A FIRE-RESISTANCE RATING OR REQUIRED TO BE FIRE BLOCKED.
8. THERE DUCTS ARE CONNECTED TO EXTERIOR WALL LOUVERS AND DUCT OUTLET IS SMALLER THAN LOUVER FRAME, PROVIDE BLANK-OUT PANELS SEALING LOUVER AREA AROUND DUCT. USE SAME MATERIAL AS DUCT, PAINTED BLACK ON EXTERIOR SIDE; SEAL TO LOUVER FRAME AND DUCT.
9. PROVIDE DUCT ACCESS DOORS FOR INSPECTION AND CLEANING BEFORE AND AFTER FILTERS, COILS, FANS, ALUMINUM DAMPERS, AT FAN DAMPERS, EXHAUST DAMPERS, AND EXHAUST AIR HANDLING UNITS.
10. CONSTRUCT T'S, BENDS, AND ELBOWS WITH RADIUS OF NOT LESS THAN 1-1/2 TIMES THE WIDTH OF THE DUCT ON CENTERLINE, WHERE NOT POSSIBLE AND WHERE RECTANGULAR ELBOWS MUST BE USED, PROVIDE TURNING VANS. INCREASE DUCT SIZES GRADUALLY, NOT EXCEEDING 15 DEGREES DIVERGENCE; MAXIMUM OF 30 DEGREES DIVERGENCE UPSTREAM OF EQUIPMENT AND 45 DEGREES CONVERGENCE DOWNSTREAM.
11. IT SHALL BE THE RESPONSIBILITY OF THE MC TO SUSPEND AND SUPPORT ALL EQUIPMENT, DUCTWORK, DIFFUSERS, AND OTHER MATERIALS FOLLOWING RECOGNIZED ENGINEERING PRACTICES AND USING STANDARD, COMMERCIALY ACCEPTED HANGERS AND SUSPENSION EQUIPMENT. ALL HVAC EQUIPMENT SHALL BE SECURELY MOUNTED TO THE BUILDING STRUCTURE AND SHALL NOT RELY ON CEILING OR WALL SURFACES FOR SUPPORT. THE SUPPORT ATTACHMENT SHALL SUPPORT THE WEIGHT OF THE EQUIPMENT PLUS THE WEIGHT OF THE SUPPORT ATTACHMENT ITSELF. SUPPORTS SHALL BE DESIGNED TO RESIST ALL SEISMIC LOADS, ORDERS, AND BENDS. THE BOTTOM CHORD IS NOT TO BE USED FOR EQUIPMENT OR PIPING SUPPORT. HANGERS SHALL NOT BE ATTACHED TO CORRUPTED STEEL DECKING.
12. DUCTS SHALL BE SUPPORTED IN ACCORDANCE WITH SMACNA AT INTERVALS NOT EXCEEDING 10 FEET. DUCTS 36 INCHES OR LARGER SHALL HAVE TRAPEZOID TYPE HANGERS SUSPENDED WITH THREADED ROD. SUPPORT DUCTS FROM BAR JOISTS, RIGGERS, OR BEAMS.
13. CHECK LOCATIONS OF AIR OUTLETS AND INLETS AND MAKE NECESSARY ADJUSTMENTS IN POSITION TO CONFORM WITH ARCHITECTURAL FEATURES, SYMMETRY, AND LIGHTING ARRANGEMENT. COORDINATE WITH SPRINKLER CONTRACTOR IF APPLICABLE.
14. PROVIDE BALANCING DAMPERS AT POINTS ON SUPPLY WHERE BRANCHES ARE TAKEN FROM LARGE DUCTS OR REQUIRED FOR AIR BALANCING. INSTALL MINIMUM 2 DUCT WIDTHS FROM DUCT TAKE-OFF. PROVIDE BALANCING DAMPERS ON DUCT TAKE-OFFS TO DIFFUSERS, AND REGISTERS, REGARDLESS OF WHETHER DAMPERS ARE SPECIFIED AS PART OF THE DIFFUSER OR REGISTER ASSEMBLY. ADJUST AIR HANDLING AND DISTRIBUTION SYSTEMS TO PROVIDE DESIGN SUPPLY, RETURN, AND EXHAUST AIR QUANTITIES AT SITE ATTITUDE.
15. MC SHALL INSTALL FIRE DAMPERS AT EACH PENETRATION OF A RATED WALL AS INDICATED ON THE DRAWINGS OR REQUIRED BY THE AUTHORITY HAVING JURISDICTION. FIRE DAMPERS SHALL BE UL LABELED (UL 555), CURTAIN TYPE, WITH INTEGRAL FACTORY SLEEVE AND BLADES LOCATED OUTSIDE THE AIR STREAM. INSTALLATION OF ALL FIRE DAMPERS SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS AND SECTION 607 OF THE 2018 NC

5. PERMITTED DUCT TO LONG-TERM ADHESIVE ADGAP CHARACTERISTICS. LININGS SHALL BE INTERRUPTED AT THE AREA OF OPERATION OF A FIRE PUMP AND AT A MINIMUM OF 6 INCHES UPSHORE AND 6 INCHES DOWNSTREAM OF ELECTRIC RESISTANCE AND FUEL-BURNING HEATERS IN A DUCT SYSTEM. METAL NOISKS OR SLEEVES SHALL BE INSTALLED TO PROTECT THE DUCT UNDER EACH HEATER. THE DUCT OPERATOR SHALL BE ADVISED OF THE DIRECTION OF OPERATION. UPON COMPLETION OF INSTALLATION OF DUCT LINER AND BEFORE OPERATION IS TO COMMENCE, VISUALLY SPEAK SYSTEM AND VERIFY THAT THE DUCT LINER IS PROPERLY INSTALLED. OPEN ALL SYSTEM DAMPERS AND TURN ON FANS TO BLOW ALL SCRAPS AND OTHER LOOSE PEECES OF MATERIAL OUT OF THE DUCT SYSTEM. ALLOW FOR A MEANS OF REMOVAL OF MATERIAL.
6. ALL MATERIAL CONTAINING FIBROUS MATERIALS EXPOSED TO ADHESIVE SHALL RATED FOR THAT EXPOSURE OR SHALL BE ENCAPSULATED. INSULATING PROPERTIES FOR ALL MATERIALS SHALL MEET OR EXCEED INDUSTRY STANDARDS. POLYSTYRENE PRODUCTS SHALL MEET ASTM C578. ALL INSULATION SHALL HAVE FORMALDEHYDE EMISSIONS NOT GREATER THAN 0.05 PPM. THE MAXIMUM FLAME SPREAD AND SMOKE DEVELOPED INDEX FOR INSULATION SHALL MEET THE REQUIREMENTS OF THE LOCAL CODE. THE LOCAL CODES SHALL BE ADDED BY THE JURISDICTION IN WHICH THE BUILDING IS LOCATED.
7. WASTIC USED TO SEAL DUCTWORK SHALL BE LISTED AND LABELED IN ACCORDANCE WITH UL 181A-95 OR UL 181B-98. MAINTAIN AMBIENT TEMPERATURES AND CONDITIONS REQUIRED BY MANUFACTURER OF ADHESIVES, MASTICS, AND INSULATION CEMENTS. DO NOT INSTALL DUCT SEALANT WHEN TEMPERATURES ARE LESS THAN THOSE RECOMMENDED BY THE SEALANT MANUFACTURER.
8. ALL ADHESIVES AND SEALANTS SHALL HAVE VOC CONTENT BELOW 20 GRAMS PER LITER AND WHICH MEET THE REQUIREMENTS OF THE MANUFACTURER OF THE PRODUCTS BEING ADHERED OR INVOLVED. ADHESIVES AND SEALANTS SHALL COMPLY TO MEET MATERIALS AND PERFORMANCE.
9. FACTORY-WARE ADGAP DUCTS AND CONNECTORS SHALL COMPLY WITH UL 181-96.
10. FLEXIBLE DUCT SHALL BE LISTED AS TYPE "R" OR CLASS "I", INSULATED, AND COMPLY WITH UL 181. FLEXIBLE DUCT SHALL BE FACTORY FORMED, COMPOSED OF STAINLESS STEEL, WOUND CORROSION RESISTANT WIRE BONDED TO AN INNER FIBER LINER. DUCT SHALL BE FACTORY INSULATED WITH A FOL VAPOR BARRIER JACKET. CONNECT TO RIGID DUCT WITH SPIN-IN FITTING AND DAMPER. FLEXIBLE DUCT AND AIR CONNECTORS SHALL NOT PASS THROUGH ANY FIRE RESISTANCE RATED WALL OR FLOOR.
11. THE MC SHALL PROVIDE ALL DIFFUSERS GRILLES, LOWERS, AND AIR DISTRIBUTION OUTLETS AND INLETS. LOWERS, GRILLES, AND DIFFUSERS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. FOR LAY-IN CEILING, INSTANT SUPPORT FROM THE STRUCTURE. FOR EACH DIFFUSER OR DOWNER, AIR DISTRIBUTION OUTLETS AND INLETS SHALL BE OF 1/8" X 6" COOLEY, PLECE, METAL-ARE, MALLOR, OR GIGGS OF THE 1987 MC MECHANICAL CODE.
12. AIR INLET SHALL BE INSTALLED IN ACCORDANCE WITH SECTION 605 OF THE 1987 MC MECHANICAL CODE.
13. THE MC SHALL PROVIDE ALL RETROPERATION PIPE, ALL PIPE AND FITTINGS SHALL BE TYPE ACR HARD COPPER TUBING WITH SWEAT FITTINGS. RETROPERATION LININGS SHALL RUN UNILATERALLY. WHERE A GROUP OF LINES ARE RUN, TRAPPEZ HANGERS MAY BE USED. DO NOT USE CHAIN OR WIRE HANGERS. RAUP TUBING SHALL BE USED AT EACH END OF THE LINE. HANGERS SHALL BE USED. HANGERS SHALL FIT AGAINST THE OUTSIDE OF THE COVERING WITH 1/2 GAUGE GALVANIZED STEEL SHELDGS OF A LENGTH EQUAL TO THE OUTSIDE DIAMETER OF THE INSULATION AND COVERING 3/4 OF THE CIRCUMFERENCE OF THE INSULATION. SAGS SHALL NOT BE PERMISSIBLE. HORIZONTAL LINES SHALL PITCH DOWN NOT LESS THAN 1 INCH IN 40 FEET. INSULATION WITH 1 INCH CLOSED CELL APMALPEX TYPE INSULATION WITH A FLAME DENSITY RATING NOT LESS THAN 25 AND A SMOKE DEVELOPED INDEX NOT LESS THAN 10. THE INSULATION SHALL BE COVERED BY 1/2" SLIVER AND AIR TIGHT. SOLDIER RETROPERATION LINES USING 15 PERCENT TAPERED SOLDER AND EVACUATE LINES TO 300 MICRONS. PROVIDE MOISTURE INDICATING SIGHT GLASS AND FILLER DRYER IN HOT LINE. PROVIDE OIL TRAPS AND DOUBLE RISERS IN REFRIGERANT SUTURE AND LIQUID GAS LINES WHERE REQUIRED TO PREVENT OIL SLUGGING AT THE COMPRESSOR AND INSURER. INSPECTOR LOCALITIES SHALL BE IDENTIFIED BY THE MANUFACTURER'S IDENTIFICATION OF ANY WATED ASSEMBLIES IN ACCORDANCE WITH THE SYSTEM IDENTIFICATION DIRECTORY FOR THE SPECIFIC ASSEMBLY BEING PENNATED. SEE ARCHITECTURAL PLANS FOR A LIST OF ALL UL FIRE RATE ASSEMBLIES.

METHODS:

- INSULATE DUCTWORK WITH FIBERGLASS DUCT WRAP. INSTALLED R-VALUE SHALL BE A MINIMUM R-6. COVERS AND LININGS, INCLUDING ADJUSTERS WHEN USED, SHALL HAVE A FLAME SPREAD INDEX NOT MORE THAN 25 AND A SMOKE-DEVELOPED INDEX NOT MORE THAN 50 WHEN TESTED IN ACCORDANCE WITH ASTM E 84. ALL NEW DUCTWORK SHALL RECEIVE INSULATION IN THE FOLLOWING MANNER:
 - 1. DUCT WORK INSULATION SHALL BE SECURED WITH TAPE. TAPE INSULATION SHALL BE TIGHTLY BUTTED. FOR RECTANGULAR DUCTS, INSTALLED INSULATION IS NOT EXCESSIVELY COMPRESSED AT DUCT CORNERS. STAPLE SPACING APPROXIMATELY 6 INCHES ON CENTER WITH OUTWARD CLINCHING STAPLES. SECURE WITH PRESSURE SENSITIVE TAPE MATCHING THE FACTORY FOR RECTANGULAR DUCTS. SECURE IN WIDTH OF DUCT. SECURE DUCT JOINTS AT THE BOTTOM OF THE DUCT WITH MECHANICAL FASTENERS SPACING 18 INCHES ON CENTER TO PREVENT SAGGING OF INSULATION. ADJACENT SECTIONS OF DUCT WRAP SHALL BE TIGHTLY BUTTED IN THE 2 INCH TAPE FLAP OVERLAPPING. ALL TEARS, PUNCTURES, ETC. OF THE DUCT WRAP INSULATION SHALL BE SEALED WITH TAPE OR WASTIC TO PROVIDE A WAPOR TIGHT SYSTEM. INSULATION SHALL BE BY KNOWN MANUFACTURER, OF FINING CORP. OR CERTIFIED CORPORATION.
 - 2. WHERE DUCTS HAVE BEEN TESTED BEFORE APPLYING INSULATION MATERIALS, VERIFY THAT DUCT SURFACES ARE CLEAN, DRY AND FREE OF FOREIGN MATERIAL. PRIOR TO INSULATING, DUCT COVERSINGS SHALL NOT PENETRATE A WALL OR FLOOR REQUIRED TO HAVE A FIRE-RESISTANCE RATING OR REQUIRED TO BE FIRE BLOCKED.
- WHERE DUCTS ARE CONNECTED TO EXTERIOR WALL, LOWERS AND DUCT OUTLET SHALL BE SMALLER THAN LOWER FRAME, PROVIDE BLANK-OUT PANELS SEALING LOWERS AREA AROUND DUCT. USE SAME MATERIAL AS DUCT, PAINTED BLACK ON EXTERIOR SIDE. SEAL TO LOWER FRAME AND WALL.
- PROVIDE DUCT ACCESS DOORS FOR INSPECTION AND CLEANING BEFORE AND AFTER FILTERS, COILS, FANS, AUTOMATIC DAMPERS, AT FAN DAMPERS, COMBINATION FAN AND SMOKE DAMPERS.
- CONSTRUCT ELBOWS AND ELBOWS WITH RATIO OF NOT LESS THAN 1-1/2 TIMES THE WIDTH OF THE DUCT ON CENTERLINE, WHERE NOT POSSIBLE AND WHERE RECTANGULAR ELBOWS ARE USED, PROVIDE TURNING VENTS.
- INCREASE DUCT SIZES GRADUALLY, NOT EXCEEDING 15 DEGREES DIVERGENCE, MAXIMUM OF 30 DEGREES DIVERGENCE UPSTREAM OF EXHAUST AND 45 DEGREES CONVERGENCE DOWNSTREAM.
- IT SHALL BE THE RESPONSIBILITY OF THE GC TO SUSPEND AND SUPPORT ALL DUCTS, DUCTWORK, OUTLET, DRAINAGE AND OTHER SYSTEMS FOLLOWING CONTRACTED ENGINEERING PRACTICES AND USING STANDARD, COMMERCIALY ACCEPTED HANGERS AND SUSPENSION EQUIPMENT. ALL HVAC EQUIPMENT SHALL BE SECURELY MOUNTED TO THE BUILDING STRUCTURE AND SHALL NOT RELY ON CEILING OR WALL SURFACES FOR SUPPORT. THE SUPPORT ATTACHMENT SHALL SUPPORT THE WEIGHT OF THE EQUIPMENT PLUS THE WEIGHT OF THE SUPPORT ATTACHMENT ITSELF. SUPPORT FROM THE TOP CHORD OF ROOF JOISTS, GIRDERS, OR RAFTS. THE DUCT SHALL NOT BE ATTACHED TO EQUIPMENT OR PIPING SUPPORT. HANGERS SHALL NOT BE ATTACHED TO CORRUGATED STEEL DECKING.
- DUCTS SHALL BE SUPPORTED IN ACCORDANCE WITH SMACNA AT INTERVALS NOT EXCEEDING 10 FEET. DUCTS 36 INCHES OR LARGER SHALL HAVE TRAPEZ TYPE HANGERS SUSPENDED WITH THREADED ROD. SUPPORT DUCTS FROM BAR JOISTS, GIRDERS, OR RAFTS.
- CHECK LOCATIONS OF AIR OUTLETS AND INLETS AND MAKE NECESSARY ADJUSTMENTS IN POSITION TO CONFORM WITH ARCHITECTURAL FEATURES, SYNOETRY, AND LIGHTING ARRANGEMENT. COORDINATE WITH SPRINKLER CONTRACTOR IF APPLICABLE.
- PROVIDE BALANCING DAMPERS AT POINTS ON SUPPORT WHERE BRANCHES ARE TACKED FROM LARGER DUCTS AS REQUIRED FOR AIR BALANCING. INSTALL MINIMUM 2 INCHES OF BALANCING DAMPER. BALANCING DAMPERS SHALL BE TURNED TO ZERO TO DISRUPTORS, AND REGISTERS, REGARDLESS OF WHETHER DAMPERS ARE SPECIFIED AS PART OF THE DIFFUSER OR REGISTER ASSEMBLY. ADJUST AIR HANDLING AND DISTRIBUTION SYSTEMS TO PROVIDE DESIGN SUPPLY, RETURN, AND EXHAUST AIR QUANTITIES AT SITE ALTITUDE.
- GC SHALL INSTALL FIRE DAMPERS AT EACH PENETRATION OF A RATED WALL AND FLOOR DRAINAGE PENETRATION. PROVIDE AUTOMATIC WIND- AND WATER-TIGHT. FIRE DAMPERS SHALL BE UL LABELED (UL 555), CURTAIN TYPE, WITH INTEGRAL FLEXIBLE SLEEVE AND BLADES LOCATED OUTSIDE THE AIR STREAM. INSTALLATION OF ALL FIRE DAMPERS SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS AND SECTION 607 OF THE 2016 NC

MECHANICAL CODE. PROVIDE ACCESS PANELS FOR TESTING AND SERVICE AS NECESSARY. MC SHALL PROVIDE RADIATION DAMPERS AND THERMAL BLANKETS FOR ALL PENETRATIONS OF RATED GLEED ASSEMBLIES. RADIATION DAMPERS SHALL BE UL LABELED (UL 555C) AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. PENETRATIONS FOR RADIATION DAMPERS COMBINATION FUEL/SMOKE DAMPERS, AND CEILING RADIATION DAMPERS SHALL BE BY RUSON, NALCO, OR LLOYD INDUSTRIES.

MC SHALL INSTALL PROGRAMMABLE THERMOSTATS AS SHOWN ON THE PLANS. THERMOSTAT SHALL BE MOUNTED AT 48 INCHES AFF. THERMOSTATS SHALL MEET THE REQUIREMENTS OF SECTION 0432.04.04 OF THE 2018 NORTH CAROLINA ENERGY CODE.

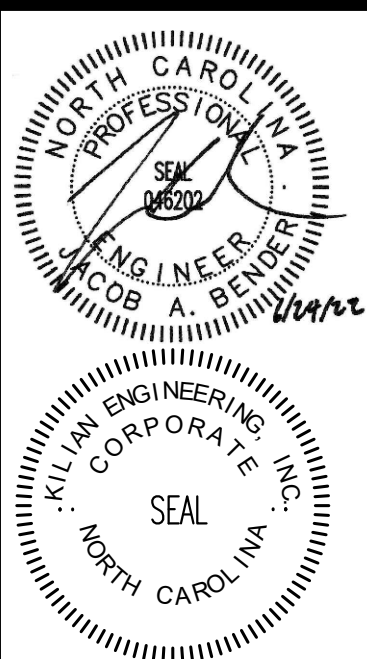
FRESH AIR INTAKES SHALL BE CALLOUT ON ALL UNITS AS SHOWN ON DRAWINGS. MAINTAIN 10 FEET OF DISTANCE BETWEEN FRESH AIR INTAKES AND ALL EXHAUST TERMINATIONS AND PLUMBING VENT THRU ROOFS.

MC SHALL INSTALL ALL EXHAUST FANS AND VENT TO THE BUILDING'S EXTERIOR. EC SHALL SWITCH FANS WITH LIGHTS OR ON SEPARATE SWITCH AS SHOWN.

P-TRAPS SHALL BE INSTALLED ON ALL UNITS. MC SHALL INSTALL AUXILIARY DRAIN PANS UNDER OVERHEAD AIR HANDLERS AND AN AUTOMATIC CUT-OFF FLOAT SWITCH FOR EACH. P-TRAPS AND CONDENSATE LINES SHALL BE 1 INCH.

P-TRAPS AND CONDENSATE LINES MAY BE PVC WHERE NOT LOCATED IN PLUMBING; OTHERWISE, THEY SHALL BE TYPE M COPPER.

INSTALLATION SHALL BE IN ACCORDANCE WITH ALL APPLICABLE DUCTS WHICH THEY PENETRATE THE THERMAL ENVELOPE PER NORTH CAROLINA ENERGY CONSERVATION CODE 0422.5.5



**LAKESIDE STORAGE
BUILDING B**

UNIVERSITY OF NORTH CAROLINA

REVISION

ISSUED:

DRAWN BY:-JMB
CHECKED BY:- MWK -

MECHANICAL NOTES AND
SCHEDULES

SHEET NO.

M1

PROJECT NO: 22214

LIGHT FIXTURE SCHEDULE												
MARK	DESCRIPTION	LID/COVER/LENS	LAMPS		BALLAST		VOLTAGE	INPUT WATTAGE	MOUNTING	REMARKS	MFG	MODEL
			TYPE	QTY	TYPE	QTY						
A	4' LED FIXTURE	ACRYLIC	LED	3500K	LED DRIVER	1	120	41	SURFACE	2	LITHONIA	ZL1D-L48-5000LM-FST-WQLT-35K-80CRI
AE	4' LED FIXTURE W/ EM	ACRYLIC	LED	3500K	LED DRIVER	1	120	41	SURFACE	1,2	LITHONIA	ZL1D-L48-5000LM-FST-WQLT-35K-80CRI-ETW
AP	LED WALL PACK	ACRYLIC	LED	4000K	LED DRIVER	1	120	54	SURFACE	2,3	LITHONIA	TWX2-LED-ALD-40K-WQLT
PE	EXTERIOR DVAL LED EMERGENCY LIGHT	POLYCARBONATE	LED	-	LED DRIVER	1	120	2	SURFACE	1,2	EELP	IDEM-EM
EM	DUAL HEAD EMERGENCY FIXTURE	ACRYLIC	LED	N/A	-	-	120	2	VARIES	1,2	LITHONIA	ELM2-LED-SD
EX	LED EXIT SIGN W/ BATTERY BACKUP	ACRYLIC	LED	N/A	-	-	120	1	VARIES	1,2	LITHONIA	L0W-S-W-1-R-120/277-EL-N-SD

1. FIXTURE SHALL HAVE BATTERY BACKUP FOR 90 MINUTE ILLUMINATION.
2. OR EQUAL BY COOPER, MOBERN, OR CURRENT BY GE LIGHTING

OCCUPANCY SENSORS SEQUENCE OF OPERATION WITH LOW-VOLTAGE MOMENTARY SWITCH
1. OCCUPANCY SENSOR DETECTS MOTION AND TURNS THE LIGHTS ON. SENSOR HOLDS LIGHTS ON AS LONG AS MOTION IS DETECTED. IF AFTER THE SET TIME DELAY, NO MOTION IS DETECTED, LIGHTS TURN OFF. CONSULT OWNER FOR DESIRED TIME DELAY SETTING. 2. THE LOAD CAN BE TURNED ON USING THE MANUAL SWITCH AND IT STAYS ON ACCORDING TO THE OCCUPANCY LOAD SETTING. THE TIME DELAY OPERATES AS PROGRAMMED. WHEN THE LOAD TURNS OFF DUE TO LACK OF OCCUPANCY DETECTION, IT CAN BE TURNED ON AGAIN BY OCCUPANCY DETECTION OR THE SWITCH. 3. ACTIVATING THE MANUAL SWITCH WHILE THE LOAD IS ON TURNS THE LOAD OFF. 3.1. WHEN THE LOAD IS TURNED OFF MANUALLY, AS LONG AS THE SENSOR CONTINUES TO DETECT OCCUPANCY THE LOAD STAYS OFF. FIVE MINUTES AFTER THE LAST OCCUPANCY DETECTION, THE LIGHTS STAY OFF AND THE SENSOR REVERTS TO THE AUTOMATIC-ON MODE. 3.2. WHEN THE LOAD IS TURNED OFF MANUALLY, PRESSING THE SWITCH AGAIN TURNS THE LOAD ON AND THE SENSOR REVERTS TO THE AUTOMATIC-ON MODE. 3.3. ONCE RETURNING TO AUTOMATIC-ON MODE, EITHER THE SWITCH OR OCCUPANCY DETECTION CAN TURN THE LOAD ON. 4. LOW-VOLTAGE INPUT SIGNAL FROM TIME CLOCK HOLDS LIGHTS ON DURING RETAIL HOURS REGARDLESS OF OCCUPANCY DETECTION.

OCCUPANCY SENSORS SEQUENCE OF OPERATIONS WITH LINE-VOLTAGE SWITCH
1. LINE VOLTAGE SWITCH MUST BE TURNED ON OR IN ON POSITION. 2. OCCUPANCY SENSOR DETECTS MOTION AND TURNS THE LIGHTS ON. SENSOR HOLDS LIGHTS ON AS LONG AS MOTION IS DETECTED. IF AFTER THE SET TIME DELAY, NO MOTION IS DETECTED, LIGHTS TURN OFF. CONSULT OWNER FOR DESIRED TIME DELAY SETTING. 3. THE LOAD CAN BE TURNED OFF USING THE MANUAL LINE VOLTAGE SWITCH AND IT STAYS OFF UNTIL THE SWITCH IS TURNED ON POSITION AND THE OCCUPANCY SENSOR DETECTS OCCUPANCY.

NOTES FOR EMERGENCY FIXTURES
1. FOR INTERIOR FIXTURES WITH EMERGENCY BATTERIES, WIRE THE BATTERY CHARGER ON THE SAME CIRCUIT AS THE FIXTURE BALLAST AHEAD OF ALL SWITCHES, SENSORS, ETC. 2. FOR EXTERIOR FIXTURES WITH EMERGENCY BATTERIES, WIRE THE BATTERY CHARGER ON THE SAME CIRCUIT AS THE NORMAL EXTERIOR LIGHTS OR AS SHOWN ON PLANS AHEAD OF ALL CONTACTORS, PHOTOCELLS, ETC. 3. IN BOTH CASES, EMERGENCY POWER SHOULD INITIATE ONLY IN THE EVENT OF THE LOSS OF NORMAL POWER. ALL BATTERIES SHALL BE RATED TO POWER EMERGENCY ILLUMINATION FOR 90 MINUTES MINIMUM.

VOLTAGE DROP SCHEDULE			
120V CIRCUITS < 8 AMPS (1.0 kVA)			
DISTANCE TO 1ST LOAD	AWG SIZE		
0' - 120'	#12		
121' - 190'	#10		
191' - 300'	#8		
301' - 470'	#6		
120V CIRCUITS 9 TO 14 AMPS (1.0-1.7 kVA)			
DISTANCE TO 1ST LOAD	AWG SIZE		
0' - 65'	#12		
66' - 110'	#10		
111' - 170'	#8		
171' - 270'	#6		

GENERAL ELECTRICAL NOTES:

ADMINISTRATIVE:

1. THE FOLLOWING ABBREVIATIONS SHALL APPLY TO NOTES AND PLANS:
PC – PLUMBING CONTRACTOR, GC – ELECTRICAL CONTRACTOR,
MC – MECHANICAL CONTRACTOR, GC – GENERAL CONTRACTOR,
FASC – FIRE ALARM SYSTEM CONTRACTOR, AHJ – AUTHORITY HAVING JURISDICTION.
2. "PROVIDE" MEANS TO FURNISH AND INSTALL. THE ELECTRICAL CONTRACTOR SHALL ALSO INSTALL MATERIALS AND EQUIPMENT FURNISHED BY OTHERS AND THE GENERAL CONTRACTOR AS REQUIRED.
3. EC SHALL PROVIDE LABOR, MATERIALS, EQUIPMENT, AND SERVICES NECESSARY AND REASONABLY INCIDENTAL TO INSURE A COMPLETE AND OPERATIONAL ELECTRICAL SYSTEM IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS. MINOR ITEMS, ACCESSORIES, AND DEVICES REASONABLY INFERRABLE AS NECESSARY FOR THE COMPLETION AND PROPER OPERATION OF ANY ELECTRICAL SYSTEM SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR.
4. WORKMANSHIP SHALL BE IN ACCORDANCE WITH NECA 1 "STANDARD PRACTICE FOR GOOD WORKMANSHIP IN ELECTRICAL CONTRACTING."
5. ALL MATERIALS AND EQUIPMENT SHALL BE DELIVERED TO THE SITE AND UNLOADED BY THE ELECTRICAL CONTRACTOR AT AN APPROVED LOCATION. THE ELECTRICAL CONTRACTOR SHALL PROTECT ALL MATERIALS AND EQUIPMENT FROM BREAKAGE, THEFT, AND THE ELEMENTS. ALL MATERIALS AND EQUIPMENT SHALL REMAIN THE PROPERTY OF THE ELECTRICAL CONTRACTOR UNTIL THE PROJECT HAS BEEN COMPLETED AND TURNED OVER TO THE OWNER.
6. THE ELECTRICAL CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS, FEES, AND INSPECTIONS NECESSARY FOR THE COMPLETION OF THE WORK UNDER THIS CONTRACT.
7. DO NOT SCALE THESE DRAWINGS-REFER TO ARCHITECTURAL SHEETS FOR DIMENSIONS.
8. TRADE NAMES AND MANUFACTURERS ARE SPECIFIED TO ESTABLISH A QUALITY STANDARD. SUBSTITUTIONS SHALL BE PERMITTED IF APPROVED BY THE ENGINEER PRIOR TO INSTALLATION. ALL LISTED MODEL NUMBERS SHALL BE VERIFIED WITH THE MANUFACTURER FOR PROPER APPLICATION OF EQUIPMENT.
9. THE ELECTRICAL CONTRACTOR SHALL VISIT THE SITE PRIOR TO BIDDING TO BECOME FAMILIAR WITH EXISTING CONDITIONS. THE ELECTRICAL CONTRACTOR SHALL CONTACT THE ENGINEER TO RESOLVE ANY DISCREPANCIES BETWEEN EXISTING CONDITIONS AND THESE PLANS. THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH OTHER TRADES PRIOR TO THE START OF CONSTRUCTION.
10. GROUNDING AND BONDING SHALL BE PER NEC ARTICLE 250. THE RACEWAY SYSTEM SHALL NOT BE RELIED UPON FOR GROUNDING CONTINUITY. A GREEN EQUIPMENT GROUNDING CONDUCTOR, SIZED PER NEC TABLE 250-122, SHALL BE RUN IN ALL POWER RACEWAYS. FOR NON-ISOLATED GROUND CIRCUITS PROVIDING ONE EQUIPMENT GROUNDING CONDUCTOR PER CONDUIT RUN. FOR ISOLATED GROUND CIRCUITS, PROVIDE ONE NEUTRAL AND ONE ISOLATED GROUND WIRE FOR EACH CIRCUIT. IN ADDITION, PROVIDE ONE EQUIPMENT GROUNDING CONDUCTOR PER CONDUIT RUN. MAIN BONDING JUMPERS AND SYSTEM BONDING JUMPERS SHALL BE INSTALLED IN ACCORDANCE WITH 250.28 OF THE NEC. FOR BUILDINGS OR STRUCTURES SUPPLIED BY FEEDERS OR BRANCH CIRCUITS, GROUNDING AND BONDING SHALL BE IN ACCORDANCE WITH 250.32. SEPARATELY DERIVED AC SYSTEMS SHALL BE GROUNDING IN ACCORDANCE WITH 250.30. RESISTANCE TO GROUND SHALL NOT EXCEED 25 OHMS; ADDITIONAL GROUNDING ELECTRODES SHALL BE INSTALLED PER 250.56 AS NECESSARY. THE ELECTRICAL CONTRACTOR SHALL ALSO COORDINATE WITH THE GENERAL CONTRACTOR REGARDING THE BONDING OF THE FOOTING REINFORC. SO THAT IT WILL BE IN PLACE AND READY AT TIME OF FOOTING INSPECTION.
11. ALL MATERIALS AND EQUIPMENT SHALL COMPLY WITH THE UNDERWRITERS' LABORATORIES, INC. STANDARDS OR HAVE UL APPROVAL, OR BEAR UL RE-EXAMINATION LISTING WHERE SUCH APPROVAL HAS BEEN ESTABLISHED FOR THE TYPE OF DEVICE IN QUESTION.
12. CONDUCTORS, FUSES, CIRCUIT BREAKERS, AND DISCONNECT SWITCHES SHOWN ON THESE PLANS HAVE BEEN SIZED FOR THE SPECIFIED EQUIPMENT. BEFORE ORDERING ELECTRICAL EQUIPMENT, THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH OTHER CONTRACTORS ON THE SITE AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES SHOULD CONDUCTOR, CIRCUIT BREAKER, OR FUSE SIZES REQUIRE CHANGE.
14. THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE GENERAL CONTRACTOR TO ENSURE THE FOLLOWING MATERIALS ARE RECEIVED DURING THE CONSTRUCTION PHASE OF THE PROJECT: LIGHT FIXTURES, INCLUDING PROPER DISPOSAL OF BALLASTS, FLUORESCENT LIGHT BULBS, AND TRANSFORMERS, WIRING AND ELECTRICAL EQUIPMENT, AND INSULATION. WASTE MATERIALS CONTAINING LEAD, ASBESTOS, PCBs (FLUORESCENT LAMP BALLASTS), OR OTHER HARMFUL SUBSTANCES SHALL BE HANDLED AND DISPOSED OF IN ACCORDANCE WITH FEDERAL AND STATE LAWS AND REQUIREMENTS CONCERNING HAZARDOUS WASTE.
15. ALL WORK SHALL CONFORM TO 2020 NATIONAL ELECTRIC CODE, 2018 STATE BUILDING CODE, AND ALL APPLICABLE LOCAL CODES.

MATERIALS:

1. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL NECESSARY DISCONNECTS, SWITCHES, RECEPTACLES, TERMINALS, ETC. UNDER THE ELECTRICAL BID AND SHALL INCLUDE ALL NECESSARY CIRCUITS AND CONNECTIONS TO THE EQUIPMENT PROVIDED BY ALL SUPPLIERS, UNLESS NOTED OTHERWISE BY OTHER DISCIPLINES.
2. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL SERVICE ENTRANCE EQUIPMENT, SUB PANELS, AND OTHER ELECTRICAL DISTRIBUTION EQUIPMENT AS NECESSARY FOR A COMPLETE INSTALLATION. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH UTILITY REGARDING SERVICE AND METERING DETAILS. PRIOR TO ORDERING EQUIPMENT, THE ELECTRICAL CONTRACTOR SHALL OBTAIN THE AVAILABLE FAULT CURRENT OR TRANSFORMER SIZE AND IMPEDANCE FROM THE UTILITY AND CONTACT THE ENGINEER IF THE VALUE EXCEEDS THE EQUIPMENT SPECIFIED. PANEL BOARDS AND SWITCH BOARDS SHALL BE SQUARE D, OUTLET-HAMMER, OR GE. BUS BARS SHALL BE COPPER UNLESS OTHERWISE APPROVED BY THE ENGINEER. RECESSED PANEL BOARDS SHALL BE INSTALLED FLUSH WITH THE WALL FINISH. METER BASES SHALL COMPLY WITH THE UTILITY'S SPECIFICATIONS AND SHALL BE MOUNTED AT A HEIGHT APPROVED BY THE UTILITY. ALL EQUIPMENT IDENTIFIED FOR SERVICE ENTRANCE USE SHALL BE SO LABELED AND UL LISTED FOR SUCH USE. ELECTRICAL CONTRACTOR SHALL INSTALL ALL ELECTRICAL EQUIPMENT WITH CLEARANCES PER NEC 110.26. ELECTRICIAN SHALL PERMANENTLY LABEL EQUIPMENT PER NEC 110.24.
3. ENCLOSED SAFETY SWITCHES SHALL BE HEAVY DUTY TYPE BY SQUARE D, EATON, OR GE. ENCLOSED SWITCHES SHALL HAVE A HANDLE LOCKABLE IN THE OFF POSITION AND SHALL HAVE A HANDLE INTERLOCKED TO PREVENT OPENING THE FRONT COVER WHILE IN THE ON POSITION. ENCLOSED SWITCHES OF THE FUSIBLE TYPE SHALL BE FUSED IN ACCORDANCE WITH NAMEPLATE DATA WITH DUAL ELEMENT TYPE FUSES BY BUSSMAN, LITTELFUSE, OR Mersen.
4. OCCUPANCY SENSORS SHALL BE BY WATSTOPPER, LUTRON, LEVITON, SENSOR SWITCH, HUBBELL, OR APPROVED EQUAL.
5. CIRCUIT BREAKERS SHALL BE MOLDED-CASE, THERMAL MAGNETIC TYPE WITH QUICK-MAKE, QUICK-BREAK MECHANISM, COMMON TRIP ON MULTI-POLE BREAKERS, AND UL LISTED FOR BOTH COPPER AND ALUMINUM CONDUCTORS. CIRCUIT BREAKERS IN PANELS SHALL BE SERIES RATED WITH THE MAIN BREAKER, FULLY RATED FOR THE SYSTEM, OR SERIES RATED WITH THE BREAKER FEEDING THE PANEL FROM THE FACTORY.
6. ALL WIRE, CONNECTORS, TERMINALS, AND LUGS SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR. WHERE CONDUCTORS ARE RUN IN PARALLEL, LUGS SHALL BE LISTED FOR PARALLEL CONDUCTORS. PUSH WIRE CONNECTORS ARE NOT ALLOWED FOR BUILDING WIRE. PUSH CONNECTORS ARE ONLY ALLOWED, WHEN APPROVED, AS PART OF MANUFACTURED LISTED PRODUCTS. ALL WIRE SHALL BE INSTALLED IN CONDUIT UNLESS SPECIFICALLY NOTED OTHERWISE.
7. THE INSULATION TYPE FOR INTERIOR WIRING SHALL BE DUAL RATED THIN/THIN OR XHHW. ALL WIRING INSTALLED BELOW GRADE OR IN MOIST OR WET LOCATIONS SHALL HAVE TYPE THIN OR XHHW INSULATION. INSULATION VOLTAGE RATING SHALL BE 600 VOLTS AND A MINIMUM TEMPERATURE RATING OF 75°C. CONDUCTORS SHALL BE SOLID OR STRANDED COPPER FOR #10 AWG AND #12 AWG, AND STRANDED COPPER FOR #8 AWG AND LARGER SIZES. ALL WIRING AND CABLE SHALL BE UL LISTED. ALL TERMINATIONS AND DEVICES SHALL BE RATED FOR USE WITH 75°C CONDUCTORS. FINAL CONNECTIONS TO ALL MOTORS AND EQUIPMENT SUBJECT TO VIBRATION OR MOVEMENT SHALL BE MADE WITH STRANDED COPPER CONDUCTORS. CONDUCTORS SHALL BE BY CERRO WIRE, INC. INSULATED WIRE & CABLE, INC. ENCORE WIRE CORPORATION, OR SOUTHWIRE COMPANY.
8. JOINTS IN SOLID CONDUCTORS SHALL BE SPLICED USING IDEAL "WIRE NUTS", 3M "SCOTCH LOCK", OR T&B "PIGGY" CONNECTORS IN JUNCTION BOXES, OUTLET BOXES, AND LIGHTING FIXTURES. JOINTS IN STRANDED CONDUCTORS SHALL BE SPLICED BY APPROVED MECHANICAL CONNECTORS AND GUM RUBBER TAPE OR FRICTION TAPE. SOLDERLESS MECHANICAL CONNECTORS FOR SPICES AND TAPS, PROVIDED WITH UL APPROVED INSULATING COVERS, MAY BE USED INSTEAD OF MECHANICAL CONNECTORS PLUS TAPE. IN ALL CASES, CONDUCTORS SHALL BE CONTINUOUS FROM OUTLET TO OUTLET AND NO SPLICING SHALL BE MADE EXCEPT WITHIN OUTLET OR JUNCTION BOXES, TROUSERS, OR GUTTERS. WHERE CONCENTRIC, ECCENTRIC, OR OVERSIZED KNOCKOUTS ARE ENCOUNTERED, A GROUNDING TYPE INSULATED BUSBAR SHALL BE SPUN, ALL CLEARANCES BETWEEN THE BOX AND THE GYPSUM BOARD SHALL BE FILLED WITH JOINT COMPOUND OR OTHER APPROVED FIRE STOP MATERIAL. FLUSH MOUNTED JUNCTION BOXES IN ADJACENT ROOMS SHALL NOT BE MOUNTED BACK-TO-BACK. SURFACE MOUNTED FIXTURES SHALL BE VERIFIED WITH THE BUILDING INSPECTOR PRIOR TO INSTALLATION. ALL FLUORESCENT FIXTURES SHALL HAVE ELECTRONIC BALLASTS MEETING ANSI C82.11 FOR ELECTRONIC BALLAST PERFORMANCE. ALL BALLASTS SHALL BE UL LISTED AND MEET FEDERAL AND STATE EFFICIENCY REQUIREMENTS.
10. ALL CONDUIT, FITTINGS, COUPLINGS, AND SUPPORTS SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR. CONDUIT FITTINGS AND COUPLINGS SHALL BE BY APPLETON, RACO, OR O-2/GCONEX. COUPLINGS SHALL BE THREADED, SET-SCREW OR COMPRESSOR TYPE. INDENTED OR CRIMP TYPE ARE NOT PERMITTED. CONDUIT FITTINGS AT ALL ELECTRICAL BOXES INCLUDING PULL, JUNCTION, AND OUTLET BOXES, SHALL HAVE INSULATED THROATS TO PREVENT INSULATION SCORING. DIE CAST FITTINGS ARE NOT PERMITTED.
11. EMT SHALL BE MANUFACTURED IN ACCORDANCE WITH AMERICAN NATIONAL STANDARDS INSTITUTE-AMERICAN NATIONAL STANDARD FOR STEEL ELECTRICAL METALLIC TUBING (EMT), ANSI C80.3 AND UL 797. RIGID METAL CONDUIT SHALL BE MANUFACTURED IN ACCORDANCE WITH ANSI-AMERICAN NATIONAL STANDARD FOR ELECTRICAL RIGID STEEL CONDUIT (ERSC), ANSI C80.1 AND UL 6. INTERMEDIATE METAL CONDUIT SHALL BE MANUFACTURED IN ACCORDANCE WITH ANSI-AMERICAN NATIONAL STANDARD FOR INTERMEDIATE METAL CONDUIT ANSI C80.6 AND UL 1242.
12. METAL CONDUIT SHALL BE BY ALUET TUBING & CONDUIT, BECK MANUFACTURING, INC. OR METALRUL TUBE COMPANY. FLEXIBLE METAL CONDUIT, LIQUID-TIGHT FLEXIBLE METAL CONDUIT, AND NONMETALLIC CONDUIT SHALL BE BY APC CABLE SYSTEMS, INC., ELECTRI-FLEX COMPANY, OR INTERNATIONAL METAL HOSE.

METHODS:

1. EC SHALL REVIEW THE MECHANICAL PLANS TO ESTABLISH POINTS OF CONNECTION AND THE EXTENT OF THE ELECTRICAL WORK TO BE PROVIDED IN THE CONTRACT.
2. ALL CIRCUIT BREAKERS FEEDING HVAC EQUIPMENT SHALL BE HACR BREAKERS. ALL BRANCH CIRCUIT CONDUCTORS SHALL BE MINIMUM #12 AWG IN 3/4 in CONDUIT. EACH MULTI-WIRE BRANCH CIRCUIT SHALL BE PROVIDED WITH A MEANS TO SIMULTANEOUSLY DISCONNECT ALL UNGROUNDED CONDUCTORS AT THE SOURCE PER NEC 210.4(D) GROUP ALL CONDUCTORS OF EACH MULTI-WIRE BRANCH CIRCUIT PER 210.4(D) WITH WIRE TIES OR SIMILAR MEANS. DO NOT EXCEED THREE HOMERUNS PER CONDUIT. DO NOT INSTALL ISOLATED GROUND AND NON-ISOLATED GROUND CIRCUITS IN THE SAME CONDUIT. INSTALL CONDUCTORS OF DIFFERENT VOLTAGES IN SEPARATE CONDUITS.
3. COLOR CODE CONDUCTORS PER NEC. FEEDERS SHALL BE IDENTIFIED IN ACCORDANCE WITH NEC 215.12. USE BLACK, RED, AND BLUE FOR PHASES A, B, AND C RESPECTIVELY ON 208Y/120 VOLT THREE-PHASE Y SYSTEMS AND WHITE FOR THE NEUTRAL. COLORS SHALL BE FACTORY APPLIED FOR CONDUCTORS #6 AWG AND SMALLER. ALL EQUIPMENT GROUNDING CONDUCTORS SHALL BE GREEN IN COLOR AND MINIMUM #12 AWG. THE EC SHALL PROVIDE PLENUM RATED CABLE FOR ANY ELECTRICAL, TELEPHONE, COMMUNICATION, OR OTHER CABLE THAT ENTERS CEILING RETURN PLenums.
4. ALL LIGHT FIXTURES SHALL BE SUPPORTED INDEPENDENTLY OF THE SUSPENDED CEILING. COORDINATE LIGHTING LAYOUT WITH CEILING GRID, MECHANICAL EQUIPMENT, DUCTWORK AND SPRINKLER HEADS AS NECESSARY. SEE REFLECTED CEILING PLAN FOR DETAILS. FLUORESCENT FIXTURES UTILIZING DOUBLE-ENDED LAMPS MUST HAVE A DISCONNECTING MEANS COMPLYING WITH NEC 410.163(e).
5. ALL LIGHT FIXTURES SHALL BE SUPPORTED INDEPENDENTLY OF THE SUSPENDED CEILING. COORDINATE LIGHTING LAYOUT WITH CEILING GRID, MECHANICAL EQUIPMENT, DUCTWORK AND SPRINKLER HEADS AS NECESSARY. SEE REFLECTED CEILING PLAN FOR DETAILS. FLUORESCENT FIXTURES UTILIZING DOUBLE-ENDED LAMPS MUST HAVE A DISCONNECTING MEANS COMPLYING WITH NEC 410.163(e).
6. ELECTRICAL CONTRACTOR SHALL PROVIDE FIRE-STOPPING AT ALL ELECTRICAL PENETRATIONS OF RATED FLOORS AND WALLS TO PRESERVE OR RESTORE THE FIRE-RESISTANCE RATING. SEAL PENETRATIONS USING A UL LISTED SYSTEM FOUND IN THE UL DIRECTORY SPECIFIC TO THE UL LISTING OF THE ASSEMBLY BEING PENETRATED. SEE ARCHITECTURAL PLANS FOR UL RATED ASSEMBLIES SPECIFIC TO THIS PROJECT.
7. ELECTRICAL CONTRACTOR SHALL PROVIDE GFCI RECEPTACLES IN KITCHENS, RESTROOMS, OUTDOORS, AND IN SHOP AREAS AS REQUIRED BY NEC. REFRIGERATORS AND WATER COOLERS MUST HAVE A DEDICATED GFCI BREAKER. EACH OUTDOOR HVAC UNIT MUST HAVE A GFCI RECEPTACLE WITHIN 25 FEET FOR SERVICING. GFCI RECEPTACLES SHALL CONFORM TO UL 943 CLASS A AND UL 498 STANDARDS. SHOW WINDOW RECEPTACLES SHALL BE PROVIDED IN ACCORDANCE WITH 210.62 OF THE NEC. RECEPTACLES SHALL BE BY COOPER WIRING DEVICES, LEVITON MANUFACTURING, PASS & SEYMOUR, OR HUBBELL. PROVIDE BOX DEVICE PARTITION/DIVIDERS FOR MULTI-GANG BOXES FOR COMPLIANCE WITH NEC 404.8(B).
8. LOCATIONS AND HEIGHTS OF ALL WALL-MOUNTED DEVICES SHALL BE COORDINATED WITH THE ARCHITECT PRIOR TO INSTALLATION.
9. CONCEAL ALL RACEWAYS EXCEPT IN MECHANICAL ROOMS OR UNFINISHED AREAS AS NOTED. USE EMT CONDUIT FOR ALL BRANCH CIRCUITS AND FEEDERS INSIDE THE BUILDING. TYPE MC CABLE AND TYPE AC CABLE MAY BE INSTALLED WITHIN WALLS IF ALL NEUTRAL WIRES, ISOLATED GROUND WIRES, AND EQUIPMENT GROUND WIRES AS LISTED ABOVE ARE CONTAINED IN THE CABLE. FLEXIBLE CONNECTIONS TO MOTORS AND OTHER EQUIPMENT SHALL BE MADE USING WEATHERPROOF FLEXIBLE CONDUIT. FOR LAY-IN LIGHT FIXTURES, USE MAXIMUM OF SIX (6) FEET OF FLEXIBLE MC CABLE (OR THE FLEXIBLE CONDUIT PROVIDED BY THE FIXTURE MANUFACTURER). SCHEDULE 40 PVC CONDUIT MAY BE USED FOR THE SECONDARY UNDERGROUND SERVICE, UNDERGROUND TELEPHONE SERVICE, AND BRANCH AND FEEDER CIRCUITS UNDER SLAB OR EXTERIOR TO THE BUILDING. EXPOSED EXTERIOR CONDUIT SHALL BE SCHEDULE 40 PVC. ALL UNDERGROUND RACEWAYS SHALL BE IDENTIFIED WITH UNDERGROUND LINE MARKING TAPE 6-8 in BELOW GRADE DIRECTLY ABOVE THE RACEWAY. PROVIDE PULL WIRE IN EMPT CONDUITS. UPSIZE CONDUIT FROM MINIMUM SIZE AS NECESSARY FOR LONGER PULLS. UNDERGROUND RACEWAYS THAT STUB INTO THE BOTTOM OF SWITCHGEARS, OUTDOOR TRANSFORMERS, GENERATORS, ETC., SHALL RISE AT LEAST 2 in ABOVE THE FINISHED SLAB TO PREVENT WATER FROM DRAINING INTO THE RACEWAYS. RACEWAYS THAT PENETRATE EXTERIOR WALLS OR INTERIOR PARTITIONS SEPARATING SPACES THAT WILL BE AT SIGNIFICANTLY DIFFERENT TEMPERATURES SHALL BE SEALED IN ACCORDANCE WITH 300.5(G), 300.7(A), AND 300.50(E) OF THE NEC. ROUTE CONDUIT IN AND UNDER SLAB FROM POINT-TO-POINT. ROUTE EXPOSED CONDUIT AND CONDUIT INSTALLED ABOVE ACCESSIBLE CEILINGS PARALLEL AND PERPENDICULAR TO WALLS. COMPLETELY AND THOROUGHLY SEWAB ALL RACEWAYS BEFORE INSTALLING WIRE. PULL ALL CONDUCTORS INTO EACH RACEWAY AT ONE TIME. USE A SUITABLE WIRE PULLING LUBRICANT FOR BUILDING WIRE #4 AWG AND LARGER.
10. CABLES, RACEWAYS, OR BOXES, INSTALLED IN EXPOSED OR CONCEALED LOCATIONS UNDER METAL-CORRUGATED SHEET ROOF DECKING, SHALL BE INSTALLED AND SUPPORTED SO THERE IS NOT LESS THAN 1-1/2 in MEASURED FROM THE LOWEST SURFACE OF THE ROOF DECKING TO THE TOP OF THE CABLE, RACEWAY, OR BOX. A CABLE, RACEWAY, OR BOX SHALL NOT BE INSTALLED IN CONCEALED LOCATIONS IN METAL-CORRUGATED, SHEET DECKING-TYPE ROOF. SEE NEC 300.4(E).
11. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL OUTLET, JUNCTION, PULL BOXES, FITTINGS, AND SUPPORTS. ALL OUTLET AND JUNCTION BOXES SHALL BE GALVANIZED STEEL TYPE BY APPLETON, STEEL CITY, OR RACO. EXTERIOR BOXES SHALL BE TYPE FS. WIPORITE BOXES SHALL BE TYPE GS. WHERE SURFACE MOUNTED BOXES ARE USED, THOSE BOXES AND

THEIR FACEPLATES SHALL HAVE ROUNDED CORNERS. BOXES INSTALLED IN FLOORS SHALL BE RATED FOR THE APPLICATION. MOUNT JUNCTION AND OUTLET BOXES FLUSH WITH FINISH SURFACES UNLESS OTHERWISE NOTED. WHERE MOUNTING FLOOR TO THE CENTER OF THE BOX. ALL BOXES SHALL BE SIZED PER NEC ARTICLE 314. ALL OUTLET AND JUNCTION BOXES SHALL HAVE IN RATED WALLS SHALL BE INSTALLED IN ACCORDANCE WITH NORTH CAROLINA BUILDING CODE 714.3.2 (MAXIMUM BOX SIZE IS 16 SQUARE IN AND MAXIMUM OF SIX (6) BOXES PER 100 SQUARE FEET). INSTALL OUTLET BOXES IN RATED WALLS SUCH THAT OPENINGS OCCUR IN ONE SIDE ONLY WITHIN ANY GIVEN STUD SPACE. ALL CLEARANCES BETWEEN THE OUTLET BOX AND THE GYPSUM BOARD SHALL BE FILLED WITH JOINT COMPOUND OR OTHER APPROVED FIRE STOP MATERIAL. FLUSH MOUNTED JUNCTION BOXES IN ADJACENT ROOMS SHALL NOT BE MOUNTED BACK-TO-BACK. SURFACE MOUNTED FIXTURES SHALL BE VERIFIED WITH THE BUILDING INSPECTOR PRIOR TO INSTALLATION. ALL FLUORESCENT FIXTURES SHALL HAVE ELECTRONIC BALLASTS MEETING ANSI C82.11 FOR ELECTRONIC BALLAST PERFORMANCE. ALL BALLASTS SHALL BE UL LISTED AND MEET FEDERAL AND STATE EFFICIENCY REQUIREMENTS.

13. WHERE CONDUCTORS ARE RUN IN PARALLEL, THE EC SHALL COMPLY WITH NEC 310.4.
14. ALL TELEPHONE AND COMMUNICATIONS OUTLETS AND RACEWAYS ARE ROUGH-INS ONLY. EACH TELEPHONE AND COMMUNICATIONS OUTLET SHALL BE A 4 in SQUARE BY 2-1/8 in DEEP BOX WITH 3/4 in KNOCK-OUTS AND A 3/4 in CONDUIT STUBBED FROM THE OUTLET BOX TO ABOVE THE CEILING. PROVIDE A NON-METALLIC INSULATING BUSHING ON ALL CONDUITS STUBBED ABOVE THE CEILING. PROVIDE A BLANK COVER PLATE ON ALL OUTLET BOXES.
15. ELECTRICAL CONTRACTOR SHALL INSTALL DISCONNECT SWITCHES IN SIGHT OF ALL HARDWIRED EQUIPMENT AND APPLANCES OR PROVIDE BREAKERS CAPABLE OF BEING LOCKED IN THE OPEN POSITION PER NEC 422.31. FOR MOTOR DRIVEN APPLANCES, PROVIDE A DISCONNECTING MEANS PER NEC 422.31 AND 430 PART IX. WHERE AN INDIVIDUAL DISCONNECT SWITCH, CIRCUIT BREAKER, STARTER, ETC. IS SHOWN ON THE PLANS ADJACENT TO ITS LOAD AND NOT LOCATED ON A WALL, PROVIDE NECESSARY MATERIALS AND LABOR TO SUPPORT THE DEVICE.
16. ELECTRICAL CONTRACTOR SHALL FIELD IDENTIFY ALL SWITCH BOARD, PANEL BOARDS, CONTROL PANELS, METER SOCKETS, ETC., TO MARK QUALIFIED PERSONS OF POTENTIAL ELECTRICAL ARC FLASH HAZARDS PER 110.16 of NEC.
17. ELECTRICAL CONTRACTOR SHALL PROVIDE NAMEPLATES FOR IDENTIFICATION OF ALL EQUIPMENT, SWITCHES, PANELS, ETC. THE NAMEPLATES SHALL BE LAMINATED PHENOLIC PLASTIC, BLACK FRONT, AND BACK WITH WHITE CORE. WHITE ENGRAVED LETTERS (1/4 in MINIMUM) ETCHED INTO THE WHITE CORE. ELECTRICAL CONTRACTOR SHALL PROVIDE A TYPE WRITTEN DIRECTORY CARD THAT ACCURATELY IDENTIFIES CIRCUITS UNDER EACH PANEL. HANDWRITTEN LABELS ARE NOT ACCEPTABLE.
18. IN ACCORDANCE WITH SECTION F510 OF THE NC FIRE PREVENTION CODE, TESTING WILL BE REQUIRED TO DETERMINE SATISFACTORY FIRST RESPONDER RADIO SIGNAL STRENGTH INSIDE EACH BUILDINGS ON SITE. TESTING WILL NOT BE EITHER BE COMPLETED BY A COUNTY FIRE INSPECTOR (OBTAIN BY REQUESTING A COURTESY INSPECTION) OR A CERTIFIED 3RD PARTY. TESTING SHALL TAKE PLACE AT BOTH BOX PROJECT COMPLETION AND APPROX AT 100% COMPLETION. IF UNACCEPTABLE SIGNAL DEGRADATION IS PRESENT AT EITHER BOX OR 100% INSPECTION, THEN AN ACCEPTABLE BOOSTER SYSTEM SHALL BE ADDED TO THE BUILDING DESIGN AT THAT TIME.

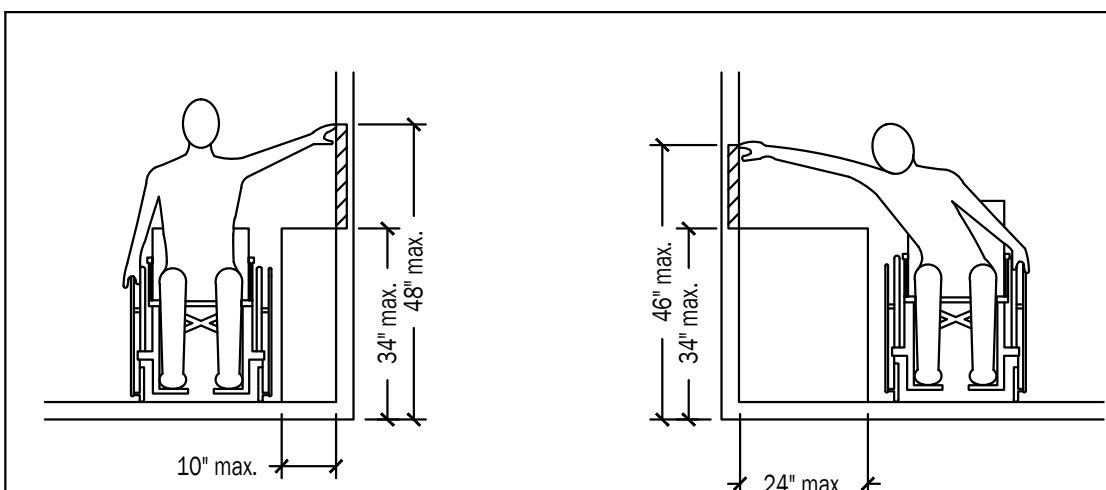
LIGHTING DEVICE LEGEND		
SYMBOL	DESCRIPTION	REMARKS
	SINGLE POLE WALL SWITCH	HEAVY DUTY, AC ONLY, COMMERCIAL GRADE GENERAL USE SNAP SWITCH COMPLYING WITH NEMA WD 6 AND WD 1. IVORY PLASTIC BODY WITH TOGGLE HANDLE. 120-277V, 20A. MEET FEDERAL SPECIFICATION W-5-896.
	DIMMER SWITCH	COMMERCIAL GRADE, 120V, 1500W
	WALL MOUNTED OCCUPANCY SENSOR	WATSTOPPER DW-100 LINE VOLTAGE OCCUPANCY SENSOR. ULTRA SONIC AND INFRARED.
	LOW VOLTAGE SWITCH	WATSTOPPER LVS-1 LOW VOLTAGE MOMENTARY CONTROL SWITCH
	3 WAY SWITCH	3-WAY TYPE SWITCH WITH SAME CHARACTERISTICS AS SINGLE POLE SWITCH ABOVE.
	2-SINGLE POLE SWITCHES	INDICATES BI-LEVEL SWITCHING. INNER LAMPS SWITCHED INDEPENDENTLY OF OUTER LAMPS.
	CEILING OCCUPANCY SENSOR	WATSTOPPER, DT-300 LOW VOLTAGE OCCUPANCY SENSOR. 360° ULTRA SONIC AND INFRARED.
	CEILING OCCUPANCY SENSOR	WATSTOPPER, WT-2255 LOW VOLTAGE OCCUPANCY SENSOR. ULTRA SONIC, 90 LINEAR FT COVERAGE.
	SWITCHING PHOTODENSOR	WATSTOPPER, LS-102, CONSULT OWNER FOR FOOT-CANDLE SET POINT.
	POWER PACK	WATSTOPPER, BZ-150 LOW VOLTAGE POWER PACK FOR CEILING PACK SENSORS.
	JUNCTION BOX	GALVANIZED METAL BOX CONSTRUCTED IN ACCORDANCE WITH 314.40 OF THE NEC.
	EXHAUST FAN	VENT FAN, 120V, CFM AS NOTED MC TO PROVIDE AND VENT, EC TO WIRE.

POWER DEVICE LEGEND		
SYMBOL	DESCRIPTION	REMARKS
	DATA AND TELEPHONE JACK	PHONE/DATA OUTLET. EC TO INSTALL 3/4" C WITH PULL-STRING FROM OUTLET BOX TO ABOVE CEILING FOR FUTURE USE. JACKS AND COMMUNICATION CABLEING BY OTHERS.
	DUPLEX RECEPTACLE	NEMA 5-20R, HEAVY DUTY, COMMERCIAL GRADE, 125V, 20A COMPLYING WITH NEMA WD 6 AND WD 1. GFCI OR AFCI IF NOTED. "WP" DENOTES WEATHERPROOF COVER. "CH" DENOTES COUNTER HEIGHT. LISTED TAMPERPROOF IF NOTED. MEET FEDERAL SPECIFICATION W-5-996.
	QUAD RECEPTACLE	QUAD RECEPTACLE OF SAME CHARACTERISTICS AS DUPLEX TYPE ABOVE.
	DEDICATED RECEPTACLE	NEMA 5-20R, HEAVY DUTY, COMMERCIAL GRADE, 125V, 20A COMPLYING WITH NEMA WD 6 AND WD 1 UNLESS OTHERWISE NOTED ON PLANS. VERIFY PLUG TYPE PRIOR TO PURCHASE & INSTALLATION. GFCI OR AFCI IF NOTED. "WP" DENOTES WEATHERPROOF COVER. "CH" DENOTES COUNTER HEIGHT. LISTED TAMPERPROOF IF NOTED. MEET FEDERAL SPECIFICATION W-5-996. MAY BE EITHER SIMPLEX, DUPLEX, OR QUAD.
	DUPLEX FLOOR RECEPTACLE	DUPLEX RECEPTACLE OF SAME CHARACTERISTICS AS ABOVE WITH BRASS COVER. MOUNT IN FLOOR. ALL FLOOR BOXES MUST BE LISTED FOR FLOOR APPLICATION.
	QUAD FLOOR RECEPTACLE	QUAD RECEPTACLE OF SAME CHARACTERISTICS AS ABOVE WITH BRASS COVER. MOUNT IN FLOOR. ALL FLOOR BOXES MUST BE LISTED FOR FLOOR APPLICATION.
	FUSIBLE DISCONNECT SWITCH	HEAVY DUTY TYPE, TYPE 1 ENCLOSURE IN INTERIOR APPLICATIONS, TYPE 3R ENCLOSURE IN EXTERIOR APPLICATIONS. FUSE ACCORDING TO NAMEPLATE DATA.
	DISCONNECT SWITCH	HEAVY DUTY TYPE, TYPE 1 ENCLOSURE IN INTERIOR APPLICATIONS, TYPE 3R ENCLOSURE IN EXTERIOR APPLICATIONS.
	JUNCTION BOX	GALVANIZED METAL BOX CONSTRUCTED IN ACCORDANCE WITH 314.40 OF THE NEC.

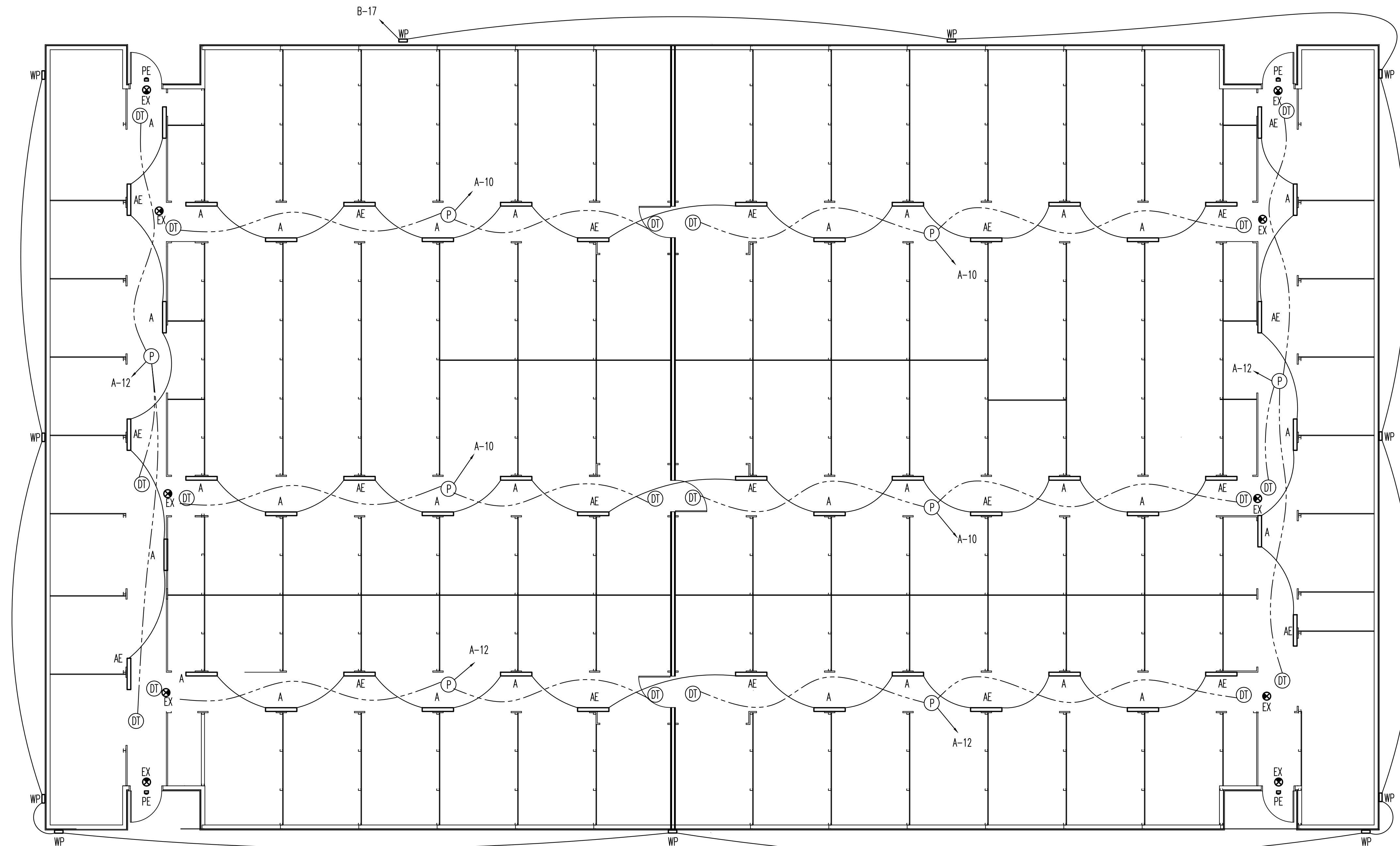
ELECTRICAL DESIGNER'S STATEMENT			
ELECTRICAL SYSTEM AND EQUIPMENT METHOD OF COMPLIANCE			
PRESCRIPTIVE	X	PERFORMANCE	ENERGY COST BUDGET
LIGHTING SCHEDULE:			
LAMP TYPE REQUIRED IN FIXTURE:		SEE LIGHTING LEGEND	
NUMBER OF LAMPS PER FIXTURE:		SEE LIGHTING LEGEND	
BALLAST TYPE USED IN FIXTURE:		SEE LIGHTING LEGEND	
NUMBER OF BALLASTS IN FIXTURE:		SEE LIGHTING LEGEND	
TOTAL WATTAGE PER FIXTURE:		SEE LIGHTING LEGEND	
TOTAL INTERIOR WATTAGE SPECIFIED VS ALLOWED:	WATTS SPECIFIED	WATTS ALLOWED	
	3315.0	11042.4600	
OCCUPANCY	AREA (sf)	ALLOWANCE (W/sf)	WATTAGE ALLOWED
STORAGE	16731	0.66	11042.46
TOTAL	16731		11042.46
EQUIPMENT SCHEDULES WITH MOTORS (NOT USED FOR MECHANICAL SYSTEMS)			
MOTOR HORSEPOWER: N/A			
NUMBER OF PHASES: N/A			
MINIMUM EFFICIENCY: N/A			
MOTOR TYPE: N/A			
NUMBER OF POLES: N/A			
DESIGNER STATEMENT: TO THE BEST OF MY KNOWLEDGE AND BELIEF, THE DESIGN OF THIS BUILDING COMPLIES WITH THE 2018 NORTH CAROLINA ENERGY CONSERVATION CODE.			

FOR THE ADDITIONAL PRESORPTIVE REQUIREMENT REQUIRED BY C406 OF 2018 NORTH CAROLINA ENERGY CONSERVATION CODE, WE ARE CHOOSING C406.3 - REDUCED LIGHTING POWER DENSITY.

3315 W SPECIFIED <= 9838.214 W (11042.46 W ALLOWED X 90%)



ANSI A117.1 FIG. 308.3.2. OBSTRUCTED HIGH REACH SIDE.
ALL SWITCHES AND CONTROLS MUST COMPLY FOR ALL COUNTERTOPS

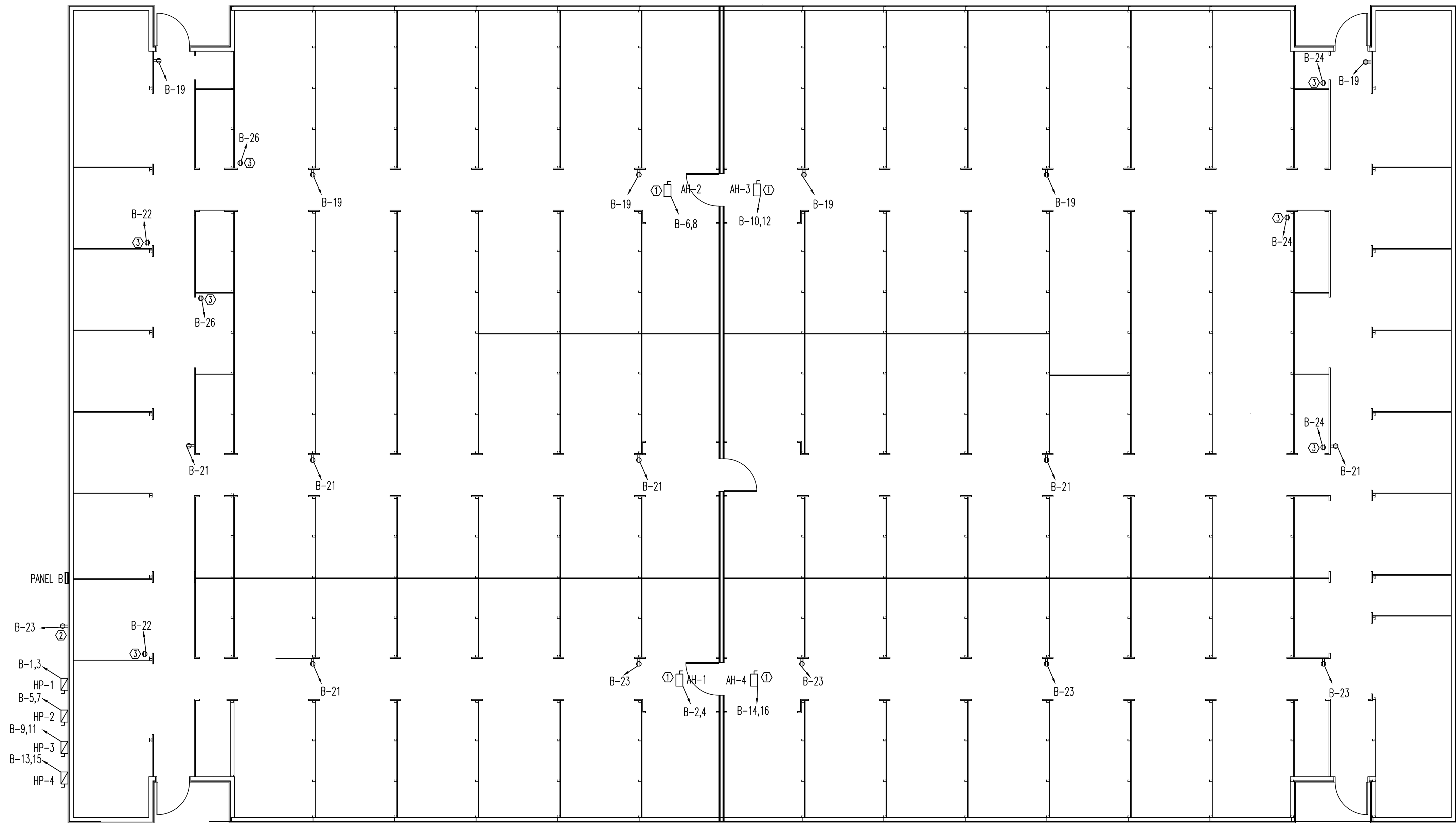


REVISION:									

ISSUED:									

DRAWN BY: JMB
CHECKED BY: MMB
ELECTRICAL LIGHTING PLAN

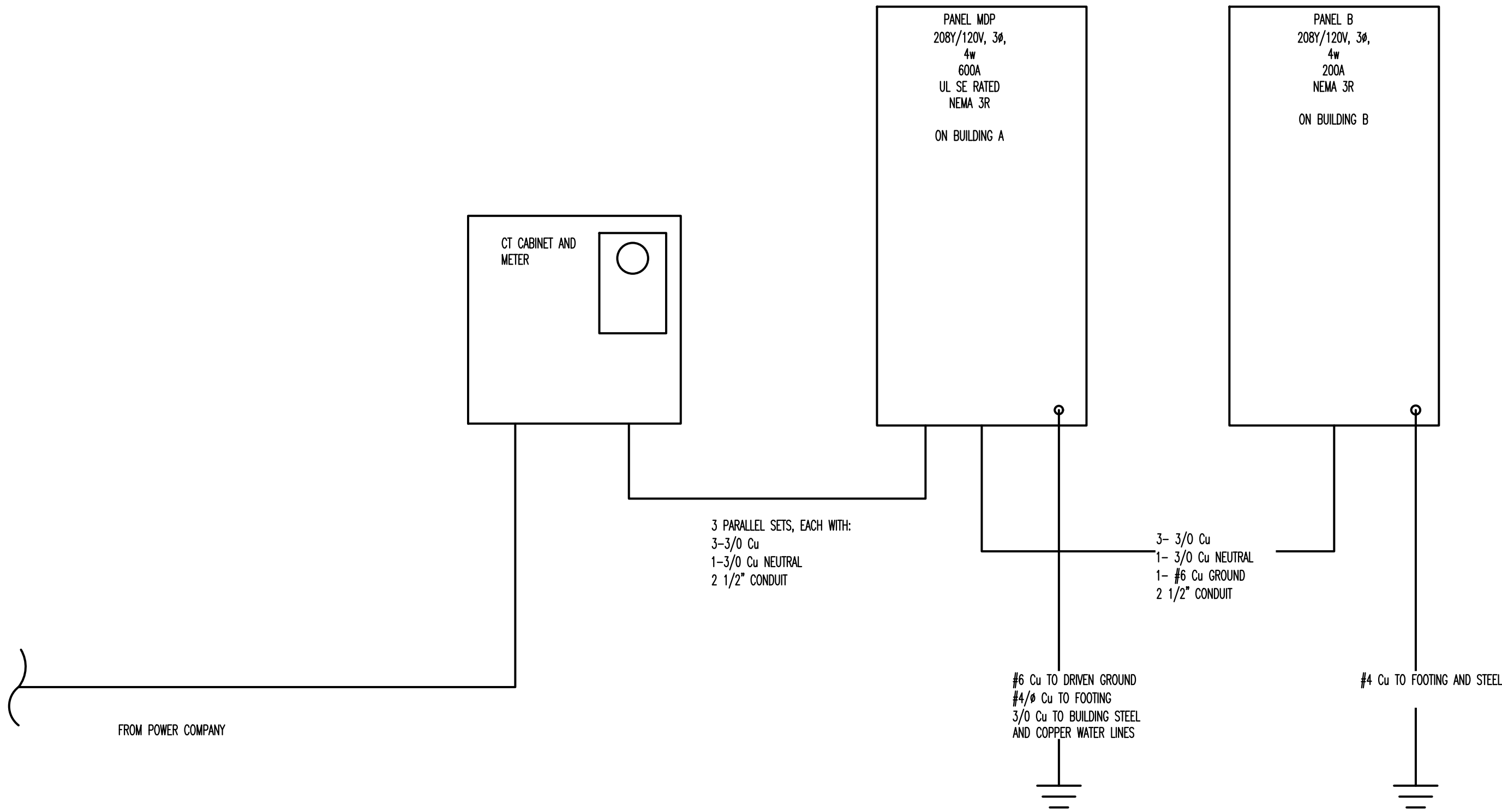
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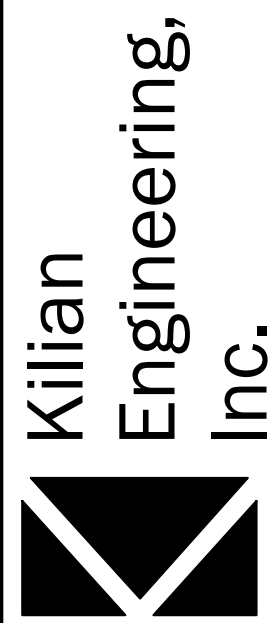


- POWER PLAN HEX NOTES
- AIR HANDLER DISCONNECT LOCATED WITH UNIT OVERHEAD IN CORRIDOR
 - EXTERIOR SERVICE RECEPTACLE TO BE GFCI WITH WEATHERPROOF COVER
 - VERIFY LOCATION OF ADA UNIT POWERED DOOR MOTOR WITH INSTALLER, PROVIDE 120V OUTLET WITH BATTERY BACKUP BANK PER NCDOA REQUIREMENTS

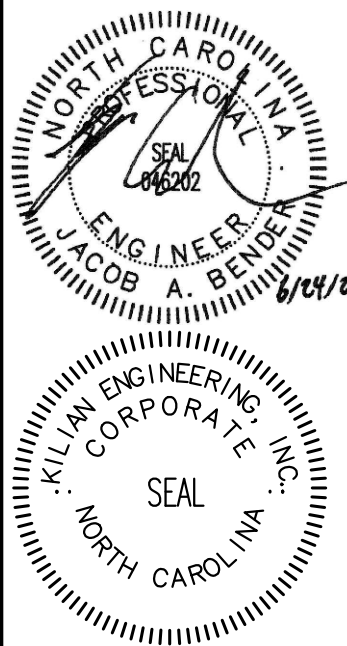
PANEL								
CKT	LOAD	BKR	LOAD kVA	PH	LOAD kVA	BKR	LOAD	CKT
1	PANEL A	200/3	17.30	A	0.70	100/3	PANEL E	2
3			18.20	B	1.50			4
5			17.60	C	1.80			6
7	PANEL B	200/3	14.90	A	3.00	100/3	PANEL F	8
9			13.60	B	0.70			10
11			12.20	C	0.40			12
13	SPACE		0.00	A	0.00		SPACE	14
15			0.00	B	0.00			16
17			0.00	C	0.00			18
			kVA	PH	AMPS			
			35.9	A	299			
			34.0	B	283			
			32.0	C	267			
VOLTAGE/PHASE					208Y/120V, 3P, 4W			
BUS RATING					600A			
MAIN CIRCUIT BREAKER RATING					600A			
ATC RATING					44K			
SERVICE ENTRANCE RATED					YES			
ENCLOSURE					NEMA 3R			
MOUNTING					SURFACE			

PANEL B								
CKT	LOAD	BKR	LOAD kVA	PH	LOAD kVA	BKR	LOAD	CKT
1	HP-1	45/2	1.25	A	2.60	25/2	AH-1	2
3			1.25	B	2.60			4
5	HP-2	45/2	1.25	C	2.60	25/2	AH-2	6
7			1.25	A	2.60			8
9	HP-3	45/2	1.25	B	2.60	25/2	AH-3	10
11			1.25	C	2.60			12
13	HP-4	45/2	1.25	A	2.60	25/2	AH-4	14
15			1.25	B	2.60			16
17	EXTERIOR LIGHTS	20/1	0.74	C	1.33	20/1	MIDDLE CORRIDORS LIGHTING	18
19	RECEPTS	20/1	1.08	A	1.28	20/1	OUTER CORRIDORS LIGHTING	20
21	RECEPTS	20/1	1.08	B	1.00	20/1	ADA UNIT POWER	22
23	RECEPTS	20/1	0.90	C	1.50	20/1	ADA UNIT POWER	24
25	SPACE		0.00	A	1.00	20/1	ADA UNIT POWER	26
27	SPACE		0.00	B	0.00		SPACE	28
29	SPACE		0.00	C	0.00		SPACE	30
31	SPACE		0.00	A	0.00		SPACE	32
33	SPACE		0.00	B	0.00		SPACE	34
35	SPACE		0.00	C	0.00		SPACE	36
37	SPACE		0.00	A	0.00		SPACE	38
39	SPACE		0.00	B	0.00		SPACE	40
41	SPACE		0.00	C	0.00		SPACE	42
			kVA	PH	AMPS			
			14.9	A	124			
			13.6	B	114			
			12.2	C	101			
VOLTAGE/PHASE					208Y/120V, 3P, 4W			
BUS RATING					200A			
MAIN CIRCUIT BREAKER RATING					200A			
AIC RATING					22K			
SERVICE ENTRANCE RATED					NO			
ENCLOSURE					NEMA-3R			
MOUNTING					SURFACE			





Kilian
Engineering,
Inc.



JACOB A. BULLOCK
ENGINEER
STATE OF NORTH CAROLINA
4624

CLIVE PATE
LAKESIDE STORAGE
BUILDING B

ANGER, NORTH CAROLINA

REVISION:

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DRAWN BY: JMB
CHECKED BY: MMB

ELECTRICAL RISER AND PANEL SCHEDULES

SHEET NO.

E4

ELECTRICAL RISER AND PANEL SCHEDULES-NO SCALE | 1 | PROJECT NO: 22214

NEW FACILITY:

BUILDING B

LAKESIDE STORAGE - ANGIER

STRUCTURAL PLANS FOR SELF STORAGE FACILITY

ANGIER, NORTH CAROLINA

STRUCTURAL DRAWING SCHEDULE			
SHEET NO.	SHEET NAME	ORIGINAL DATE	RE-ISSUE DATE
SN1	COVER SHEET	07-07-2022	---
SN2	SPECIAL INSPECTIONS	07-07-2022	---
S1.2	FOUNDATION PLAN	07-07-2022	---
S2.2	ROOF FRAMING PLAN	07-07-2022	---
S2.2a	ROOF PLAN	07-07-2022	---
S2.4	ROOF DETAILS	07-07-2022	---
S3.2	ELEVATIONS	07-07-2022	---
S4	FOUNDATION DETAILS	07-07-2022	---
S5	FRAMING DETAILS	07-07-2022	---
S6	FRAMING DETAILS	07-07-2022	---

STRUCTURAL DESIGN DATA SHEET:

RISK CATEGORY:
II

IMPORTANCE FACTORS:
I seismic 1.0
I snow 1.0

DEAD LOADS:
ROOF 5 psf
ELEVATED FLOOR 60 psf

LIVE LOADS:
ROOF 20 psf
FLOOR 125 psf

SNOW LOAD:
Pg 15 psf

WIND LOAD:
Basic Wind Speed 120 MPH
Exposure Category C

SEISMIC LOAD:
Spectral Response
Ss 0.176
S1 0.084
Sds 0.188
Sd1 0.134
Seismic Design Category C
Seismic Site Class D - Default
Structural System Light framed walls w/ Steel Sheets
R-Factor 6.5
Analysis Procedure Equivalent Lateral Force

SEISMIC ANCHORAGE OF NON-STRUCTURAL COMPONENTS:
SEISMIC ANCHORING NOT REQUIRED

LATERAL DESIGN CONTROL:
X-Direction WIND
Y-Direction WIND

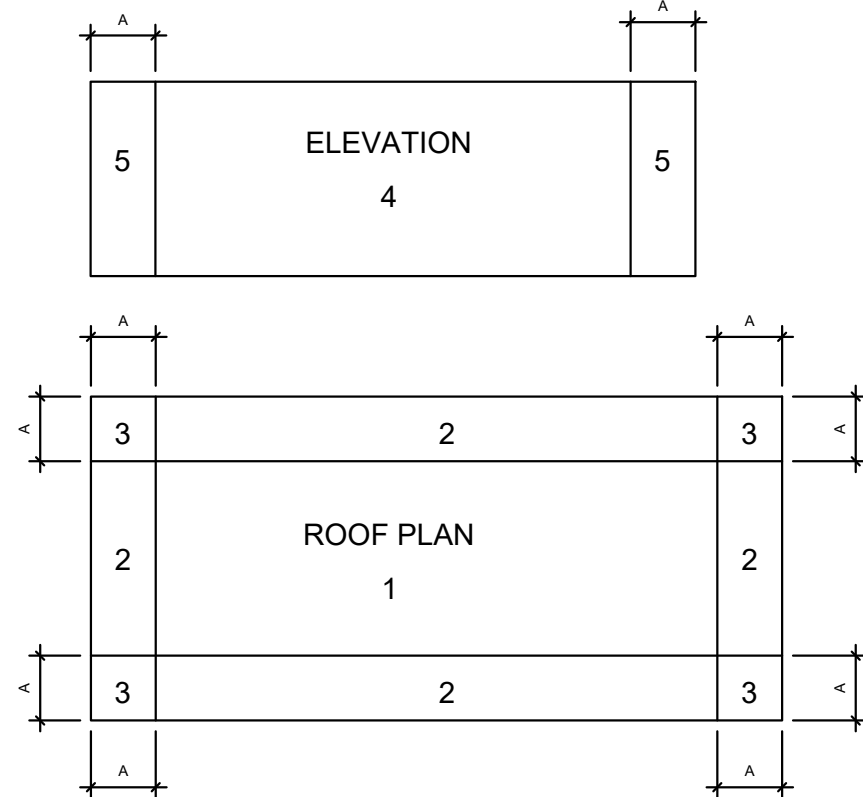
SOIL BEARING PROPERTIES:
Allowable Bearing Capacity = 2000 psf

BASE SHEAR SCHEDULE				
	WIND BASE SHEAR ¹		SEISMIC BASE SHEAR ²	
	Vx	Vy	Vx	Vy
BUILDING A	22.7 K	17.4 K	2.4 K	2.4 K
BUILDING B	22.7 K	17.4 K	2.4 K	2.4 K
BUILDING D	51.6 K	4.0 K	1.4 K	1.4 K

1. WIND BASE SHEAR INCLUDES A 0.6 WIND FACTOR.
2. SEISMIC BASE SHEAR INCLUDES A 0.7 SEISMIC FACTOR.

WIND LOAD SCHEDULE					
COMPONENTS & CLADDING	ROOF WIND LOAD			WALL WIND LOADS	
	ROOF AREA			WALL AREA	
	1	2	3	4	5
PRESSURE (PSF)	+10.2	+10.2	+10.2	+27.5	+27.5
SUCTION (PSF)	-27.1	-36.4	-43.8	-30.0	-35.8

1. CORNER DISTANCE, A=15 FEET, ROOF = 50 SF, WALL = 20 S.F. C&C



COLD-FORMED STEEL:

- ALL MEMBERS SHALL CONFORM TO THE AISI "SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS," NAS-01 AND SHALL BE OF THE TYPE AND SIZE AS INDICATED ON THE PLANS. ALL STRUCTURAL MEMBERS SHALL MEET THE REQUIREMENTS OF 2007 A.I.S.I. GENERAL PROVISIONS. STRUCTURAL MEMBER MATERIAL IS EITHER ASTM A653-06 GR 55 OR A1011-04 HSLAS GR. 55 CH-L. ALL MEMBERS SHALL BE ZINC COATED MEETING ASTM A1003, G-60 OR EQUAL.
- THE PHYSICAL AND STRUCTURAL PROPERTIES AS LISTED BY BUILDING VENDOR SHALL BE THE MINIMUM PERMITTED FOR FRAMING MEMBERS. WE HAVE ASSUMED SSMA LISTED SIZES OR EQUIVALENT SUBSTITUTIONS MUST BE SUBMITTED THROUGH SHOP DRAWINGS AND APPROVED PRIOR TO CONSTRUCTION BY THE ENGINEER.
- FASTENING OF COMPONENTS SHALL BE WITH SELF-DRILLING SCREWS OR WELDING IN COMPLIANCE WITH C1513. SCREWS AND WELDS SHALL BE OF SUFFICIENT SIZE TO ENSURE THE STRENGTH OF THE CONNECTION. ALL SCREWS SHALL NOT BE LESS THAN 3/4" O.C. OR FROM EDGE. ALL WELDS SHALL BE TOUCHED-UP WITH ZINC-RICH PAINT. U.N.O. ALL SCREW ATTACHMENTS SHALL BE #12 OR BETTER.
- ALL POWER-ACTUATED FASTENERS (PAF) SHALL BE 0.177" DIA., U.N.O.
- STRUCTURAL MATERIAL IS NOT DESIGNED TO BE PUNCHED. IF MATERIAL IS PUNCHED, CONSULT EOR FOR REMEDIATION.
- TOP AND BOTTOM TRACKS SHALL BE THE SAME DEPTH AND GAGE, ALL TRACKS SHALL BE CONNECTED TO SUPPORTS WITH (2) FASTENERS OR PAFs AT EACH 30" O.C., MAXIMUM.
- U.N.O, FLANGES SHOULD 2-1/2".
- SPLICES IN FRAMING COMPONENTS, OTHER THAN RUNNER TRACK, SHALL NOT BE PERMITTED.
- TEMPORARY BRACING, WHERE REQUIRED, SHALL BE PROVIDED UNTIL ERECTION IS COMPLETE.
- ALL FRAMING COMPONENTS SHALL BE CUT SQUARELY FOR ATTACHMENT TO PERPENDICULAR MEMBERS OR, AS REQUIRED, FOR AN ANGULAR FIT AGAINST ABUTTING MEMBERS.
- PROVIDE ADDITIONAL STUDS, WHEN NECESSARY, TO RESIST VERTICAL COMPONENTS OF LOADS.
- THE QUANTITY OF STUDS AT HEADER OPENINGS SHALL BE MINIMUM AMOUNT OF STUDS DISPLACED DUE TO OPENING WITH HALF ON EACH SIDE OF OPENING.
- MULTIPLE STUDS AT STUD PACKS SHALL BE ATTACHED AT (2) ROWS, STAGGERED WITH #10 TEKs SCREWS AT 24" O.C., IN A BACK-TO-BACK CONFIGURATION. WHEN FLANGE-TO-FLANGE IS REQUIRED GUSSET PLATES OR TRACKS SHALL BE INSTALLED AT THE ABOVE MENTIONED SPACING.
- STUDS SHALL BE INSTALLED SO THE ENDS ARE POSITIONED AGAINST THE INSIDE OF THE RUNNER TRACK WEB PRIOR TO FASTENING AND SHALL BE ATTACHED TO BOTH FLANGES OF THE UPPER AND LOWER RUNNER TRACKS.
- PROVIDE STIFFENERS IN HEADERS AT EACH POINT LOAD AND AT BEARING LOCATIONS, AS DESIGNATED ON PLANS.
- ATTACH ALL CONNECTION PER PLANS OR AS DETAILED AND NOTED IN MANUFACTURER TECHNICAL MANUALS, PROVIDE SCREW OR POWDER ACTUATED FASTENER (PAF) ATTACHMENTS AS SPECIFIED.
- LAYOUTS AS INDICATED ON PLANS IS FOR GRAPHICAL REPRESENTATION PURPOSES ONLY. ACTUAL STUD LOCATIONS MUST BE SUBMITTED WITH SHOP DRAWINGS.

STRUCTURAL STEEL:

- ALL STRUCTURAL STEEL WORK SHALL CONFORM TO THE A.I.S.C. "STEEL CONSTRUCTION MANUAL" 360-05.
- STRUCTURAL STEEL SHALL BE ASTM A-992.
- STRUCTURAL TUBES SHALL BE ASTM A500, GRADE B.
- STEEL FRAMING CONNECTIONS SHALL BE BOLTED OR WELDED, BOLTS SHALL BE 3/4" DIAMETER MINIMUM AND SHALL BE ASTM A-325-N U.N.O., SNUG TIGHT ALL CONNECTIONS.
- ANCHOR BOLTS SHALL BE ASTM F1554 HEADED BOLTS. MINIMUM ANCHOR BOLT EMBEDMENT LENGTH SHALL BE 12 BOLT DIAMETERS U.N.O. CLEAN ANCHOR BOLTS OF ALL GREASE, DIRT, ETC., BEFORE INSTALLATION.
- WELDS SHOWN ON THE STRUCTURAL DRAWINGS ARE THE MINIMUM REQ'D BY DESIGN. THE FABRICATOR'S DRAWINGS SHALL SHOW WELDS AND THEY SHALL CONFORM TO A.W.S. SPECIFICATIONS. ALL WELDING SHALL BE DONE WITH E-70 SERIES ELECTRODES.
- PAIN'T ALL STRUCTURAL STEEL WITH ONE COAT OF RED OXIDE RUST-INHIBITIVE PRIMER 2.5 MILS IN THICKNESS. THE COMPATABILITY OF PRIMER AND ANY TOP COAT SHALL BE VERIFIED BEFORE ANY PAINTING IS PERFORMED. TOUCH-UP ALL EXPOSED METAL AFTER FIELD INSTALLATION. ALL STRUCTURAL STEEL WHICH IS EXPOSED TO THE ELEMENTS SHALL RECEIVE TWO COATS OF EXTERIOR ENAMEL WHICH IS COMPATIBLE TO THE PRIMED SURFACE.
- THE SHOP DRAWINGS SHALL INCLUDE COMPLETE DETAILS AND SCHEDULES FOR FABRICATION AND ASSEMBLY OF STRUCTURAL STEEL MEMBERS. SUBMIT FOUR PRINTS OF EACH DRAWING. REPRODUCTION OF STRUCTURAL DRAWINGS FOR SHOP DRAWINGS IS NOT PERMITTED. CONTRACTOR TO REVIEW AND STAMP DRAWINGS PRIOR TO SUBMISSION TO THE EOR.

DESIGN AND CODE INFORMATION:

- ALL CONSTRUCTION SHALL CONFORM TO THE 2018 NORTH CAROLINA BUILDING CODE AND ASCE 7-10.
- VERIFY EXISTING CONDITIONS AND NOTIFY ARCHITECT OF ANY CONDITIONS WHICH DO NOT COMPLY WITH PLANS AND SPECIFICATIONS. STRUCTURAL DRAWINGS MUST BE WORKED WITH ARCHITECTURAL DWGS.
- THE DESIGN ADEQUACY, SAFETY OF ERECTION BRACING, SHORING, TEMPORARY SUPPORTS, ETC. IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
- FOR LOCATION OF MISCELLANEOUS ITEMS (SUCH AS INSERTS, ETC.) AFFECTING STRUCTURAL WORK, SEE ARCHITECTURAL, MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS.
- THIS PROJECT CONTAINS A SERIES OF DETAILS CONSIDERED "TYPICAL DETAILS". THESE SHALL APPLY AT ALL SITUATIONS THAT ARE THE SAME OR SIMILAR AS THESE DETAILS. THESE "TYPICAL DETAILS" SHALL APPLY WHETHER OR NOT THEY ARE INDICATED OR CUT AT EACH LOCATION.
- USE OF STRUCTURAL DRAWINGS FOR SHOP DRAWINGS IS NOT PERMITTED. CONTRACTOR TO REVIEW AND STAMP DRAWINGS ACCORDINGLY PRIOR TO SUBMITTING TO THE ENGINEER. THE OMISSION OF ITEMS FROM SHOP DRAWINGS SHALL NOT RELIEVE CONTRACTOR OF RESPONSIBILITY OF FURNISHING AND INSTALLING ITEMS REGARDLESS OF WHETHER SHOP DWGS. HAVE BEEN REVIEWED AND APPROVED.

FOUNDATION NOTES:

- FOUNDATION DESIGN IS BASED UPON ASSUMED SOIL VALUES. CONTRACTOR/OWNER SHALL VERIFY PRIOR TO CONSTRUCTION.
- FOOTINGS ARE DESIGNED TO BEAR ON UNIFORM SUITABLE SOIL CAPABLE OF SUPPORTING 2000 PSF.
- THE SOIL BEARING CAPACITY AND CONSISTENCY SHALL BE VERIFIED FOR THE BUILDING LIMITS BY A REGISTERED GEOTECHNICAL ENGINEER WHEN FOUNDATION EXCAVATIONS HAVE BEEN CARRIED DOWN TO THE PROPOSED ELEVATIONS. THE BOTTOM OF ALL EXTERIOR FOOTINGS SHALL BE -1'-4" MINIMUM BELOW FINISHED GRADE. (U.N.O.)
- WHERE FOOTING EXCAVATIONS ARE TO REMAIN OPEN AND MAY BE EXPOSED TO RAINFALL, THE EXCAVATIONS SHALL BE UNDERCUT AND A 3" THICK MUD MAT OF 2000 PSI CONCRETE SHALL BE PLACED OR CLEAN SHALL BE PLACED IN THE BOTTOM TO PROTECT THE BEARING SOILS.
- WHERE FOOTING STEPS ARE NECESSARY, THEY SHALL BE NO STEEPER THAN 1 VERTICAL TO 2 HORIZONTAL, UNLESS SHOWN OTHERWISE ON PLANS.

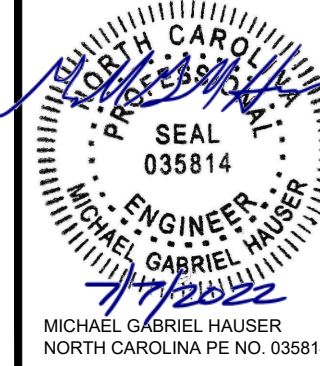
REINFORCED CONCRETE:

- ALL CONCRETE WORK SHALL CONFORM TO THE "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE." (ACI 318, 05)
- REINFORCING STEEL SHALL BE DEFORMED BARS ASTM A-615 (GRADE 60)
- FOUNDATIONS AND SLAB-ON-GRADE COMPRESSIVE STRENGTH AT 28 DAYS SHALL BE 3000 P.S.I. (SEE CIVIL DRAWINGS FOR SITE CONCRETE) KEEP COPY OF CONC. TEST REPORTS ON SITE AT ALL TIMES.
- WALL AND ELEVATED SLAB COMPRESSIVE STRENGTH AT 28 DAYS SHALL BE 4000 P.S.I. (SEE CIVIL DRAWINGS FOR SITE CONCRETE) KEEP COPY OF CONC. TEST REPORTS ON SITE AT ALL TIMES
- LAP SPLICES FOR #5 REINFORCING BARS SHALL BE 36" MIN., AND #6 REINFORCING BARS SHALL BE 43" MIN., UNLESS SUBMITTED AND APPROVED OTHERWISE.
- CLEAR CONCRETE COVER FOR REINFORCING STEEL:
WALLS: 3" CAST AGAINST GROUND
2" FORMED EDGES
FOOTINGS: 2" FORMED EDGES
3" CAST AGAINST GROUND
SLAB ON GRADE: MID-HEIGHT OF SLAB
- THE LONGITUDINAL REINFORCING STEEL IN WALLS AND FOOTINGS SHALL BE CONTINUOUS AROUND CORNERS. SEE TYPICAL DETAILS.
- SLUMP LIMIT IS 5 INCHES FOR CONCRETE WITH VERIFIED SLUMP OF 2 TO 4 INCHES BEFORE ADDING HIGH-RANGE WATER-REDUCING ADMIXTURE OR PLASTICIZING ADMIXTURE, PLUS OR MINUS 1 INCH
- AIR CONTENT: 4 PERCENT, PLUS OR MINUS 1.5 PERCENT AT POINT OF DELIVERY FOR 3/4-INCH NOMINAL MAXIMUM AGGREGATE SIZE. EXCEPTION TROWEL-FINISHED FLOOR SHALL NOT EXCEED 3 PERCENT.
- MAXIMUM COARSE-AGGREGATE SIZE: 3/4 INCH NOMINAL.
- PORTLAND CEMENT: ASTM C 150/C 150M, TYPE I.
- COLD-WEATHER PLACEMENT: COMPLY WITH ACI 306.1.
- HOT-WEATHER PLACEMENT: COMPLY WITH ACI 301.
- DESIGN, ERECT, SHORE, BRACE, AND MAINTAIN FORMWORK, ACCORDING TO ACI 301, TO SUPPORT VERTICAL, LATERAL, STATIC, AND DYNAMIC LOADS, AND CONSTRUCTION LOADS THAT MIGHT BE APPLIED. UNTIL STRUCTURE CAN SUPPORT SUCH LOADS. PLACE FORMWORK SO CONCRETE MEMBERS AND STRUCTURES ARE OF SIZE, SHAPE, ALIGNMENT, ELEVATION, AND POSITION INDICATED, WITHIN TOLERANCE LIMITS OF ACI 117. CHAMFER EXTERIOR CORNERS AND EDGES OF PERMANENTLY EXPOSED CONCRETE
- BEFORE PLACING CONCRETE, VERIFY THAT INSTALLATION OF FORMWORK, REINFORCEMENT, AND EMBEDDED ITEMS IS COMPLETE AND THAT REQUIRED INSPECTIONS ARE COMPLETED. DEPOSIT CONCRETE CONTINUOUSLY IN ONE LAYER OR IN HORIZONTAL LAYERS OF SUCH THICKNESS THAT NO NEW CONCRETE IS PLACED ON CONCRETE THAT HAS HARDENED ENOUGH TO CAUSE SEAMS OR PLANES OF WEAKNESS. IF A SECTION CANNOT BE PLACED CONTINUOUSLY, PROVIDE CONSTRUCTION JOINTS AS INDICATED. DEPOSIT CONCRETE TO AVOID SEGREGATION. CONSOLIDATE PLACED CONCRETE WITH MECHANICAL VIBRATING EQUIPMENT ACCORDING TO ACI 301.

CONCRETE MASONRY:

- CONCRETE MASONRY SHALL CONFORM TO THE NATIONAL CONCRETE MASONRY ASSOCIATION SPECIFICATIONS, AND HAVE A DENSITY OF 125 P.C.F. AND SHALL HAVE A MINIMUM PRISM STRENGTH (F'm) OF 1500 P.S.I.
- GROUT FOR FILLING CONCRETE MASONRY CELLS SHALL CONFORM TO STANDARD SPECIFICATIONS FOR "GROUT FOR MASONRY", ASTM C-476-02, AND SHALL HAVE A COMPRESSIVE PRISM STRENGTH (F'm) OF 3000 P.S.I. AT 28 DAYS. THE SLUMP SHALL BE BETWEEN 9" AND 11". WHERE THE MINIMUM DIMENSION OF ANY CONTINUOUS VERTICAL CELL IS 3" OR LESS, USE FINE GROUT, OTHERWISE USE COARSE (PEA GRAVEL) GROUT.
- MORTAR FOR CONCRETE MASONRY SHALL BE TYPE "S" AND SHALL CONFORM TO ASTM C-270-04.
- GROUT PROCEDURES AND REBAR INSTALLATION SHALL PER ASTM ACI 530 1-99. LAP SPLICES FOR REINFORCING BARS SHALL BE 24" MIN., U.N.O.
- BRICK LINTELS - SEE SCHEDULE ON STRUCTURAL "S" SHEETS
- ALL METAL BRICK TIES FOR BRICK VENEER SHALL BE A 2-PIECE, 3/16" DIAMETER ADJUSTABLE TIE, SPACED AT EACH STUD LOCATION, 24" O.C. (MAX) HORIZONTALLY, AND 16" O.C. VERTICALLY. METAL TIES SHALL BE EMBEDDED AT LEAST 2" INTO THE BRICK WYTHE. TIE MUST BE HOT DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A153, CLASS B. IN ADDITION, TIES SHOULD NOT HAVE MECHANICAL PLAY IN EXCESS OF 0.05" AND SHOULD NOT DEFORM OVER 0.05" FOR 100 LB LOAD IN EITHER TENSION OR COMPRESSION. METAL TIES SHOULD BE INSTALLED WITH 1/4-14 FASTENERS

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PROJECT #: 22-10X-00X



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BUILDING B
LAKESIDE STORAGE - ANGIER
ANGIER, NC

ISSUE DATE: 07-07-2022

REV DATE

PROJECT
DATA
& SPECS

SN1

STATEMENT OF SPECIAL INSPECTIONS:

Project Name: LAKESIDE STORAGE - ANGIER

Building Permit Number: _____

Project Address: 5556 NC-210, Angier, North Carolina, 27501

The following information is being submitted in accordance with the Special Inspection provisions of the International Building Code. Attached is the Schedule of Special Inspections (SSI) required for this project.

The Special Inspection program outlined herein does not relieve the Contractor or any other entity of contractual duties, including quality control, quality assurance or safety. The contractor is solely responsible for construction means, methods and job site safety.

Respectfully submitted,
The Structural Engineer of Record

Signature: _____ Date: _____

SCHEDULE OF SPECIAL INSPECTIONS:

Project Name: LAKESIDE STORAGE - ANGIER
Construction divisions which require inspections for this project are as follows:

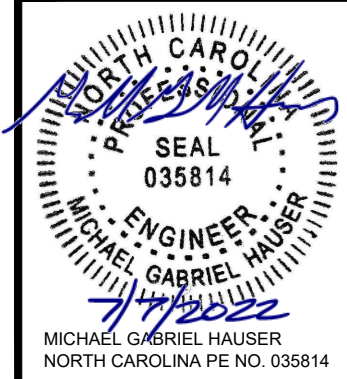
INSPECTION TASK	CONTINUOUS (C) OR PERIODIC (P) INSPECTIONS		SPECIAL INSPECTIONS FIRM	NOTES & SCOPE
	C	P		
1. VERIFICATION OF SOILS (Table 1704.7)				
Verify materials below shallow Foundations are adequate to achieve the design bearing capacity.		P	Testing Agency (TA)	Testing Agency shall provide soils report
Verify excavations are extended to proper depth.		P	Testing Agency (TA)	
Perform Classification and testing of compacted fill materials.		P	Testing Agency (TA)	
Verify use of proper materials, densities and lift thickness during placement and compaction of compacted fill.	C		Testing Agency (TA)	
Prior to placement of compacted fill, observe sub-grade and verify that site has been prepared properly.		P	Testing Agency (TA)	
2. REINFORCED CONCRETE (Table 1704.4)				
Inspection of reinforcing steel, including prestressing tendons, and placement. ACI 318:3.5, 7.1-7.7		P	Testing Agency (TA)	ACI 318: 3.5,7.1-7.7 IBC: 1913.4
Verifying use of required design mix: ACI 318: Ch. 4, 5.2-5.4		P	Testing Agency (TA)	ACI 318: Ch. 4, 5.2-5.4 IBC: 1904.2.2, 1913.2, 1913.3
At the time fresh concrete is sampled to fabricate specimens for strength tests, slump, air content, and temperature of concrete.	C		Testing Agency (TA)	ASTM C 172, C 31 ACI: 318: 5.6, 5.8 IBC: 1913.10

SCHEDULE OF SPECIAL INSPECTIONS (Continued):

Project Name: 6917 NC 55 HIGHWAY
Construction divisions which require inspections for this project are as follows:

INSPECTION TASK	CONTINUOUS (C) OR PERIODIC (P) INSPECTIONS		SPECIAL INSPECTIONS FIRM	NOTES & SCOPE
	C	P		
3. STRUCTURAL STEEL (Table 1704.3)				
Material verification of high strength bolts, nuts and washers.		P	Special Inspector (SI)	AISC 360, A3.3
Inspection of high strength bolting, snug tight joints		P	Special Inspector (SI)	AISC 360, M2.5 IBC 1704.3.3
Material verification of structural steel.		P	Special Inspector (SI)	Fabricator's bill of materials verification is acceptable.
All field welding.		P	Special Inspector (SI)	AWS D1.1 IBC 1704.3.1
4. RETAINING WALLS (Table 1704.12)				
Inspect all retaining walls over 5 feet in height per NCSBC.		P	Testing Agency (TA)	
5. MASONRY (Table 1704.4)				
As masonry construction begins, the following shall be verified to ensure compliance: (A) Proportions of site mixed mortar. (B) Construction of mortar joints. (C) Location of reinforcement and connectors.		P	Testing Agency (TA)	ACI 318: 3.5.7.1-7.7 IBC: 1913.4
The inspection program shall verify: (A) Size and location of structural elements. (B) Size, grade, type of reinforcement. (C) Protection of masonry during cold weather (temperature below 40 degrees F) or hot weather (temperature above 90 degrees F)		P	Testing Agency (TA)	Sec. 2108.9.2.11, Item 2, Sec. 2104.3, 2104.4, ACI Sec. 1.15.4, 2.1.2, Sec. 1.12, Sec 2.1.8.6, 2.1.8.6.2, ACI 3.3G, Art 2.4.3.4, Art 1.8
Prior to grouting, the following shall be verified to ensure compliance: (A) Grout space is clean. (B) Placement of reinforcement and connectors. (C) Proportions of site-prepared grout. (D) Construction of mortar joints		P	Testing Agency (TA)	Sec. 1.12, Art. 3.2D, Art 3.4, Art. 2.6B, Art. 3.3B
Grout Placement shall be verified to ensure compliance with code and construction provisions.		P	Testing Agency (TA)	Art. 3.5

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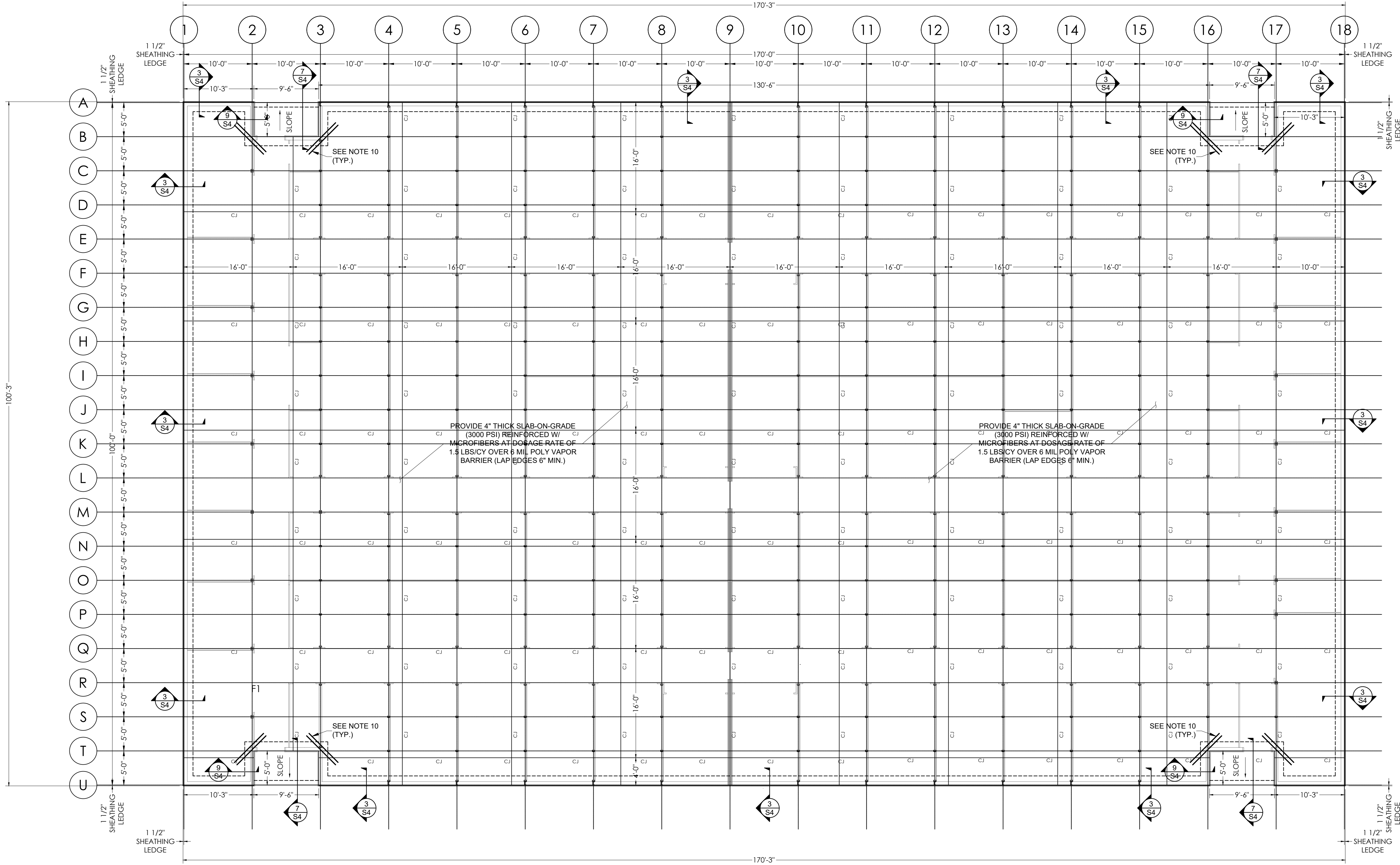
SPECIAL INSPECTIONS
SN2

FOUNDATION NOTES:

1. PROVIDE COMPACTED BUILDING PAD (95% MIN COMPACTION). CONTRACTOR MUST VERIFY WITH GEOTECHNICAL ENGINEER AND SPECIAL INSPECTOR ON-SITE IF MOISTURE CONTENT IN SOILS WARRANTS 4" POROUS BASE UNDER SLAB (CLEAN NO. 57 STONE, SAND, OR EQUIVALENT).
2. ALL DIMENSIONS REFERENCED TO SLAB EDGE, AND CENTERLINE OF INTERIOR BEARING WALLS. SEE ARCHITECTURAL PLANS FOR DIMENSIONS NOT SHOWN. VERIFY DIMENSIONS PRIOR TO CONSTRUCTION.
3. MIN. TOP OF EXTERIOR FTG. = F.F.E. - SEE PLAN.
4. SEE DETAIL 1/54 FOR SLAB CONTROL JOINTS (CJ), ALTERNATE LAYOUT PLANS MAY BE SUBMITTED FOR APPROVAL.
5. PROVIDE POSITIVE DRAINAGE FROM ALL PERIMETER WALLS.
6. SEE DETAILS AND SCHEDULES FOR FOOTING SIZES AND REINFORCING.
7. PROVIDE 1'-6" MINIMUM DISTANCE BETWEEN THE NEW ANCHOR BOLTS AND THE CONCRETE EDGE, EXPANSION JOINT, CONTROL JOINT, MIS-ALIGNED/ABANDONED BOLT HOLE.
8. PROVIDE DRAINAGE FOR EXPOSED EARTH SURROUNDED BY FOOTINGS UNTIL SLAB IS POURED.
9. ALL CONCRETE FOOTINGS AND SLABS SHALL HAVE A MINIMUM DESIGN STRENGTH OF F_c=3000 PSI.
10. PROVIDE (2) 4'-0" LONG #5 BARS AT RE-ENTRANT CORNERS, PLACE AT MID-DEPTH OF SLAB, ONE IN EACH DIRECTION.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING THE SERVICES OF A QUALIFIED TESTING LABORATORY TO PERFORM ALL COMPACTION TESTING.
12. FOOTING STEP LOCATIONS ARE BASED ON THE SITE CIVIL DRAWINGS AND SHOULD BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.

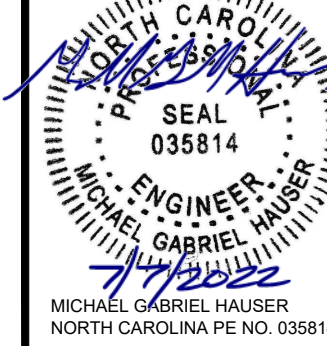
ABBREVIATIONS:

- | | |
|--------|------------------------|
| A. | COLUMN |
| EX. | EXISTING |
| S.O.G. | SLAB ON GRADE |
| T.O.S. | TOP OF STEEL |
| T.O.P. | TOP OF PARAPET |
| T.O.M. | TOP OF MASONRY |
| O.C. | ON CENTERS SPACING |
| T+B | TOP AND BOTTOM |
| F.F.E. | FINISH FLOOR ELEVATION |
| TYP. | TYPICAL |
| DEM.O. | DEMOLITION |
| CONT. | CONTINUOUS |
| CMU | CONCRETE MASONRY UNIT |
| STD. | STANDARD |
| XS. | EXTRA STRONG |
| XXS. | DOUBLE EXTRA STRING |
| GALV. | GALVANIZED |



BUILDING B FOUNDATION PLAN
SCALE: 1/8" = 1'-0"

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FOUNDATION
PLAN
S1.2

FRAMING NOTES:

1. MAXIMUM ZEE JOIST SPACING IS INDICATED ON THE PLANS. SPACE JOIST AT ACCESS DOORS TO ALLOW FOR PROPER INSTALLATION. REFER TO ARCHITECTURAL PLANS FOR LOCATIONS.
2. MATERIAL SUPPLIER SHALL VERIFY ALL DIMENSIONS, LAYOUTS AND COORDINATE WITH BEARING WALL AND BEAM LOCATIONS. SUBMIT SHOP DRAWINGS FOR APPROVAL. ALTERNATE LAYOUT PLANS MAY BE SUBMITTED FOR APPROVAL.
3. REFER TO FOUNDATION PLAN FOR DIMENSIONS AND TO ARCHITECTURAL PLANS FOR DIMENSIONS NOT SHOWN.
4. SEE DETAIL 1/S2.3 FOR ROOF PANEL SIZE AND ATTACHMENT..
5. VERIFY LOCATIONS AND AMOUNTS OF ALL HEADERS.
6. METAL STUD WALL SHOP DRAWINGS SHALL PROVIDED FOR REVIEW AND APPROVAL.
7. STUD SPACING SHALL NOT EXCEED 60" O.C. ON UPPER LEVEL (OR SINGLE STORY BUILDING) AND 30" ON LOWER LEVEL. ADDITIONALLY POINTS LOADS FROM STUDS ARE DESIGNED TO STACK FROM FLOOR-TO-FLOOR. CONTACT EOR IF STUDS DO NOT ALIGN
8. STUD WALL SIZES AND CONNECTIONS DIFFERING FROM THOSE SHOWN ON THESE PLANS MAY BE SUBMITTED FOR APPROVAL, PROVIDED THE ALTERNATES ARE PROVIDED IN THE FORM OF A SIGNED AND SEALED SHOP DRAWING BY A LICENSED PROFESSIONAL. NOTE THAT ANY PARTS OMITTED FROM THESE PLANS SHALL BE CONSIDERED THE DESIGNATED ENGINEER RESPONSIBILITY THROUGH SHOP DRAWINGS.
9. EXTERIOR WALL PANELS REQUIRE MID-HEIGHT WALL GIRT OR BRACING AT THIRD POINTS FOR SUPPORT. SEE DETAIL 2 ON S6
10. SEE DETAIL 3 ON S6 FOR PARTITION WALL INTERSECTION W/ BEARING WALL.

BUILDING 1 - LIGHT GAGE METAL STUD SCHEDULE

LOCATION	STUD HEIGHT	SIZE	SPACING	LATERAL BRACING LOCATIONS
FIRST FLOOR EXTERIOR WALLS - METAL PANELS	VARIABLE	4Cx2 1/2x16GA (50 KSI)	60" MAX.	60" O.C. BRACING
FIRST FLOOR INTERIOR BEARING WALLS	VARIABLE	4Cx2 1/2x16GA (50 KSI)	60" MAX.	SHEATHED ONE SIDE

CLADDING SCHEDULE

PANEL TYPE	LOCATION	MATERIAL	GIRT/PURLIN - WALL/ROOF PANEL BRACE SPACING
U PANEL BY VENDOR	INTERIOR WALL	29 GA.	INTERIOR STUD SPACING = 5.0 FT O.C
R PANEL BY VENDOR	EXTERIOR WALL	26 GA.	CORNER ZONE = 5.0 FT O.C INTERIOR ZONE = 5.0 FT O.C.
24 GA. STANDING SEAM BY VENDOR	ROOF	24 GA.	CORNER ZONE = 5.0 FT O.C PERIMETER ZONE = 5.0 FT O.C INTERIOR ZONE = 5.0 FT O.C

1. SUBMIT VENDOR CUT SHEETS/SHOP DRAWING INFORMATION FOR APPROVAL.
2. SEE MANUFACTURER REQUIREMENTS FOR INSTALLATION COMPONENTS AND TRIM COMPONENTS TO RESIST CLADDING PRESSURES

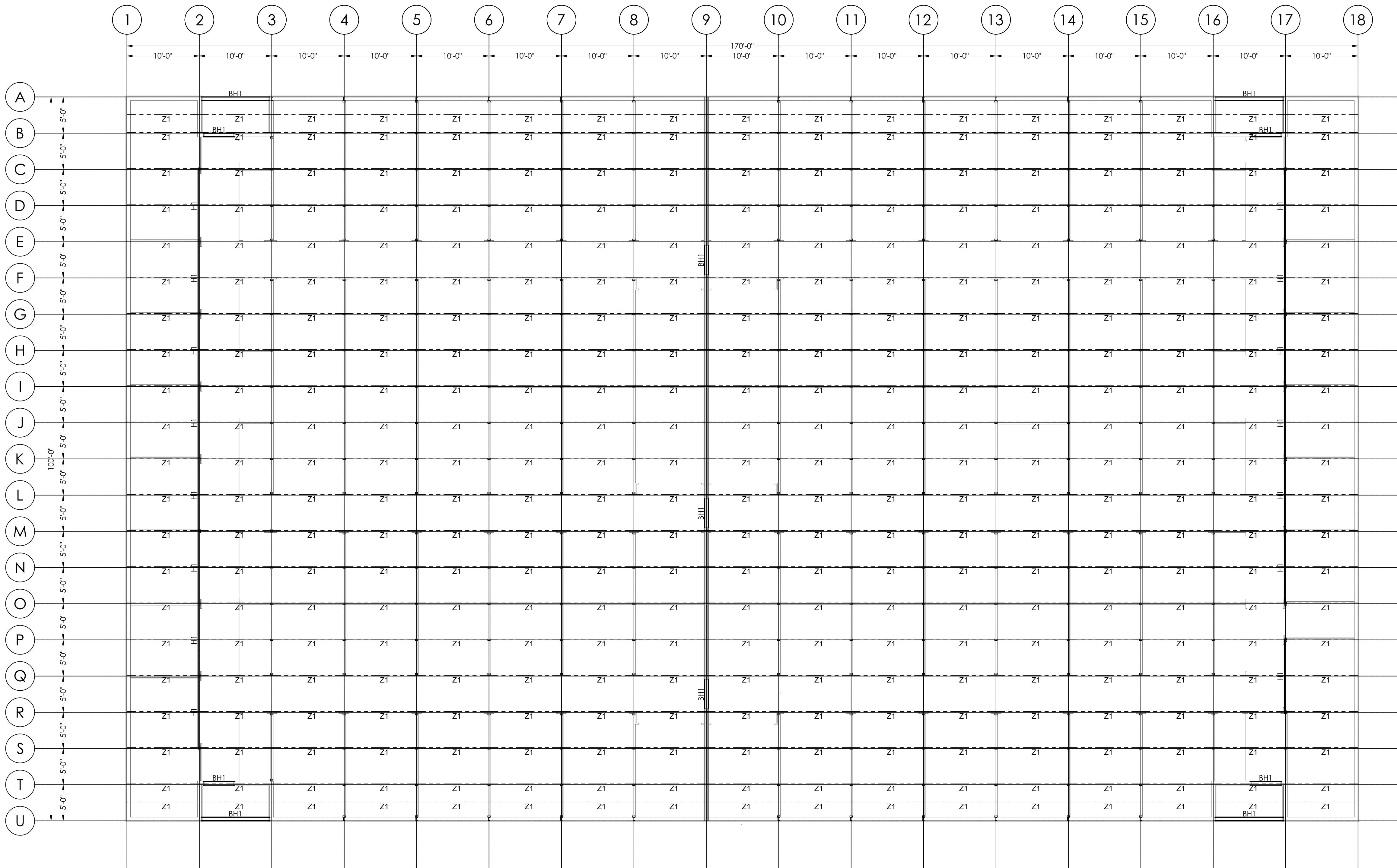
LINTEL SCHEDULE

SIZE	NOTES
L3-1/2x3-1/2x5/16	UP TO 4'-0" OPENINGS
L4x4x3/8	4'-0" TO 6'-0" OPENINGS
L6x4x3/8 (LLV)	6'-0" TO 8'-0" OPENINGS
L7x4x7/16 (LLV)	8'-0" TO 10'-0" OPENINGS
CONTACT EOR	OPENINGS > 10'-0"

1. NO EXPANSION JOINTS MAY BE POSITIONED ON EITHER SIDE OF OPENING OF ABOVE OPENING. LINTEL IS DESIGNED WITH ARCHING AFFECT OF MASONRY ACCOUNTED.
2. FOR OPENINGS UP TO 8'-0" PROVIDE 6" BEARING ON EACH SIDE. FOR OPENING 8'-0" TO 10'-0", PROVIDE 8" BEARING ON EACH SIDE.
3. NO CONCENTRATED LOADS SHALL BE INSTALLED ABOVE LINTELS, IE, AWNING CONNECTIONS, ARCH FEATURES ETC.

LIGHT GAGE HEADER AND PURLIN SCHEDULE

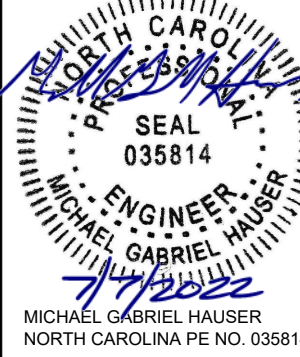
LABEL	SIZE	MATERIAL	NOTES
H1	SINGLE 8Cx3-1/2x14GA	50 KSI	SEE DETAILS 5 AND 6 ON S5
DH1	DOUBLE 6Cx2x14GA (50 KSI) W/ CRIPPLE STUDS AT 24" O.C.	50 KSI	SEE DETAIL 4 ON S6
DH2	DOUBLE 12Cx3-1/2x12GA (50 KSI) W/ CRIPPLE STUDS AT 24" O.C.	50 KSI	SEE DETAIL 4 ON S6
DH3	DOUBLE 8Cx2-1/2x16GA (50 KSI) W/ CRIPPLE STUDS AT 24" O.C.	50 KSI	SEE DETAIL 4 ON S6
BH1	DOUBLE 6Cx2x16GA (50 KSI) W/ T&B TRACK TO FORM BOX HEADER	50 KSI	SEE DETAILS 5 AND 6 ON S6
BH2	DOUBLE 6Cx2x14GA (50 KSI) W/ T&B TRACK TO FORM BOX HEADER	50 KSI	SEE DETAILS 5 AND 6 ON S6
Z1	4"x2 1/2"x16 GA Zee Purlins SEE SHOP DRAWINGS	50 KSI	SEE DETAILS 2,3,4, AND 5 ON S5
Z2	12"x3 1/2"x14 GA Zee Purlins SEE SHOP DRAWINGS	50 KSI	SEE DETAILS 2,3,4, AND 5 ON S5



BUILDING B ROOF FRAMING PLAN

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

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ROOF
FRAMING PLAN

S2.2

FRAMING NOTES:

1. MAXIMUM ZEE JOIST SPACING IS INDICATED ON THE PLANS. SPACE JOIST AT ACCESS DOORS TO ALLOW FOR PROPER INSTALLATION. REFER TO ARCHITECTURAL PLANS FOR LOCATIONS.
2. MATERIAL SUPPLIER SHALL VERIFY ALL DIMENSIONS, LAYOUTS AND COORDINATE WITH BEARING WALL AND BEAM LOCATIONS. SUBMIT SHOP DRAWINGS FOR APPROVAL. ALTERNATE LAYOUT PLANS MAY BE SUBMITTED FOR APPROVAL.
3. REFER TO FOUNDATION PLAN FOR DIMENSIONS AND TO ARCHITECTURAL PLANS FOR DIMENSIONS NOT SHOWN.
4. SEE DETAIL 1/S2.3 FOR ROOF PANEL SIZE AND ATTACHMENT..
5. VERIFY LOCATIONS AND AMOUNTS OF ALL HEADERS.
6. METAL STUD WALL SHOP DRAWINGS SHALL PROVIDED FOR REVIEW AND APPROVAL.
7. STUD SPACING SHALL NOT EXCEED 60" O.C. ON UPPER LEVEL (OR SINGLE STORY BUILDING) AND 30" ON LOWER LEVEL. ADDITIONALLY POINTS LOADS FROM STUDS ARE DESIGNED TO STACK FROM FLOOR-TO-FLOOR. CONTACT EOR IF STUDS DO NOT ALIGN
8. STUD WALL SIZES AND CONNECTIONS DIFFERING FROM THOSE SHOWN ON THESE PLANS MAY BE SUBMITTED FOR APPROVAL. PROVIDED THE ALTERNATES ARE PROVIDED IN THE FORM OF A SIGNED AND SEALED SHOP DRAWING BY A LICENSED PROFESSIONAL. NOTE THAT ANY PARTS OMITTED FROM THESE PLANS SHALL BE CONSIDERED THE DESIGNATED ENGINEER RESPONSIBILITY THROUGH SHOP DRAWINGS.
9. EXTERIOR WALL PANELS REQUIRE MID-HEIGHT WALL GIRT OR BRACING AT THIRD POINTS FOR SUPPORT. SEE DETAIL 2 ON S6
10. SEE DETAIL 3 ON S6 FOR PARTITION WALL INTERSECTION W/ BEARING WALL.

BUILDING 1 - LIGHT GAGE METAL STUD SCHEDULE

LOCATION	STUD HEIGHT	SIZE	SPACING	LATERAL BRACING LOCATIONS
FIRST FLOOR EXTERIOR WALLS - METAL PANELS	VARIABLES	4Cx2 1/2x16GA (50 KSI)	60" MAX.	60" O.C. BRACING
FIRST FLOOR INTERIOR BEARING WALLS	VARIABLES	4Cx2 1/2x16GA (50 KSI)	60" MAX.	SHEATHED ONE SIDE

CLADDING SCHEDULE

PANEL TYPE	LOCATION	MATERIAL	GIRT/PURLIN - WALL/ROOF PANEL BRACE SPACING
U PANEL BY VENDOR	INTERIOR WALL	29 GA.	INTERIOR STUD SPACING = 5.0 FT O.C
R PANEL BY VENDOR	EXTERIOR WALL	26 GA.	CORNER ZONE = 5.0 FT O.C INTERIOR ZONE = 5.0 FT O.C.
24 GA. STANDING SEAM BY VENDOR	ROOF	24 GA.	CORNER ZONE = 5.0 FT O.C PERIMETER ZONE = 5.0 FT O.C INTERIOR ZONE = 5.0 FT O.C

1. SUBMIT VENDOR CUT SHEETS/SHOP DRAWING INFORMATION FOR APPROVAL.
2. SEE MANUFACTURER REQUIREMENTS FOR INSTALLATION COMPONENTS AND TRIM COMPONENTS TO RESIST CLADDING PRESSURES

LINTEL SCHEDULE

SIZE	NOTES
L3-1/2x3-1/2x5/16	UP TO 4'-0" OPENINGS
L4x4x3/8	4'-0" TO 6'-0" OPENINGS
L6x4x3/8 (LLV)	6'-0" TO 8'-0" OPENINGS
L7x4x7/16 (LLV)	8'-0" TO 10'-0" OPENINGS
CONTACT EOR	OPENINGS > 10'-0"

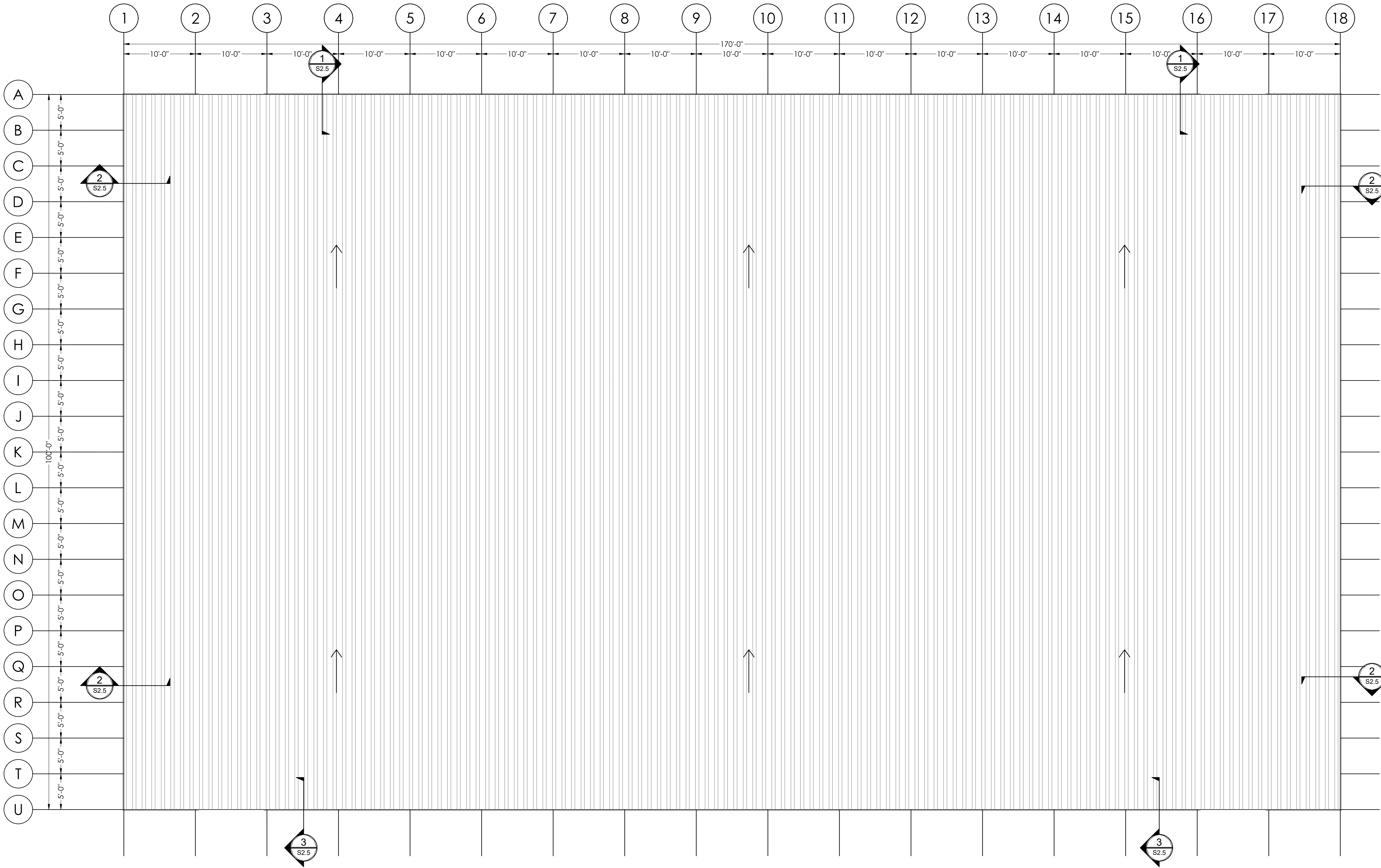
1. NO EXPANSION JOINTS MAY BE POSITIONED ON EITHER SIDE OF OPENING OF ABOVE OPENING. LINTEL IS DESIGNED WITH ARCHING AFFECT OF MASONRY ACCOUNTED.

2. FOR OPENINGS UP TO 8'-0" PROVIDE 6" BEARING ON EACH SIDE. FOR OPENING 8'-0" TO 10'-0", PROVIDE 8" BEARING ON EACH SIDE.

3. NO CONCENTRATED LOADS SHALL BE INSTALLED ABOVE LINTELS. IE, AWNING CONNECTIONS, ARCH FEATURES ETC.

LIGHT GAGE HEADER AND PURLIN SCHEDULE

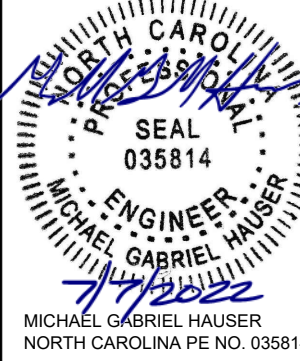
LABEL	SIZE	MATERIAL	NOTES
H1	SINGLE 8Cx3-1/2x14GA	50 KSI	SEE DETAILS 5 AND 6 ON S5
DH1	DOUBLE 6Cx2x14GA (50 KSI) W/ CRIPPLE STUDS AT 24" O.C.	50 KSI	SEE DETAIL 4 ON S6
DH2	DOUBLE 12Cx3-1/2x12GA (50 KSI) W/ CRIPPLE STUDS AT 24" O.C.	50 KSI	SEE DETAIL 4 ON S6
DH3	DOUBLE 8Cx2-1/2x16GA (50 KSI) W/ CRIPPLE STUDS AT 24" O.C.	50 KSI	SEE DETAIL 4 ON S6
BH1	DOUBLE 6Cx2x16GA (50 KSI) W/ T&B TRACK TO FORM BOX HEADER	50 KSI	SEE DETAILS 5 AND 6 ON S6
BH2	DOUBLE 6Cx2x14GA (50 KSI) W/ T&B TRACK TO FORM BOX HEADER	50 KSI	SEE DETAILS 5 AND 6 ON S6
Z1	4"x2 1/2"x16 GA Zee Purlins SEE SHOP DRAWINGS	50 KSI	SEE DETAILS 2,3,4, AND 5 ON S5
Z2	12"x3 1/2"x14 GA Zee Purlins SEE SHOP DRAWINGS	50 KSI	SEE DETAILS 2,3,4, AND 5 ON S5



BUILDING B ROOFING PLAN

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

HAUSER-CREECH, INC.
PROJECT # 22-10X-00X



HAUSER-CREECH, INC.

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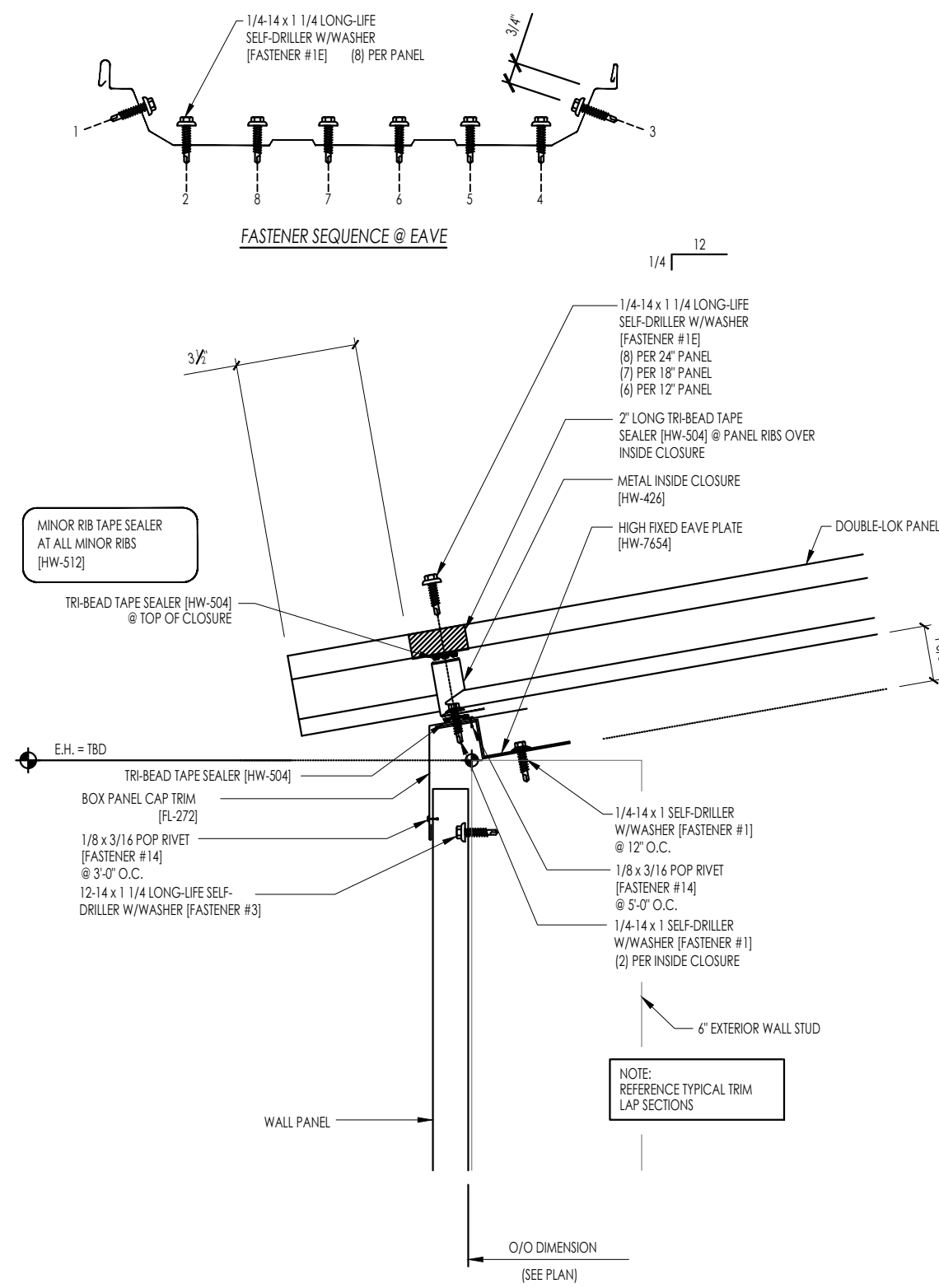
BUILDING B
LAKESIDE STORAGE - ANGIER
ANGIER, NC

ISSUE DATE: 07.07.2022

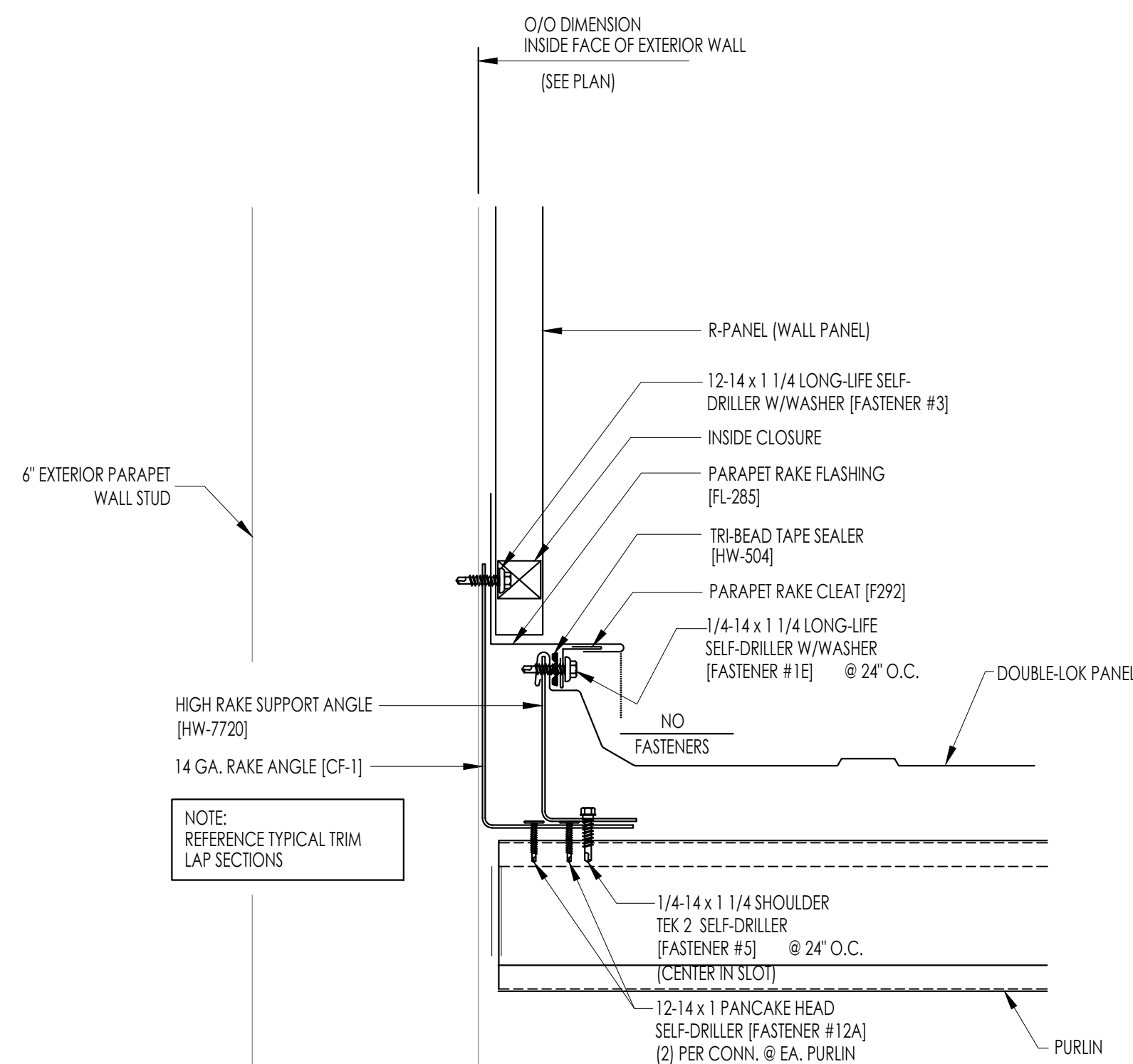
REV	DATE

ROOFING
PLAN

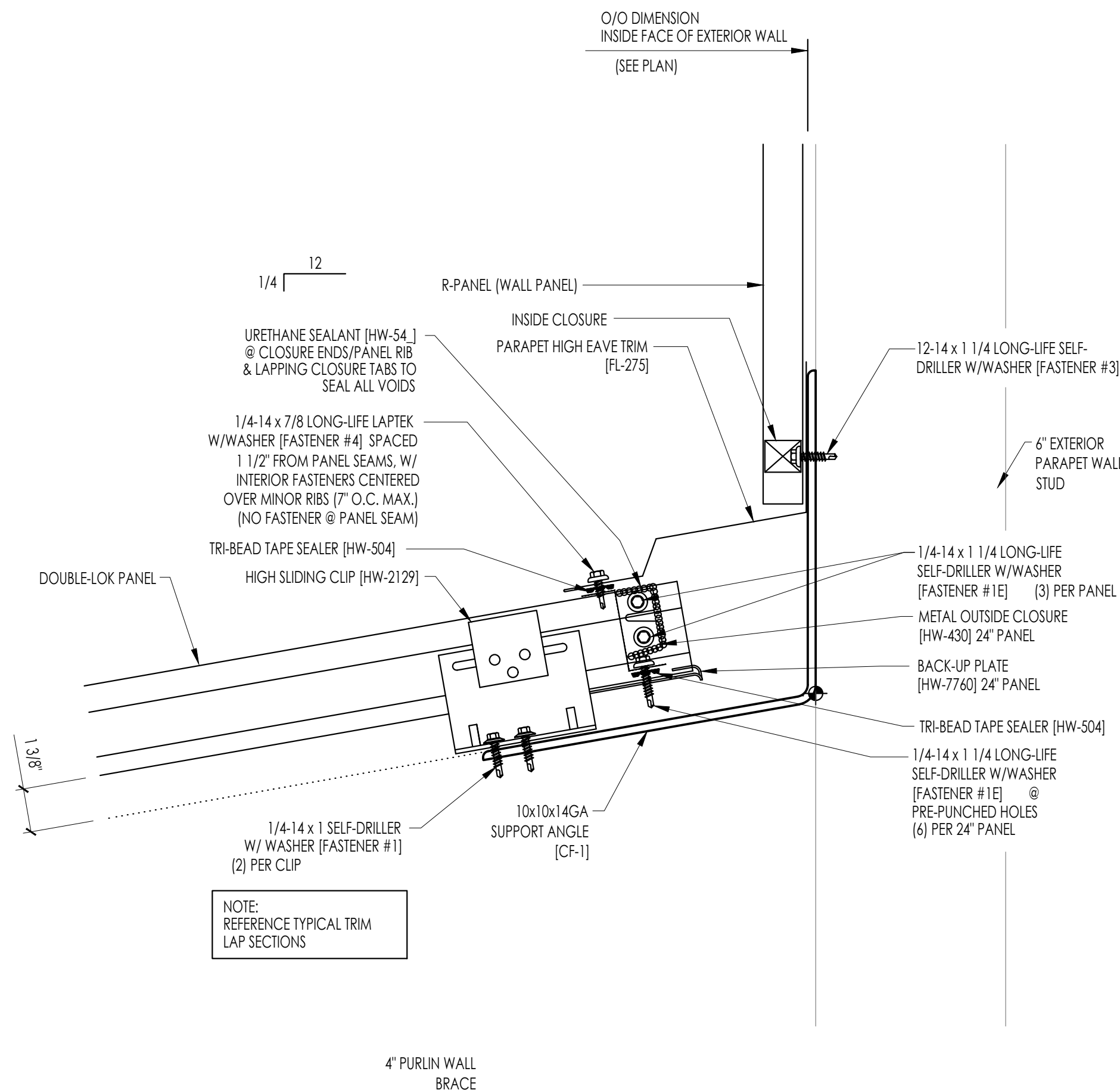
S2.2a



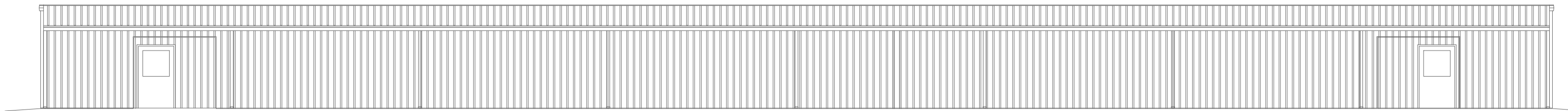
1 LOW EAVE NO GUTTER SECTION
S2.4 SCALE: N/A



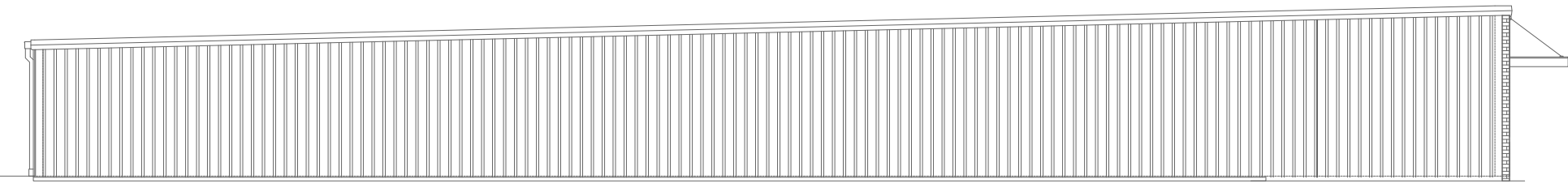
2 PARAPET RAKE TRIM SECTION
S2.4 SCALE: N/A



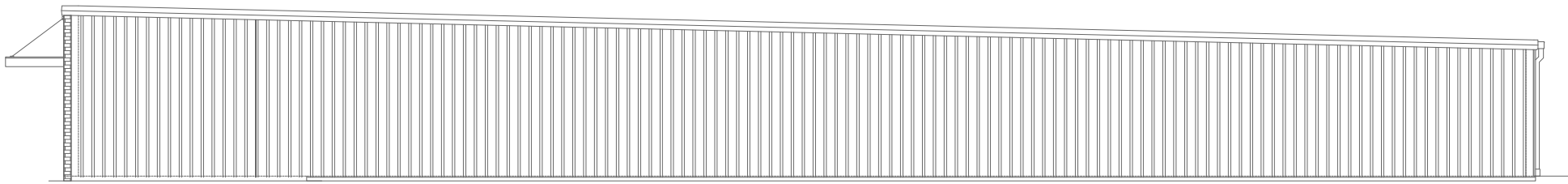
3 PARAPET HIGH EAVE TRIM SECTION
S2.4 SCALE: N/A



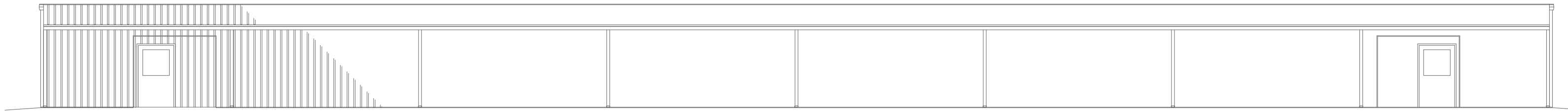
FRONT ELEVATION



LEFT SIDE ELEVATION



RIGHT SIDE ELEVATION



REAR ELEVATION

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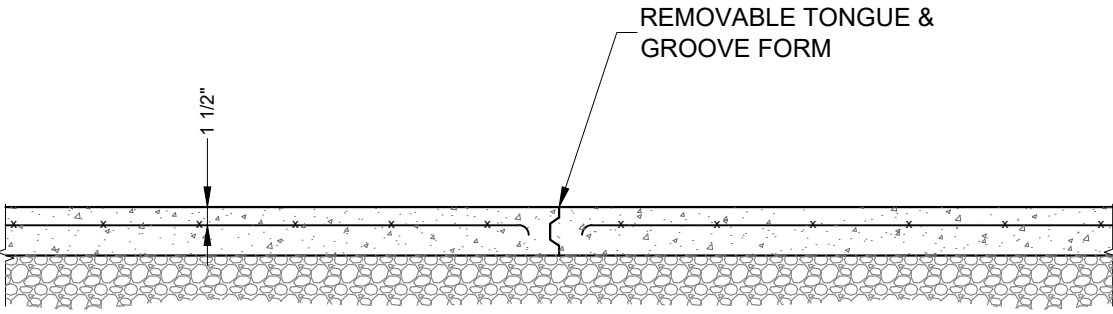
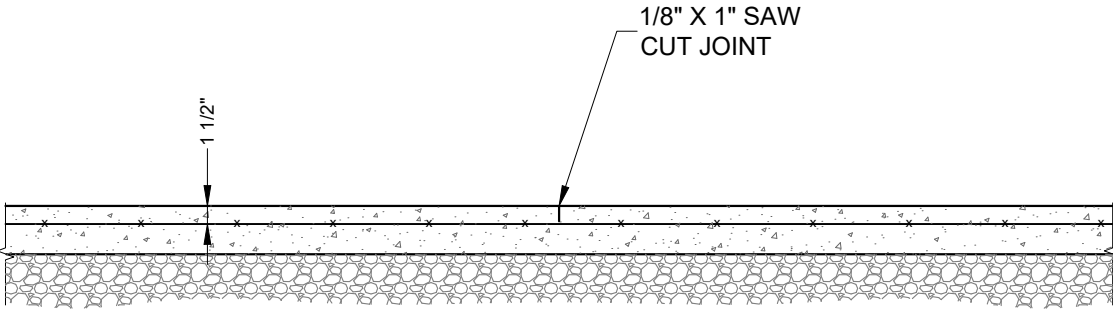
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BUILDING B
LAKESIDE STORAGE - ANGIER
ANGIER, NC

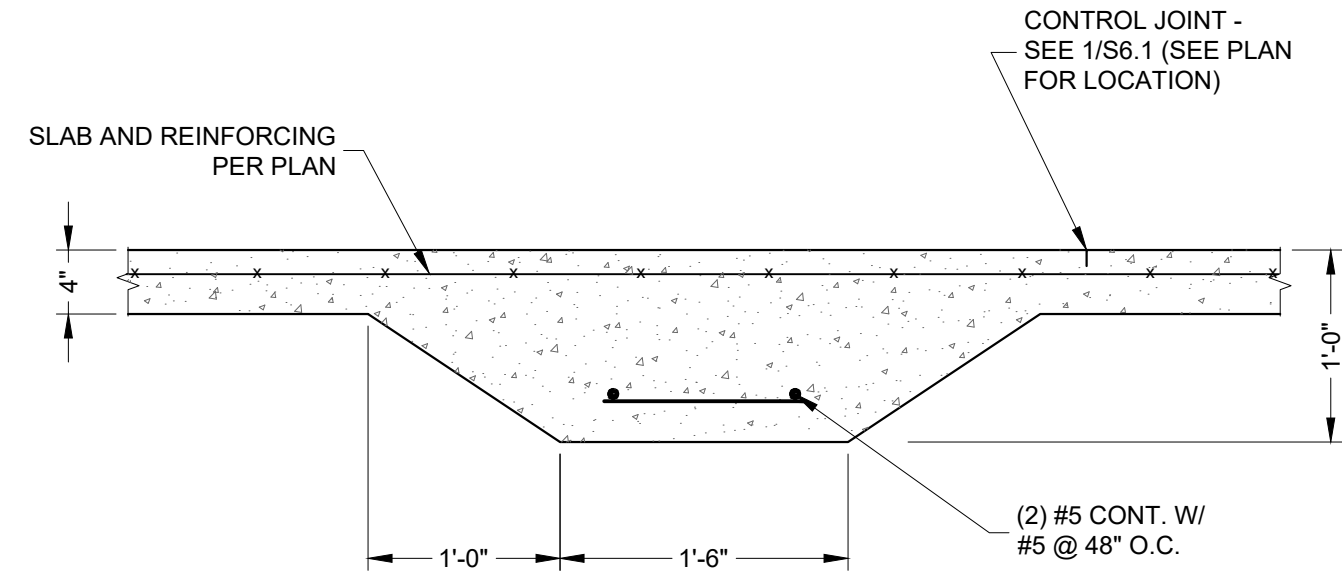
ISSUE DATE: 07.07.2022	
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BUILDING B
ELEVATIONS
S3.2

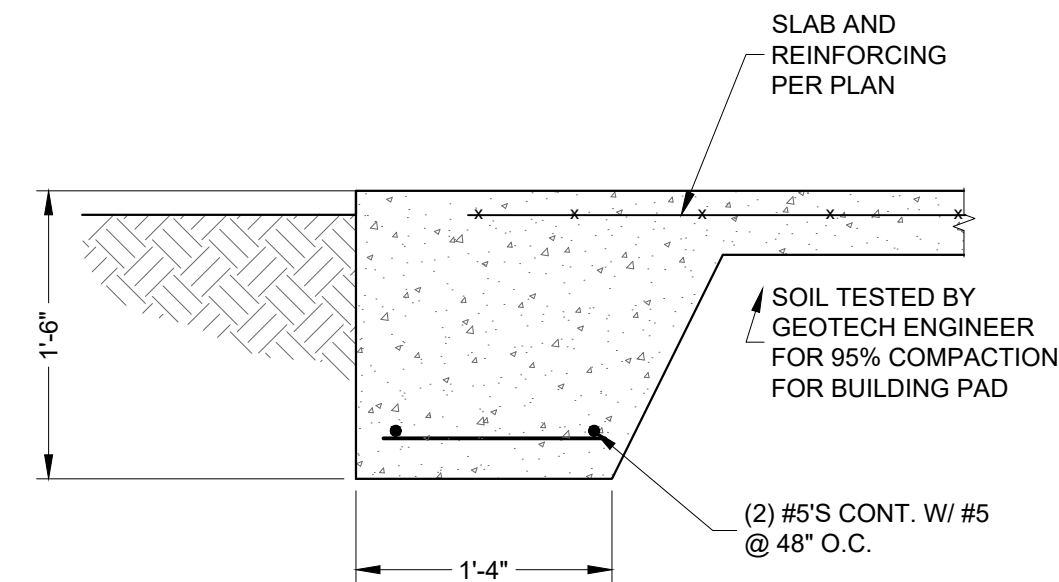
NOTE:
MAXIMUM JOINT SPACING SHALL
BE 20 FT. IN EACH DIRECTION
UNLESS SHOWN OTHERWISE ON PLAN
LOCATED UNDER NON-LOAD
BRG. WALLS IF POSSIBLE



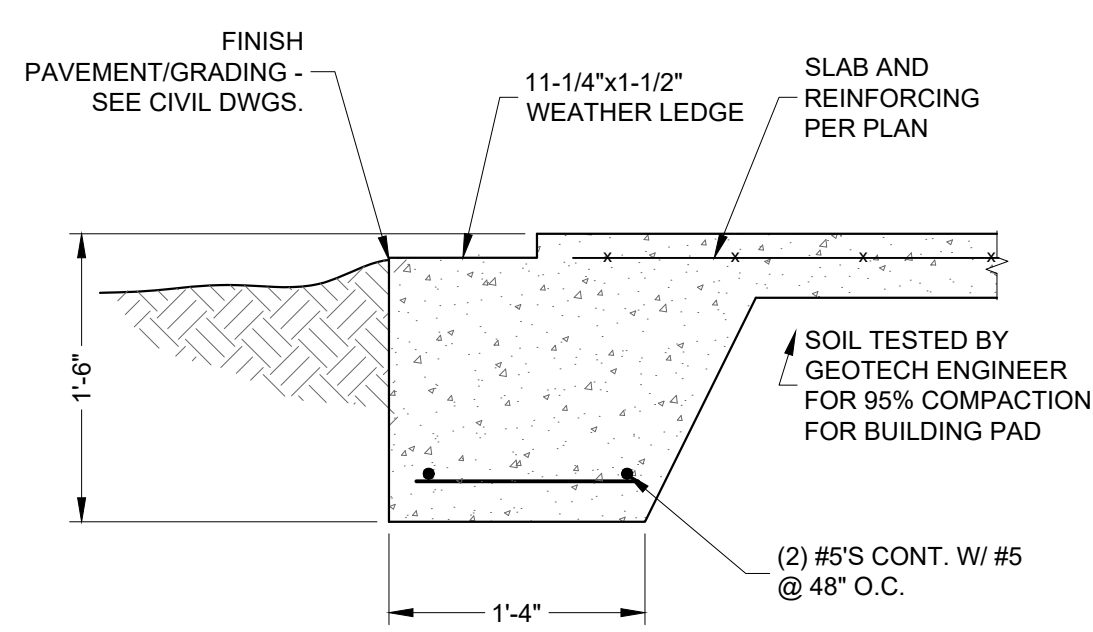
1 SLAB ON GRADE JOINTS
SCALE: NONE



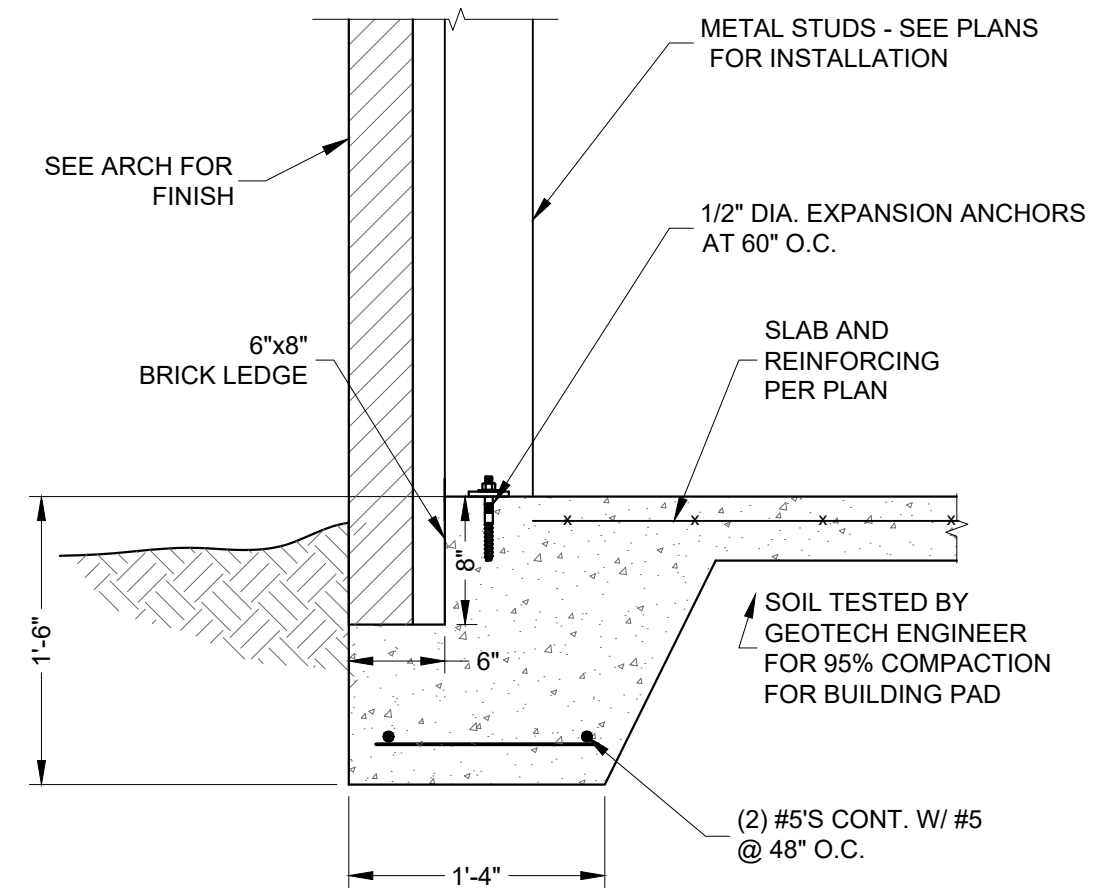
5 THICKENED SLAB
SCALE: NONE



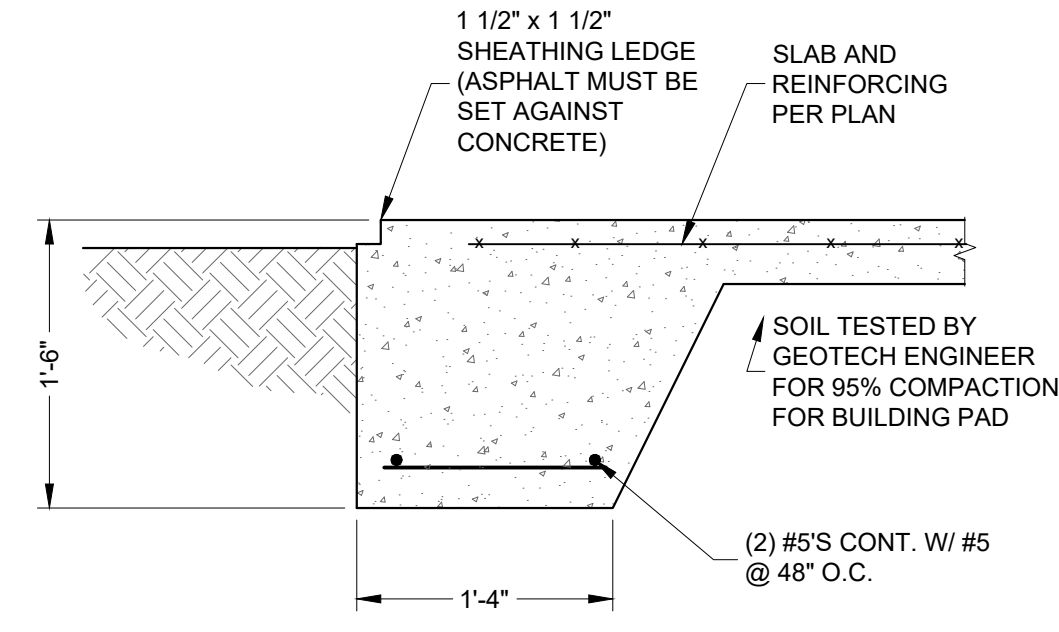
9 EXTERIOR AT TURN-DOWN
SCALE: NONE



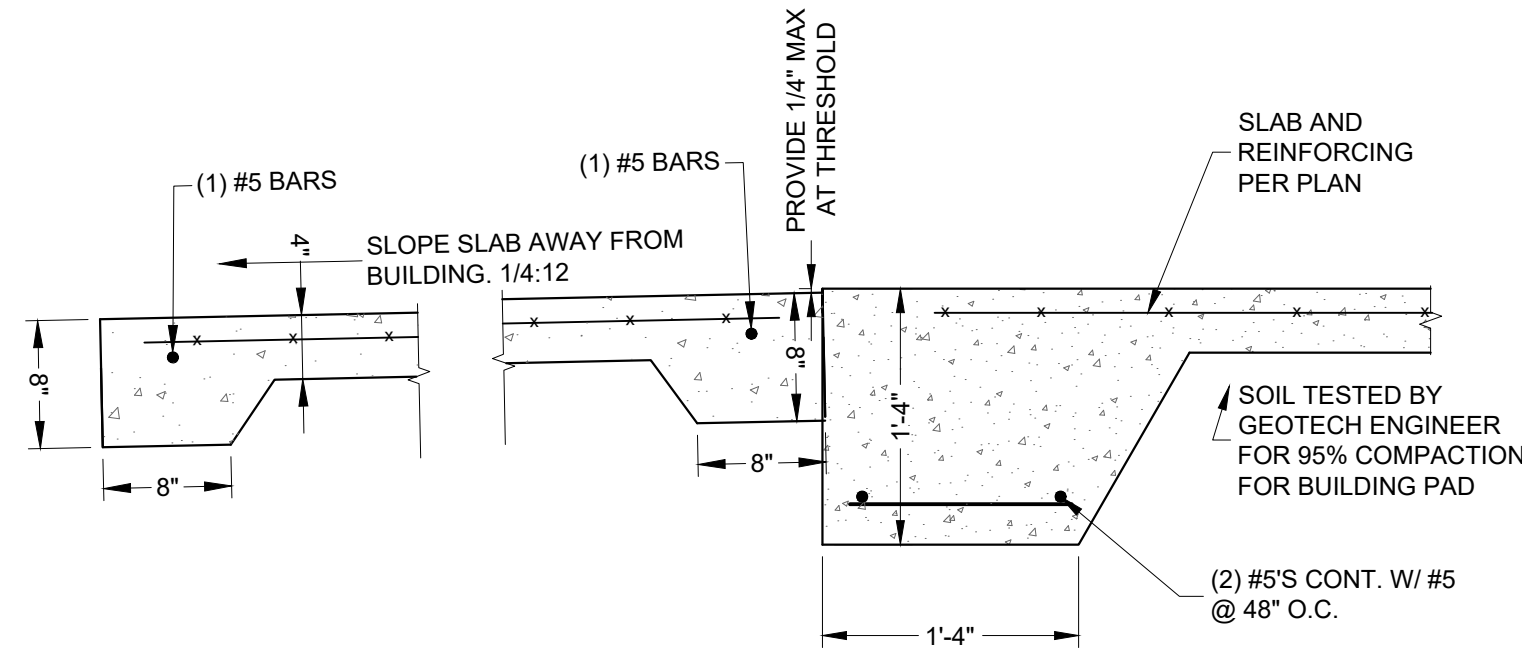
2 SECTION @ EXTERIOR WALL
(WEATHER LEDGE)
SCALE: NONE



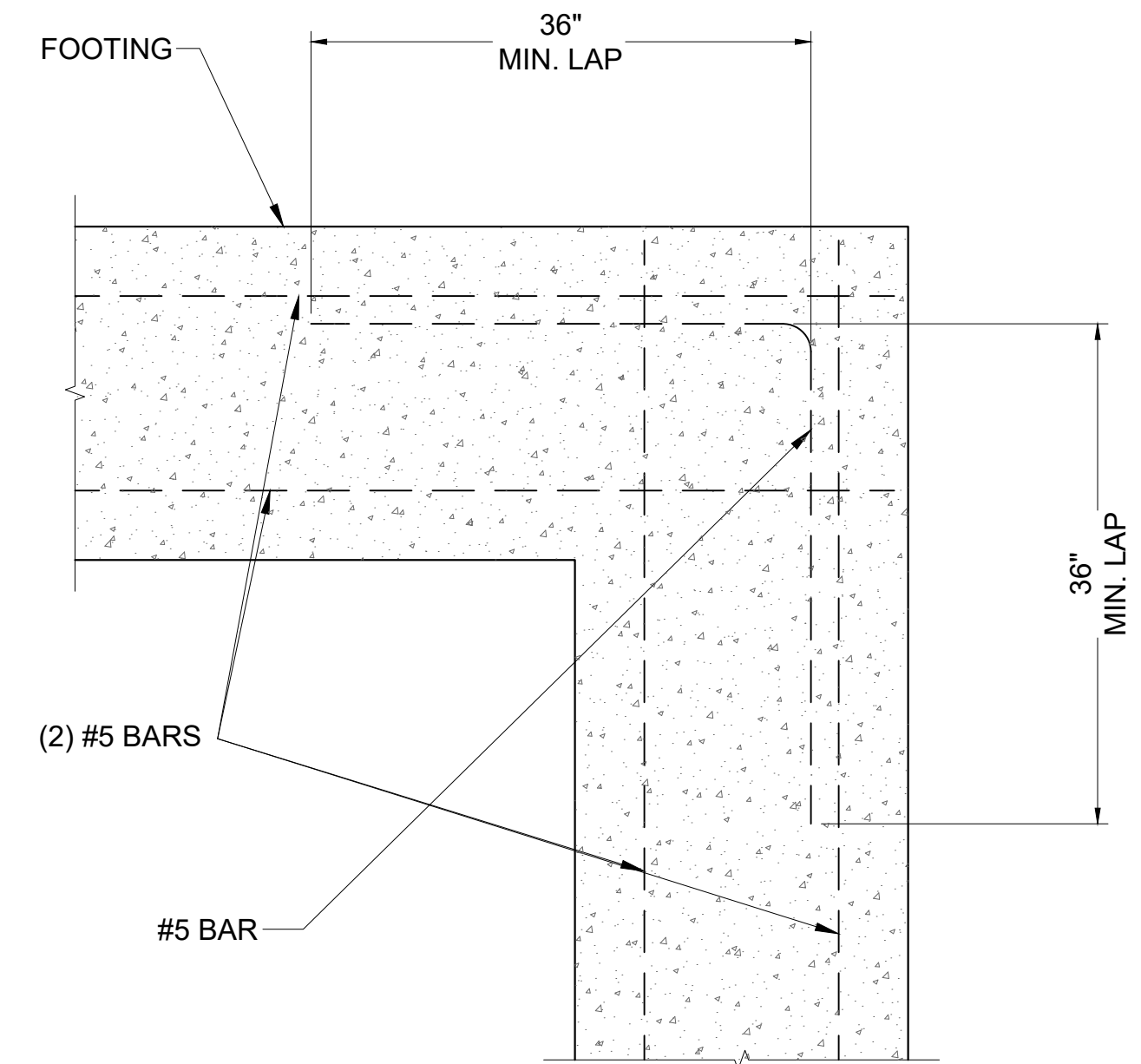
6 SECTION @ EXTERIOR WALL
(BRICK LEDGE)
SCALE: NONE



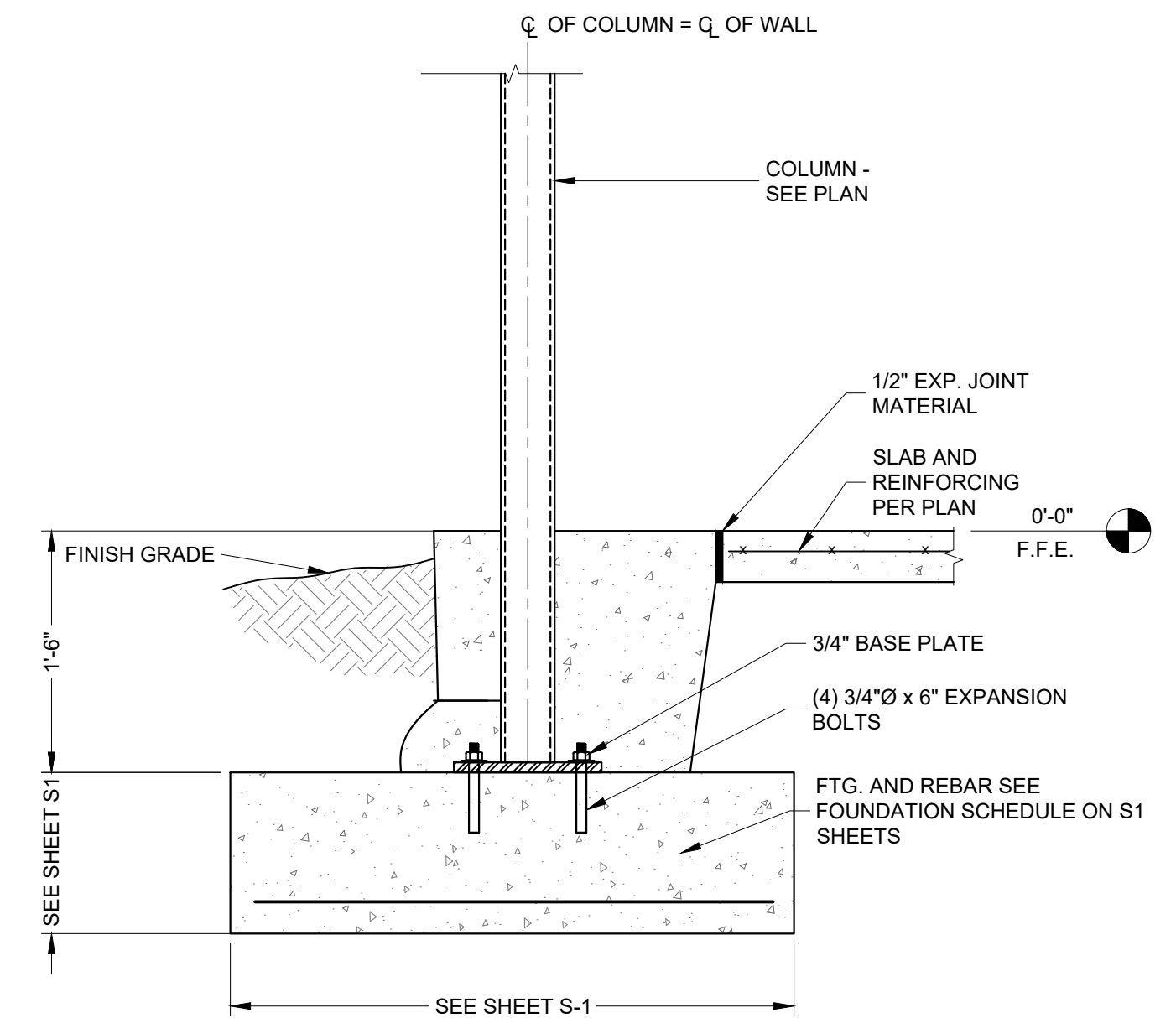
3 SECTION @ SHEATHING NOTCH
SCALE: NONE



7 EXTERIOR ENTRY/ALCOVE PAD
SCALE: NONE

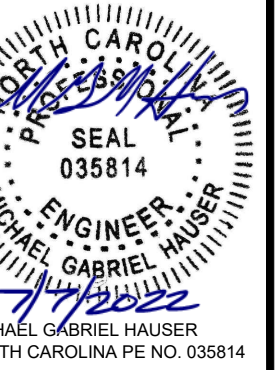


4 CONTINUITY CORNERS - ALL BUILDING CORNERS
SCALE: NONE



8 EXTERIOR STEEL COLUMN
SCALE: NONE

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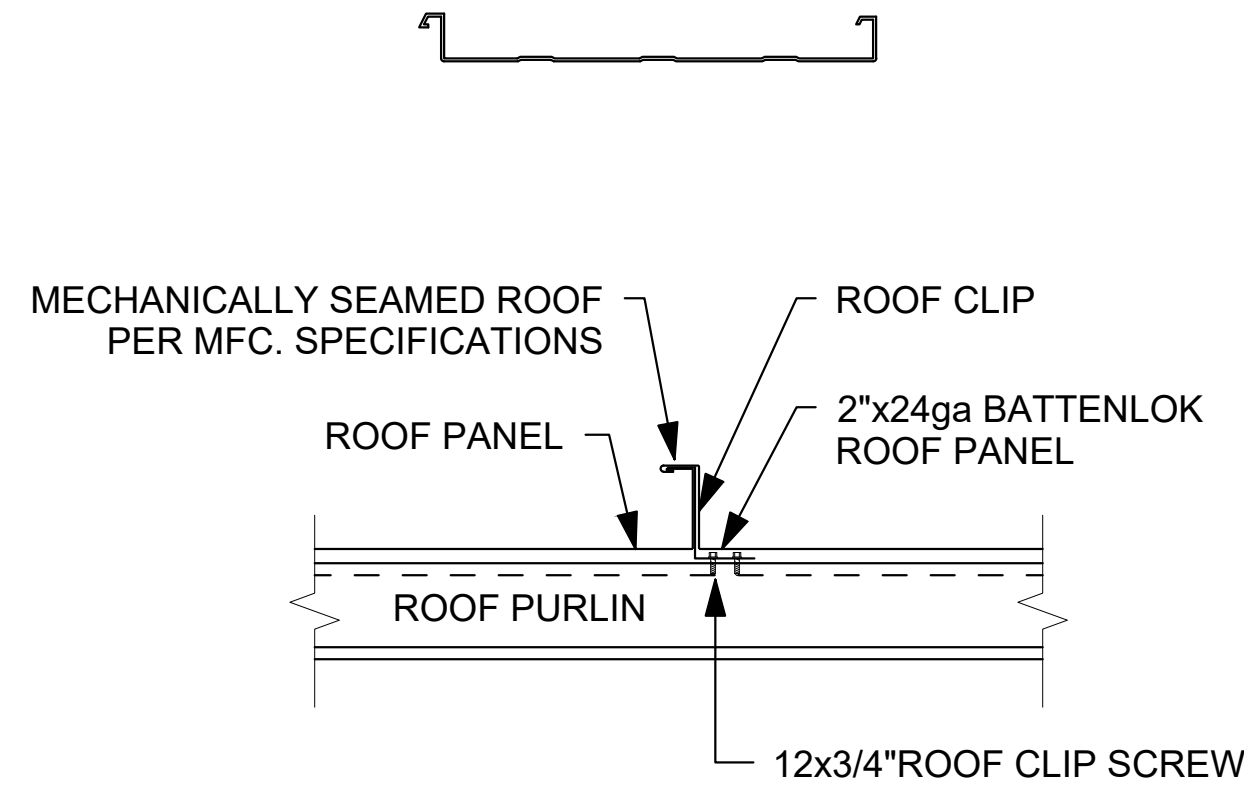
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BUILDING B
LAKESIDE STORAGE - ANGIER
ANGIER, NC

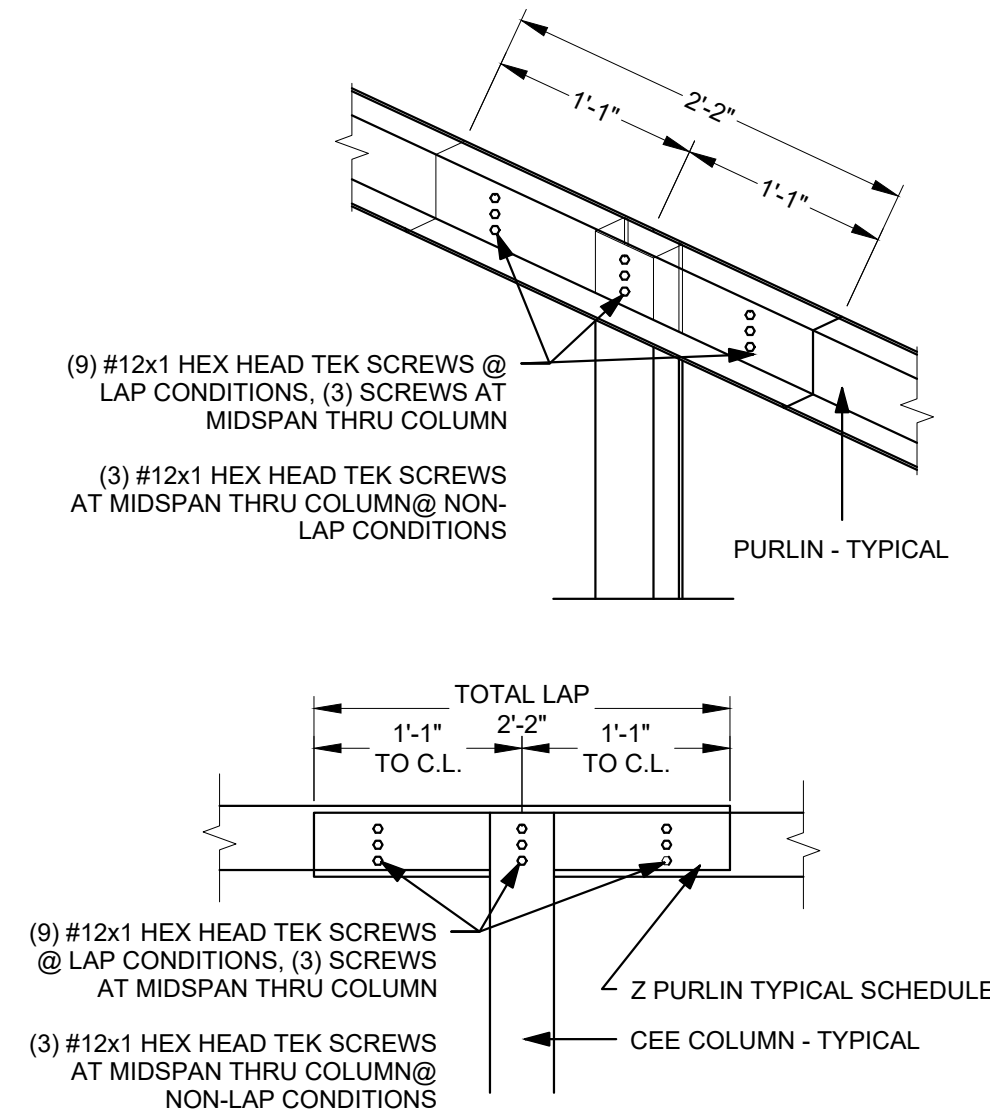
ISSUE DATE: 07.07.2022	
REV	DATE

FOUNDATION
DETAILS

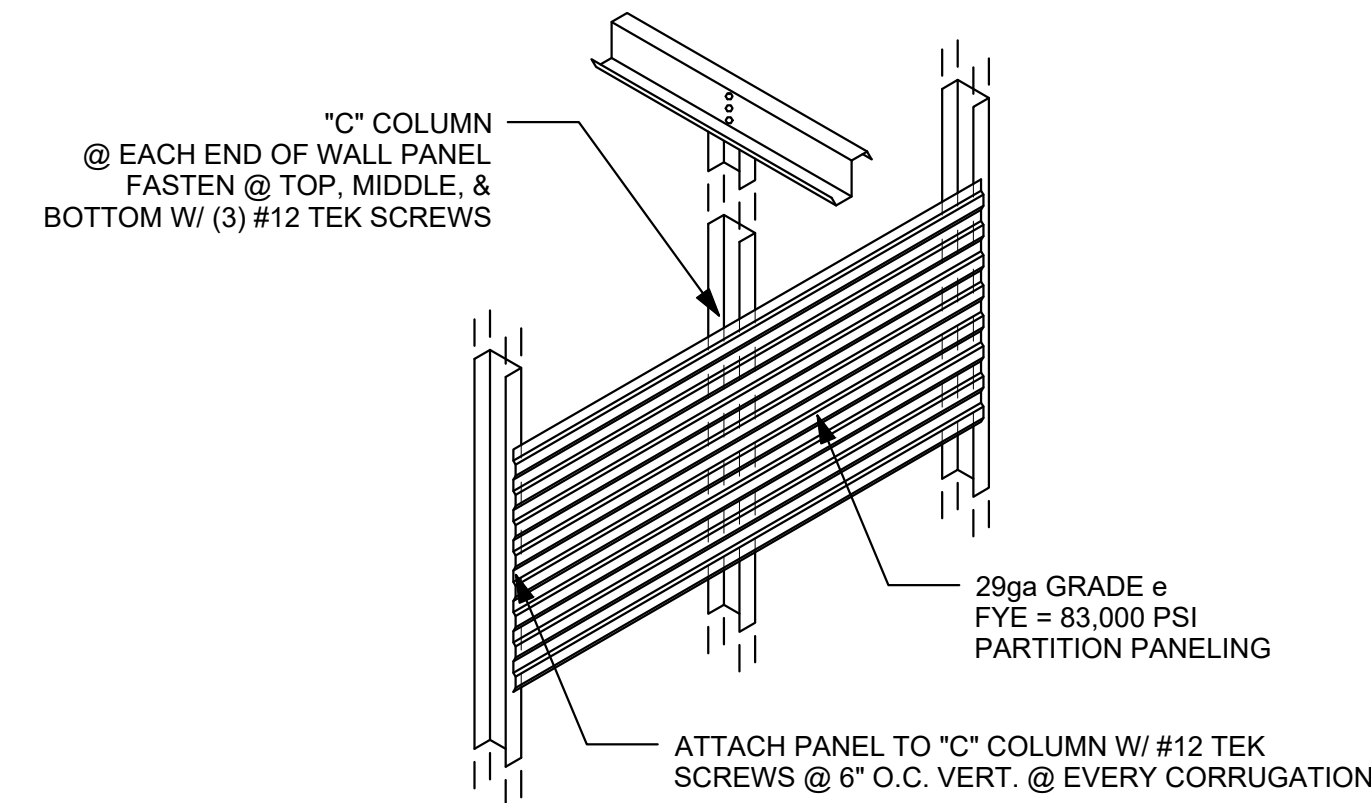
S4



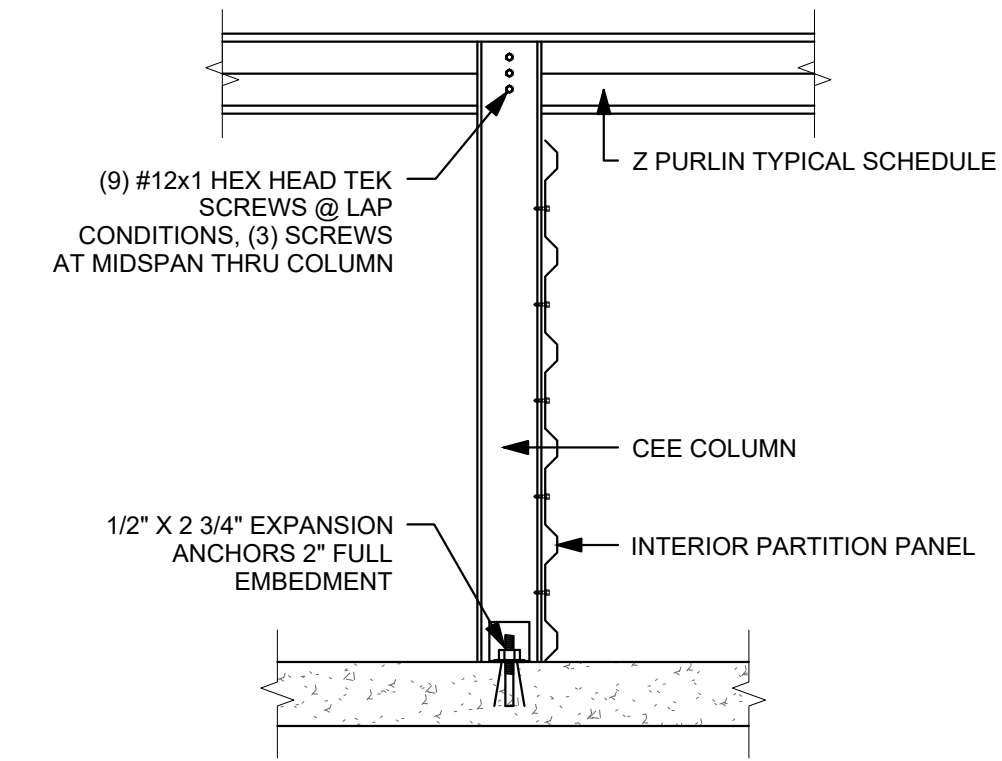
1 **STANDING SEAM ROOF PANEL DETAIL**
SCALE: NONE



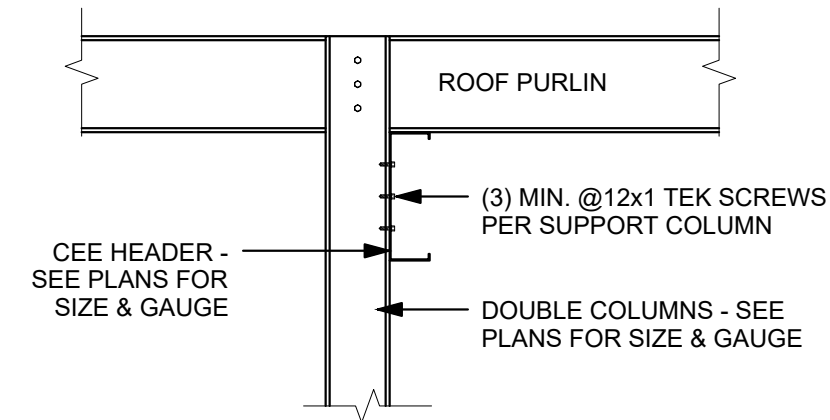
2 **PURLIN CONNECTION/LAP**
SCALE: NONE



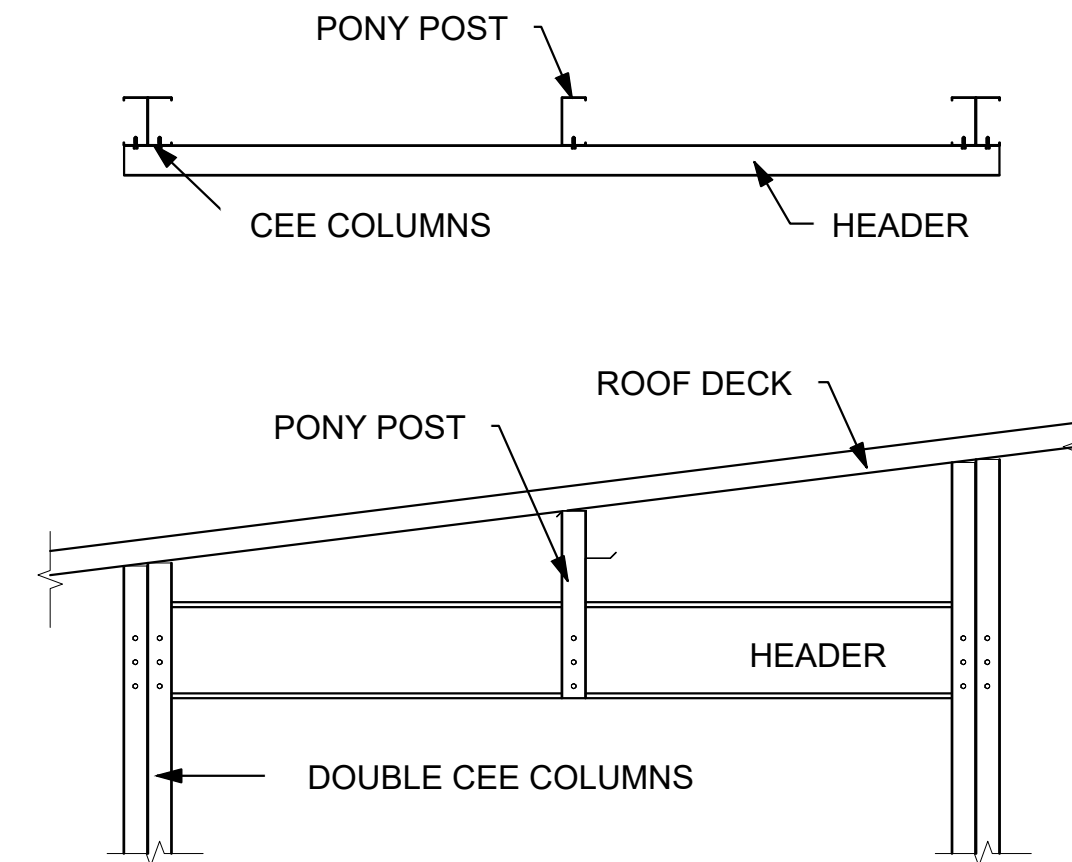
3 **PURLIN SUPPORT WALL FRAMING**
SCALE: NONE



4 **PURLIN SUPPORT WALL CONNECTION**
SCALE: NONE



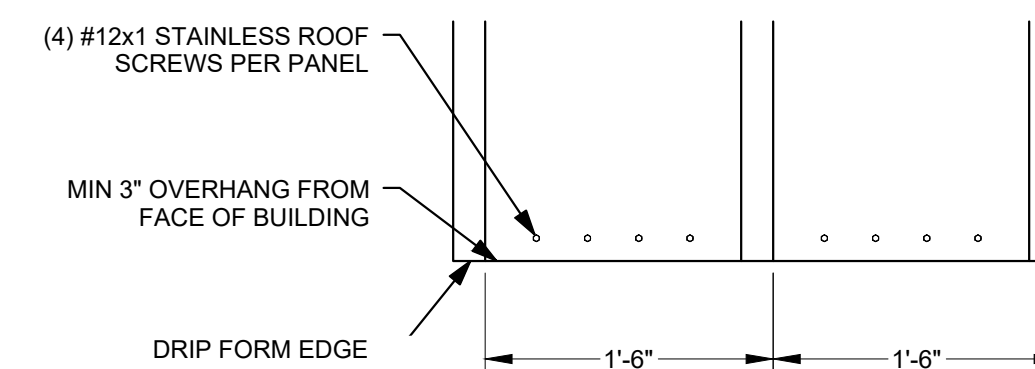
5 **PURLIN SUPPORT - HEADER CONNECTION**
SCALE: NONE



6 **PURLIN SUPPORT - HEADER CONNECTION**
SCALE: NONE

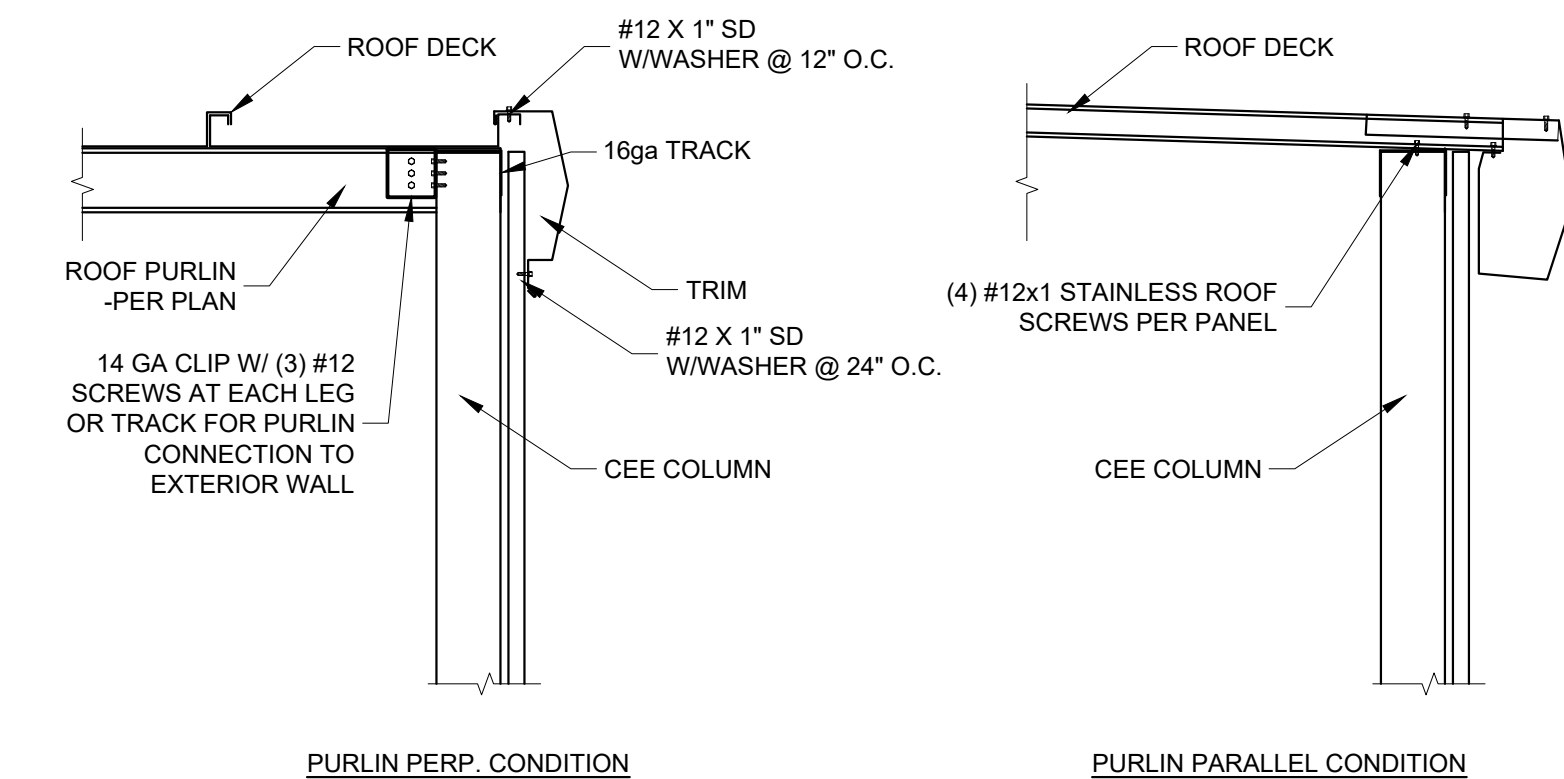
7 **DETAIL NOT USED**
SCALE: NONE

8 **DETAIL NOT USED**
SCALE: NONE



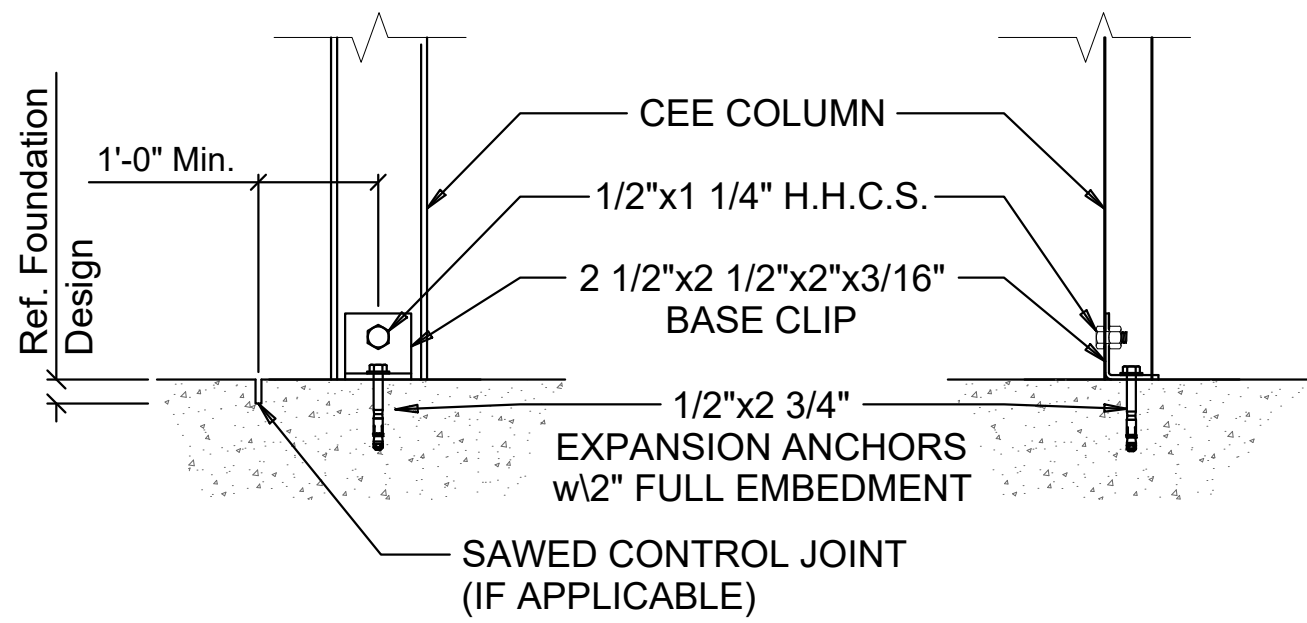
9 **DETAIL NOT USED**
SCALE: NONE

10 **DETAIL NOT USED**
SCALE: NONE

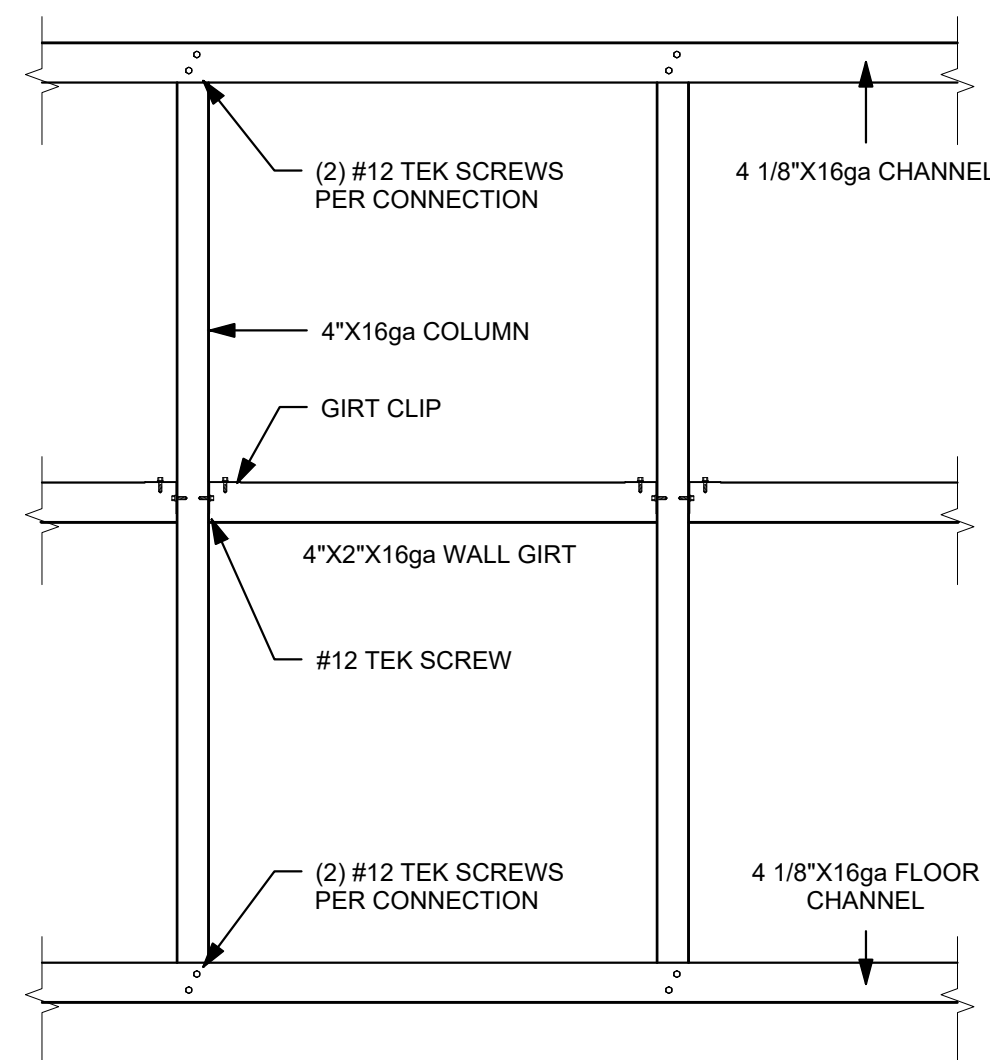


11 **ROOF PANEL CONNECTION AT EAVE**
SCALE: NONE

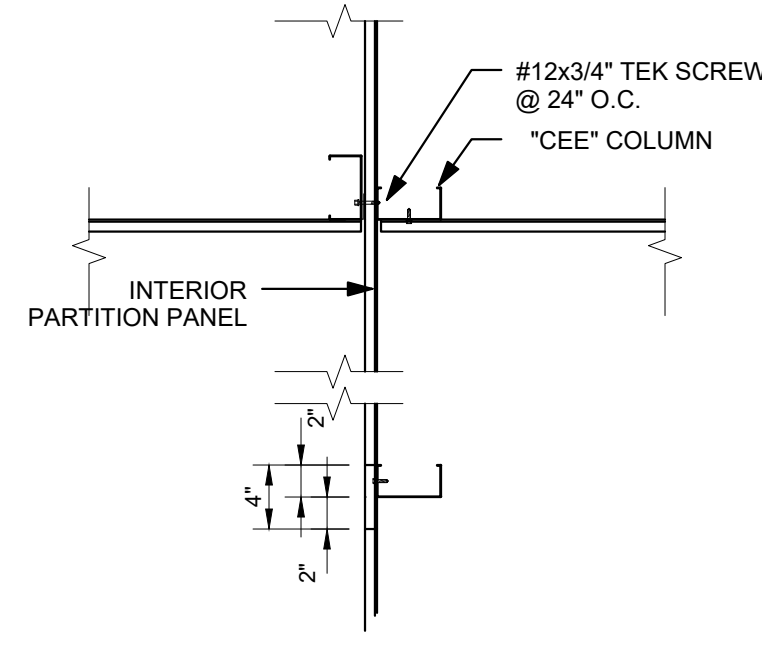
12 **ROOF CONNECTION AT EXTERIOR**
SCALE: NONE



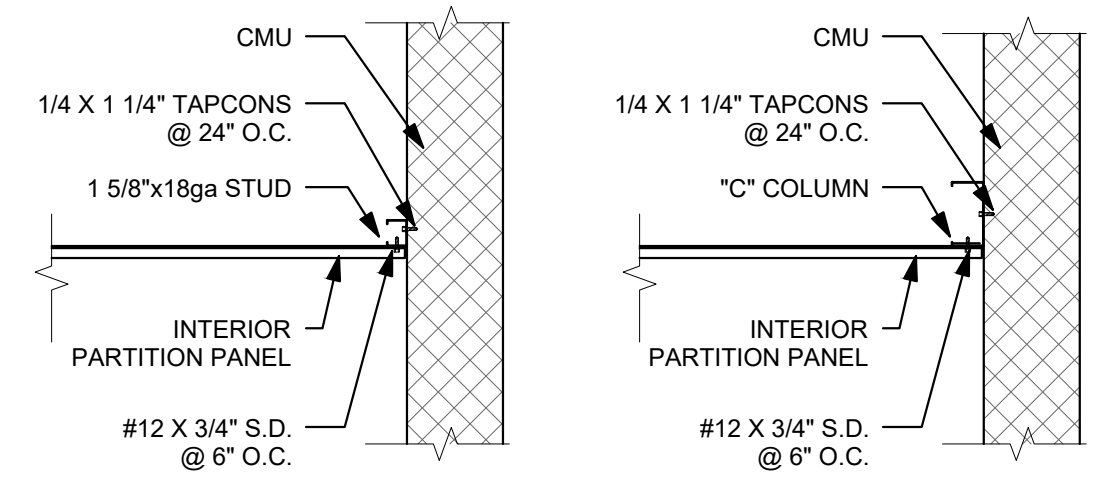
1 FIRST FLOOR - LATERAL WALL BRACING
SCALE: NONE



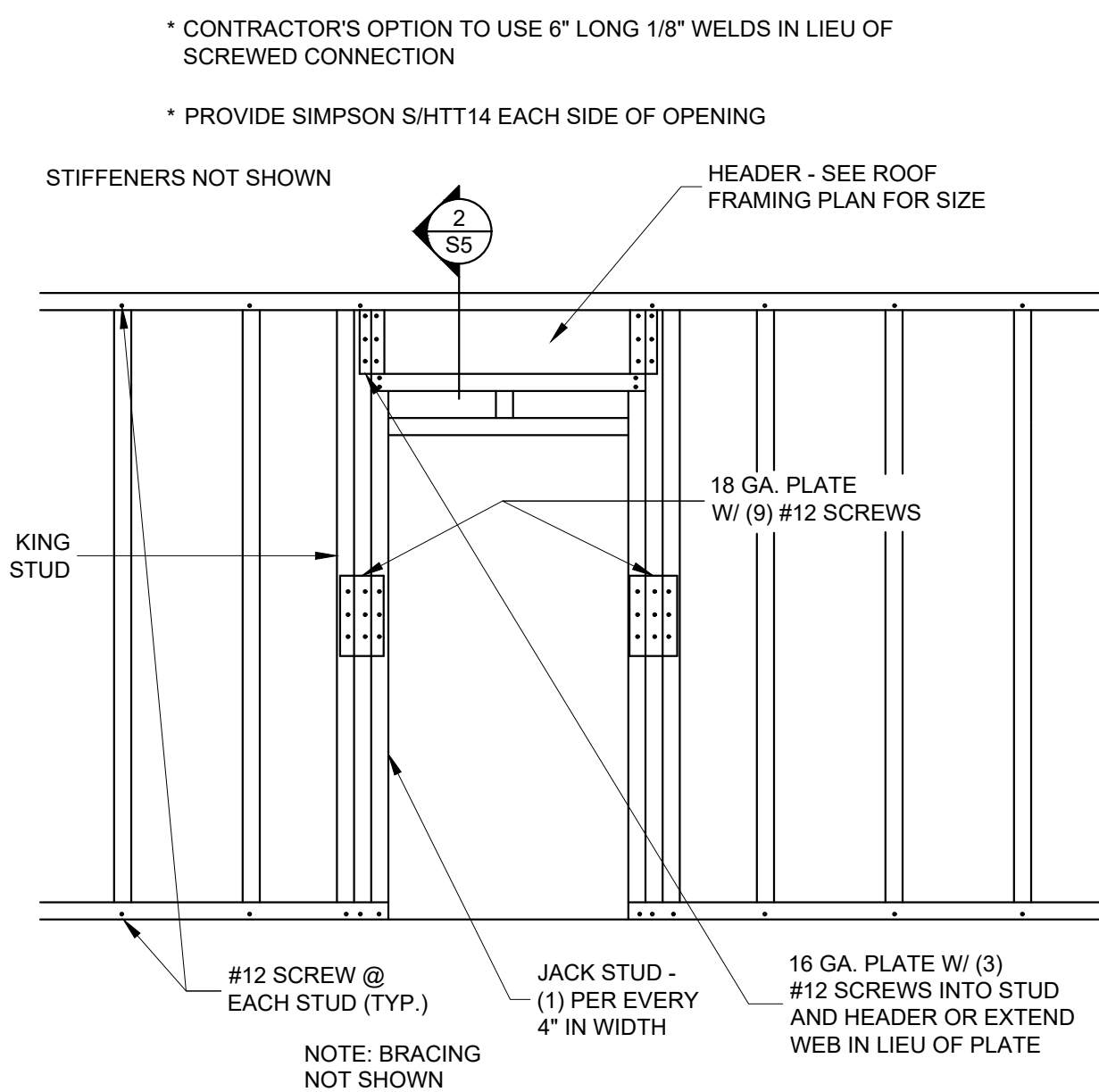
2 SECTION
SCALE: NONE



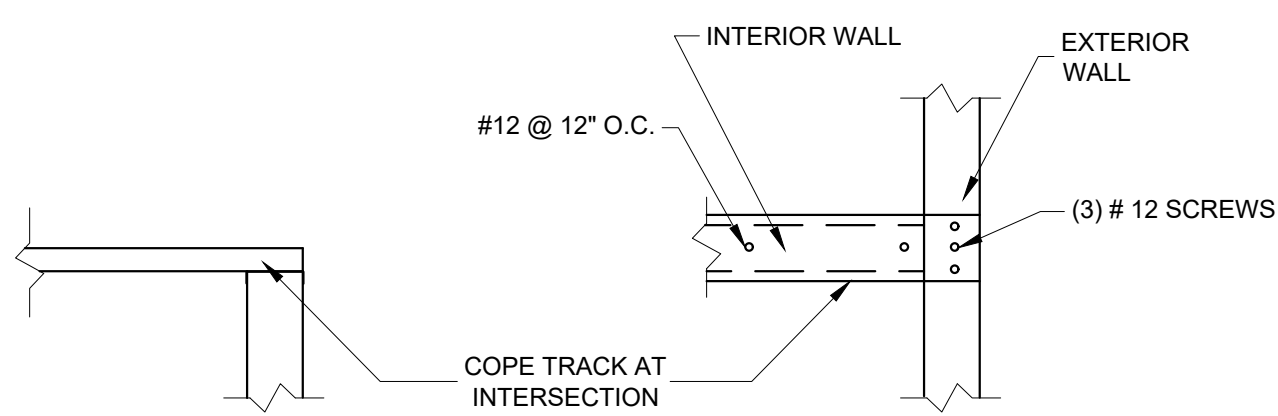
3 PARTITION WALL INTERSECTION
W/ BEARING WALL
SCALE: NONE



4 METAL WALL @ SHAFT
SCALE: NONE



5 DOUBLE HEADER - COMPOSITE SLAB
LATERAL SUPPORT
SCALE: NONE



6 PURLIN SUPPORT - HEADER CONNECTION
SCALE: NONE