

GENERAL NOTES:

- CONTRACTOR TO HAVE A COMPLETE SET OF CONTRACT DOCUMENTS AS WELL AS ALL PERMIT APPROVALS AND EASEMENTS ON JOB SITE AT ALL TIMES.
- CONSTRUCTION AND MATERIAL SPECIFICATIONS TO CONFORM TO CURRENT NORTH CAROLINA DEPARTMENT OF TRANSPORTATION, DEPARTMENT OF ENVIRONMENTAL QUALITY, OR TOWN OF NAGS HEAD STANDARDS, AND CONTRACT DOCUMENTS.
- ALL SHOP DRAWINGS MUST BE REVIEWED AND APPROVED BY ENGINEER BEFORE EQUIPMENT OR MATERIAL IS ORDERED.
- ALL KNOWN EXISTING UTILITIES HAVE BEEN LOCATED BASED ON BEST AVAILABLE INFORMATION. CONTRACTOR IS RESPONSIBLE TO ACCURATELY LOCATE BOTH HORIZONTALLY AND VERTICALLY ALL EXISTING UTILITIES PRIOR TO START OF CONSTRUCTION (ONE CALL CENTER 1-800-632-4949). ALL COSTS ASSOCIATED WITH ANY DAMAGE TO KNOWN OR UNKNOWN EXISTING UTILITIES RESULTING FROM CONTRACTOR'S FAILURE TO ADEQUATELY PROTECT EXISTING UTILITIES DURING CONSTRUCTION TO BE BORNE SOLELY BY CONTRACTOR.
- THE CONTRACTOR SHALL CONTACT NC811 AND THE FOLLOWING PRIOR TO MOBILIZATION FOR LOCATION OF THE FOLLOWING KNOWN UNDERGROUND UTILITIES IN THE PROJECT AREA:
 - POWER
 - PHONE
 - GAS
 - WATER
 - SEWER
 - CABLE
 - OTHER
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRAFFIC CONTROL AND SHALL ADHERE TO THE PROVISIONS OF THE MUTCD (MOST CURRENT EDITION).
- CONTRACTOR TO SAVE PROPERTY IRONS, MONUMENTS, OTHER PERMANENT POINTS AND LINES OF REFERENCE AND CONSTRUCTION STAKES. A REGISTERED LAND SURVEYOR AT CONTRACTOR'S EXPENSE TO REPLACE PROPERTY IRONS, MONUMENTS, AND OTHER PERMANENT POINTS OF REFERENCE DESTROYED BY CONTRACTOR.
- CONTRACTOR TO FURNISH, INSTALL, AND MAINTAIN ALL NECESSARY EROSION CONTROL MEASURES WHETHER OR NOT SHOWN ON PLANS TO PROTECT ADJACENT DITCHES, CANALS, ROADWAYS, ETC. FROM SILT AND EROSION.
- ALL WORK TO BE COMPLETED ON PUBLIC PROPERTY. NO EASEMENTS HAVE BEEN OBTAINED. CONTRACTOR TO PROVIDE SHEETING AND SHORING AS NEEDED TO RESTRICT ALL LAND DISTURBANCE TO DEFINED LIMITS OF DISTURBANCE
- CONTRACTOR TO RELOCATE EXISTING UTILITIES AS REQUIRED FOR INSTALLATION OF NEW WORK. THERE WILL BE NO ADDITIONAL OR SEPARATE PAY ITEM FOR THIS WORK UNLESS SPECIFICALLY CALLED OUT IN BID FORM. RELOCATIONS OF EXISTING UTILITIES MUST BE COORDINATED WITH AFFECTED UTILITY COMPANY.
- CONTRACTOR TO SUPPORT ALL UTILITY POLES AS NECESSARY. CONTRACTOR TO COORDINATE UTILITY POLE SUPPORT WITH APPROPRIATE UTILITY COMPANIES.
- CONTRACTOR TO RESTORE/REPLACE ALL SIGNS, MAILBOXES, ETC. ENCOUNTERED DURING CONSTRUCTION TO ORIGINAL CONDITION.
- CONTRACTOR TO RESTORE ALL DISTURBED CROSS PIPES TO ORIGINAL OR BETTER CONDITION EXCEPT WHERE PIPES ARE REPLACED BY THE PROPOSED COLLECTION SYSTEM.
- CONTRACTOR SHALL MAINTAIN ACCESS TO PROPERTY AT ALL TIMES.
- CONTRACTOR TO RESTORE EXISTING DUNE WALKOVER AND GAZEBO WITH IN-KIND REPLACEMENT IN NEW CONDITION
- CONTRACTOR TO RESTORE ALL DISTURBED AREAS TO EXISTING GRADE UNLESS OTHERWISE NOTED ON DRAWINGS.
- ROADWAY DITCHES DISTURBED DURING CONSTRUCTION TO BE RESTORED TO PRE-CONSTRUCTION CONDITION OR BETTER AND CONFORM TO NCDOT REQUIREMENTS.
- ALL DISTURBED AREAS SHALL BE PREPPED AND RESEEDED IN ACCORDANCE WITH SECTION 1660 OF THE NCDOT STANDARD SPECIFICATIONS. LIMITED AREAS OF THE PROJECT MAY REQUIRE SOD INSTALLATION, AT THE DIRECTION OF THE TOWN ENGINEER. SODDING SHALL BE COMPLETED IN ACCORDANCE WITH SECTION 1664 OF THE NCDOT STANDARD SPECIFICATIONS.
- EXCAVATED MATERIAL TO BE PLACED WITHIN LIMITS OF DISTURBANCE DURING UTILITY INSTALLATION. CONTRACTOR TO PROVIDE NECESSARY SEDIMENT AND EROSION CONTROL MEASURES TO CONTROL RUN-OFF. EXCESS EXCAVATED MATERIAL TO BE REMOVED FROM CONSTRUCTION SITE AND DISPOSED OF IN A LEGAL MANNER.

- POSITIVE DRAINAGE TO BE PROVIDED FOR ALL AREAS THROUGHOUT CONSTRUCTION.
- NO WORK OR DISTURBANCE PERMITTED OUTSIDE DEFINED WORK LIMITS. CONTRACTOR RESPONSIBLE FOR ALL DAMAGE TO PRIVATE PROPERTY.
- ACCESS TO THE SITE IS RESTRICTED DURING SUMMER MONTHS DUE TO HIGH TRAFFIC CONDITIONS. THE PROJECT SITE WILL BE AVAILABLE TO THE CONTRACTOR DURING THE TIMES OUTLINED IN THE TABLE BELOW. NO CONSTRUCTION ACTIVITY WILL BE PERMITTED OUTSIDE OF THESE TIMES UNLESS APPROVED IN WRITING BY THE TOWN.

BEGINNING DATE	END DATE*
JANUARY 6, 2025	MAY 1, 2025
SEPTEMBER 15, 2025	MAY 1, 2026
SEPTEMBER 14, 2026	OCTOBER 30, 2026

*ALL OCEANFRONT CONSTRUCTION WORK SHALL CEASE PRIOR TO APRIL 30.

- EQUIPMENT AND MATERIALS MAY BE STAGED IN AREAS APPROVED FOR SUCH USE BY THE TOWN, IN WRITING, AFTER THE NOTICE TO PROCEED DATE
- CONSTRUCTION, MATERIAL STORAGE AND STAGING AREAS SHALL NOT IMPEDE OR DISRUPT PUBLIC PARKING, BEACH ACCESS, MULTI-USE PATHS, SIDEWALKS, DRIVEWAYS, OR ROADWAYS BETWEEN MAY 1, 2025, AND SEPTEMBER 14, 2025, OR BETWEEN MAY 1, 2026, AND SEPTEMBER 13, 2026 WITHOUT THE WRITTEN APPROVAL OF THE TOWN.
- THE CONTRACTOR SHALL NOTIFY THE TOWN AT LEAST 14 CALENDAR DAYS PRIOR TO RESTRICTING ACCESS OR CLOSING ANY PUBLIC PARKING, BEACH ACCESS, MULTI-USE PATHS, SIDEWALKS, OR ROADWAYS AT ANY TIME DURING THIS CONTRACT.
- ALL EQUIPMENT, UNUSED CONSTRUCTION MATERIALS, AND DEBRIS SHALL BE REMOVED FROM THE CONSTRUCTION SITE DURING THE SUMMER TOURIST SEASON. MATERIALS AND EQUIPMENT MAY BE STORED IN OTHER SUITABLE AREAS NEAR THE PROJECT SITE, AND AT THE CONTRACTOR'S OWN RISK, DURING OTHER TIMES WITH THE WRITTEN APPROVAL OF THE TOWN. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMISSIONS, AGREEMENTS, AND PERMITS RELATED TO MATERIAL AND EQUIPMENT STORAGE.
- IMPROVEMENTS AT JUNCOS STREET INCLUDING BUT NOT LIMITED TO TRAFFIC CONTROL, DEMOLITION, EROSION CONTROL, UTILITY RELOCATION, GAZEBO REMOVAL (AND STORAGE), WET WELL INSTALLATION, DUNE INFILTRATION CONSTRUCTION, WALKWAY RECONSTRUCTION, AND STABILIZATION MAY BE PERFORMED DURING THE DATES LISTED ABOVE. DURING THIS TIME THE CONTRACTOR SHALL MAINTAIN VEHICULAR BEACH ACCESS TO THE OCEANFRONT AS NOTED BELOW.
- THE JUNCOS STREET BEACH ACCESS SHALL REMAIN ACCESSIBLE BY ALL PERMITTED VEHICLES FROM SEPTEMBER 15, 2025 THROUGH DECEMBER 15, 2025.
- INSTALLATION OF THE DUNE INFILTRATION GALLERY AND RESTORATION OF THE VEHICULAR BEACH ACCESS PATH SHALL BE COMPLETED PRIOR TO MAY 1, 2026.
- DUE TO TURTLE NESTING SEASON, NO CONSTRUCTION ACTIVITY IS PERMITTED OCEANWARD OF THE EXISTING EDGE OF THE JUNCOS ST PARKING LOT BETWEEN MAY 1, 2025 AND NOVEMBER 15, 2025 AND MAY 1, 2026 AND NOVEMBER 15, 2026
- DURING OTHER AVAILABLE TIMES (SEE ABOVE) THE CONTRACTOR MAY PROHIBIT PARKING IN THE JUNCOS STREET LOT AND PEDESTRIAN BEACH ACCESS, BUT SHALL NOT DISRUPT EMERGENCY VEHICULAR ACCESS TO THE OCEANFRONT VIA THE VEHICULAR BEACH ACCESS FOR MORE THAN 14 TOTAL CALENDAR DAYS OR MORE THAN 10 CONSECUTIVE CALENDAR DAYS.
- PARKING, PEDESTRIAN ACCESS, AND VEHICULAR BEACH ACCESS SHALL BE FULLY RESTORED AND OPEN TO THE PUBLIC ON OR BEFORE MAY 1, 2026.
- THE CONTRACTOR SHALL NOTIFY THE TOWN, IN WRITING, AT LEAST 14 CALENDAR DAYS PRIOR TO ANY CLOSURE OF THE VEHICULAR BEACH ACCESS THAT WOULD PREVENT EMERGENCY VEHICLES FROM ACCESSING THE OCEANFRONT VIA JUNCOS STREET.
- EXCEPT AS NOTED ABOVE, CONSTRUCTION ACTIVITY AT JUNCOS STREET THAT WILL NOT OCCUPY MORE THAN 2 PARKING SPACES OR DISRUPT VEHICULAR BEACH ACCESS TO THE OCEANFRONT MAY BE PERMISSIBLE AT ALL TIMES DURING THIS CONTRACT WITH WRITTEN TOWN APPROVAL. THE CONTRACTOR IS REQUIRED TO REQUEST THIS ALLOWANCE FROM THE TOWN, IN WRITING, AT LEAST 14 CALENDAR DAYS IN ADVANCE OF COMMENCING ANY SUCH ACTIVITY.
- THE FINAL PAYMENT REQUEST SHALL BE SUBMITTED TO THE TOWN NO LATER THAN OCTOBER 30, 2026.

LEGEND

	NAIL		APPLE
	CAP & TACK		ASH
	COTTON SPINDLE		BEECH
	BENCHMARK		HARDWOOD TREE
	CROSS ON PAVEMENT		BIRCH
	PK/MAG NAIL SET		BLACK WALNUT
	ANGLE IRON		CEDAR
	AXLE		CHERRY
	CONCRETE MONUMENT		CRAPE MYRTLE
	EXISTING IRON PIPE		DOGWOOD
	IRON PIPE SET		RED OAK
	CALCULATED POINT		ELM
	MASONRY NAIL		SHRUB
	NC GEODETIC SURVEY MON.		SWEET GUM
	REBAR		HICKORY
	RAILROAD SPIKE		HEDGEROW
	RIGHT-OF-WAY MONUMENT		
	WITNESS POST		
	FIRE HYDRANT		HOLLY
	WATER METER		HARDWOOD
	BACKFLOW PREVENTER		JAPANESE MAPLE
	WATER MANHOLE		LANDSCAPED AREA
	WATER VALVE		MAGNOLIA
	BLOW OFF VALVE		MAPLE
	HOSEBIB		MIMOSA
	FIRE DEPT. CONNECTION		OAK
	SPRINKLER HEAD		ORNAMENTAL
	DRAINAGE INLET/YARD INLET		PECAN
	CL CATCH BASIN AT BC		REDBUD
	STORM DRAIN MANHOLE		PEAR
	JUNCTION BOX		PEACH
	FES		PERSIMMON
	ELECTRIC MANHOLE		SASSAFRAS
	ELECTRIC METER		WILLOW
	ELECTRIC TRANSFORMER		PINE
	ELECTRIC PEDESTAL		SUGARBERRY
	ELECTRIC HANDHOLE		POPLAR
	ELECTRIC BOX		SOURWOOD
	GUY WIRE		SYCAMORE
	LIGHT POLE		
	TOWER		WHITE OAK
	POWER/UTILITY POLE		SPRUCE
	GREASE TRAP MANHOLE		
	CLEAN OUT		
	SEWER MANHOLE		
	IRRIGATION CONTROL VALVE		
	RECLAIMED WATER METER		
	GAS SERVICE METER		
	GAS MARKER		
	GUY POLE		
	GAS REGULATOR		
	GAS TEST STATION		
	GAS VALVE		
	CABLE TV BOX		
	CATV HANDHOLE		
	TELEPHONE HANDHOLE		
	TELEPHONE BOX		
	TELEPHONE MANHOLE		
	TELEPHONE PEDESTAL		
	FIBER OPTIC MARKER		
	FIBER OPTIC HANDHOLE		
	UNKNOWN MANHOLE		
	UNKNOWN UTILITY PEDESTAL		
	BURIED CABLE WARNING POST		
	TRAFFIC SIGNAL BOX		
	SIGNAL POLE		
	TRAFFIC HANDHOLE		
	RAILROAD CROSSING GATE		
	BOLLARD		
	AIR CONDITIONER SIGN		
	MAILBOX		
	WATER WELL		
	CAMERA		
	SOLAR PANEL		
	FLOOD LIGHT		
	WETLAND FLAGS		
	ROOF DRAIN		
	SATELLITE DISH		
	BORE HOLE		
	FLAG POLE		
	MONITORING/OBSERVATION WELL		
	ARTWORK/STATUE		
	OUTDOOR AMENITY		
	BOLLARD LIGHT		
	CONTROLLED ACCESS R/W		
	REGULAR SPACES		
	ACCESSIBLE SPACES		
	BIKE RACK		
	BOUNDARY LINE		
	ADJOINER LINE		
	RIGHT OF WAY LINE		
	GAS LINE		
	WATER LINE		
	SEWER LINE		
	STORM LINE		
	WATER LINE PER RECORD/GIS		
	SEWER LINE PER RECORD/GIS		
	STORM LINE PER RECORD/GIS		
	FENCE		
	HANDRAIL		
	CANOPY/BUILDING OVERHANG		
	GUARD RAIL		
	UNDERGROUND TV CABLE		
	UNDERGROUND ELECTRIC LINE		
	UNDERGROUND FIBER OPTIC CABLE		
	UNKNOWN UTILITY		
	UNDERGROUND TELEPHONE CABLE		
	UNDERGROUND STEAM LINE		
	UNDERGROUND AIR LINE		
	RECLAIMED WATERLINE		
	OVERHEAD TELEPHONE LINE		
	FORCEMAN LINE		
	OVERHEAD ELECTRIC LINE		
	WOOD LINE/LANDSCAPING		
	RAILROAD TRACKS		
	RIP RAP		



McADAMS

The John R. McAdams Company, Inc.
621 Hillsborough Street
Suite 500
Raleigh, NC 27603
phone 919. 361. 5000
fax 919. 361. 2269
license number: C-0293, C-187

www.mcadamsco.com

CLIENT

TOWN OF NAGS HEAD
POST OFFICE BOX 99
NAGS HEAD, NC 27959
PHONE: 252.441.5580



**SOOIR STORMWATER
INFRASTRUCTURE
IMPROVEMENTS
CONSTRUCTION DRAWINGS**
PROJECT AREA 12
 NAGS HEAD, NC, 27959



2/10/2025

REVISIONS

NO.	DATE

PLAN INFORMATION

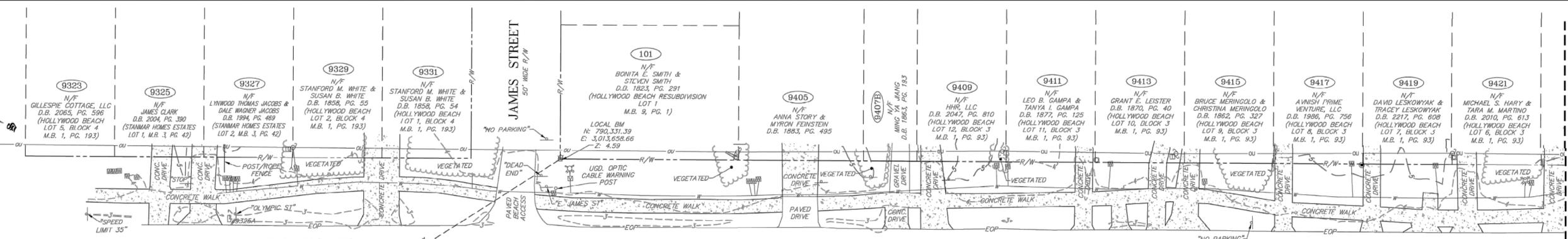
PROJECT NO. SRP-SW-ARP-0019.2
FILENAME TNH22001_17-CS2
CHECKED BY HCF
DRAWN BY JWS
SCALE AS NOTED
DATE 1/29/25

SHEET

GENERAL NOTES

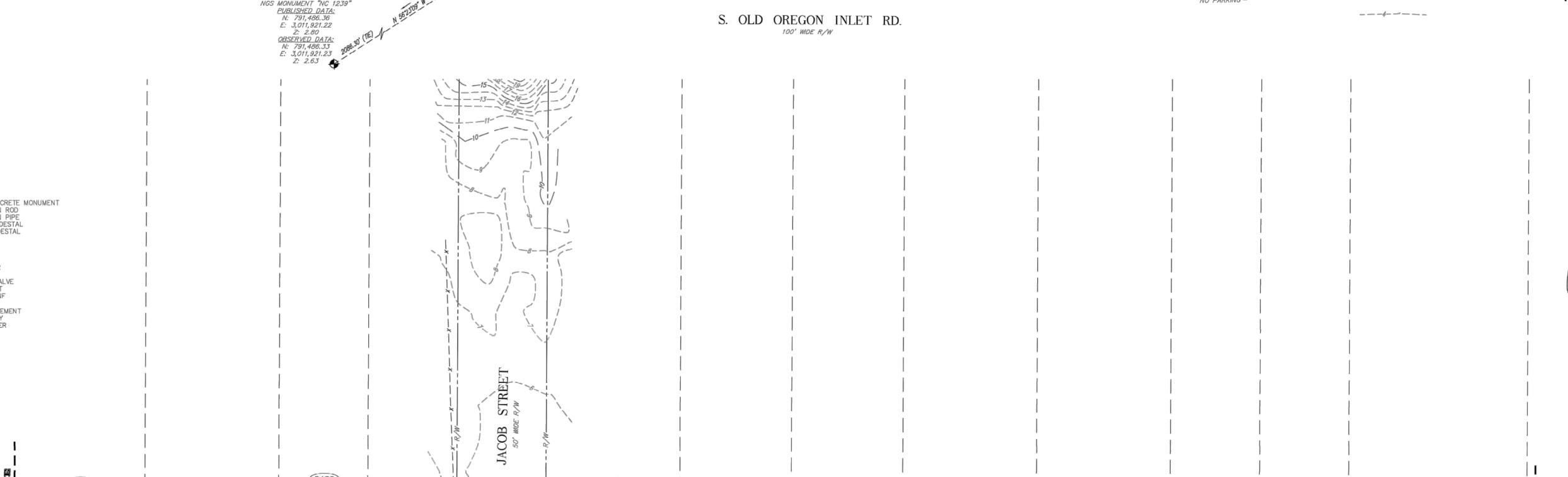
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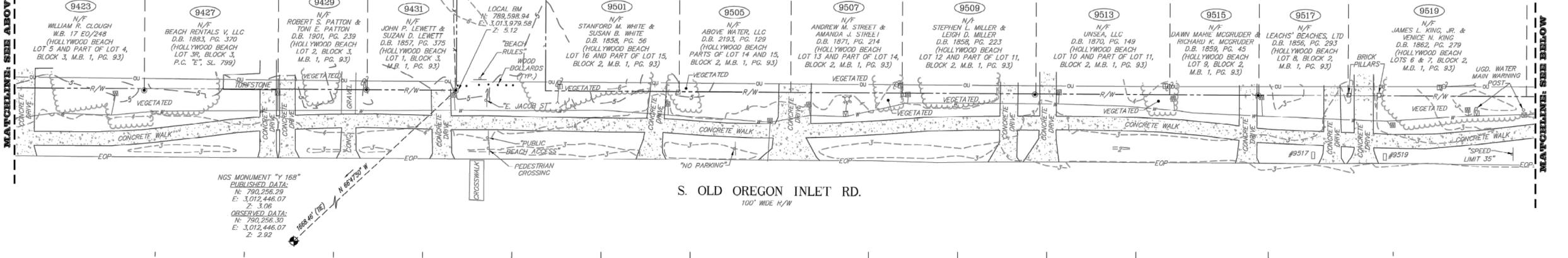


S. OLD OREGON INLET RD.
100' WIDE R/W

- LEGEND:**
- EXISTING CONCRETE MONUMENT
 - EXISTING IRON ROD
 - EXISTING IRON PIPE
 - CABLE TV PEDESTAL
 - ELECTRIC PEDESTAL
 - TV PEDESTAL
 - LIGHT POLE
 - SIGN
 - POWER POLE
 - WATER METER
 - WATER VALVE
 - IRRIGATION VALVE
 - FIRE HYDRANT
 - PROPERTY INF
 - R/W LINE
 - EDGE OF PAVEMENT
 - R/W — RIGHT OF WAY
 - 9423 — HOUSE NUMBER



S. OLD OREGON INLET RD.
100' WIDE R/W



S. OLD OREGON INLET RD.
100' WIDE R/W

- NOTES:**
- TOPOGRAPHIC CONDITIONS SHOWN HEREON ARE BASED ON A SURVEY PERFORMED BY COASTAL ENGINEERING AND SURVEYING, INC. IN JULY, 2019.
 - HORIZONTAL DATUM SHOWN HEREON BASED ON NAD83 (2011) DATUM (NO STATE PLANE GRID PROJECTION).
 - VERTICAL DATUM SHOWN HEREON BASED ON NAVD 88 DATUM.
 - BOUNDARY LINES SHOWN HEREON ARE BASED ON DEEDS AND PLANS OF RECORD AND FOUND BOUNDARY EVIDENCE. THIS PLAN IS NOT INTENDED TO PORTRAY A BOUNDARY SURVEY.
 - THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A TITLE COMMITMENT.
 - THESE PARCELS MAY BE SUBJECT TO EASEMENTS NOT SHOWN HEREON.

P.O. Box 1129
4425 N. Creation Hwy.
Kitty Hawk, N.C. 27949
(252) 261-4151
(252) 261-1533

Coastal
ENGINEERING & SURVEYING, INC.
C-0836

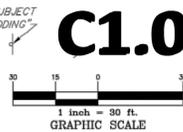
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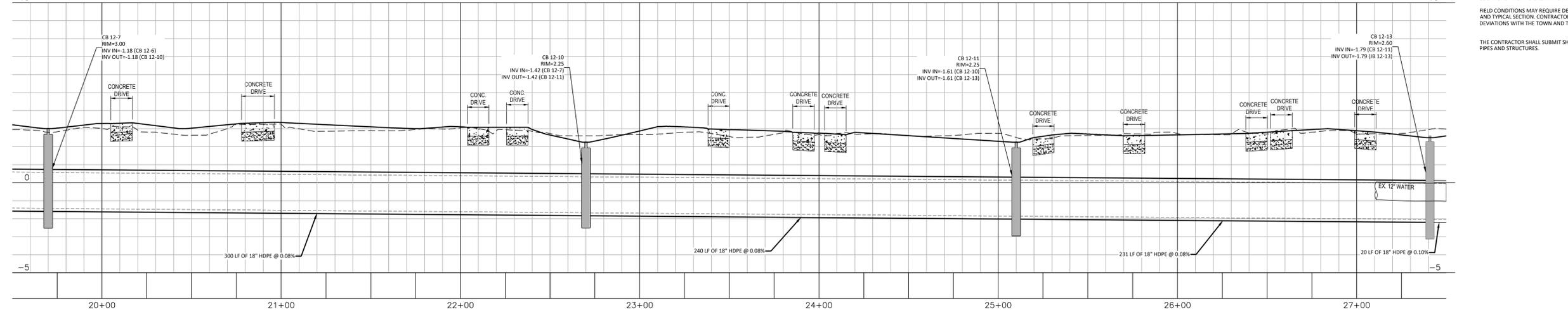
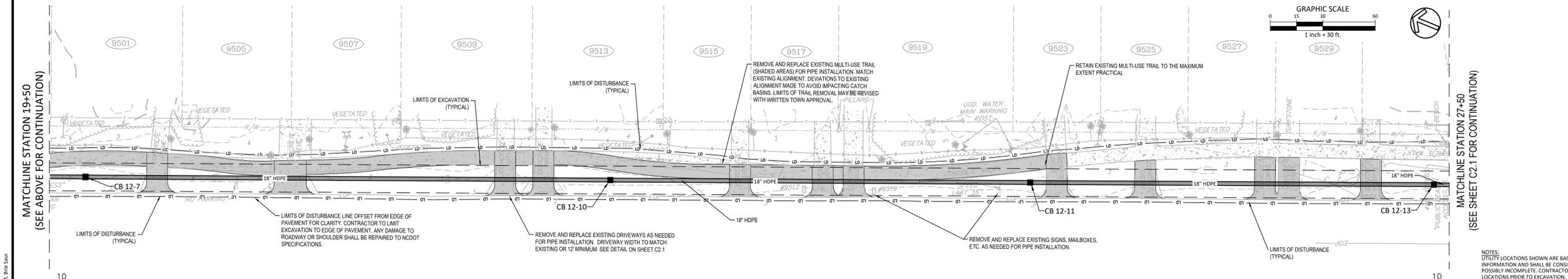
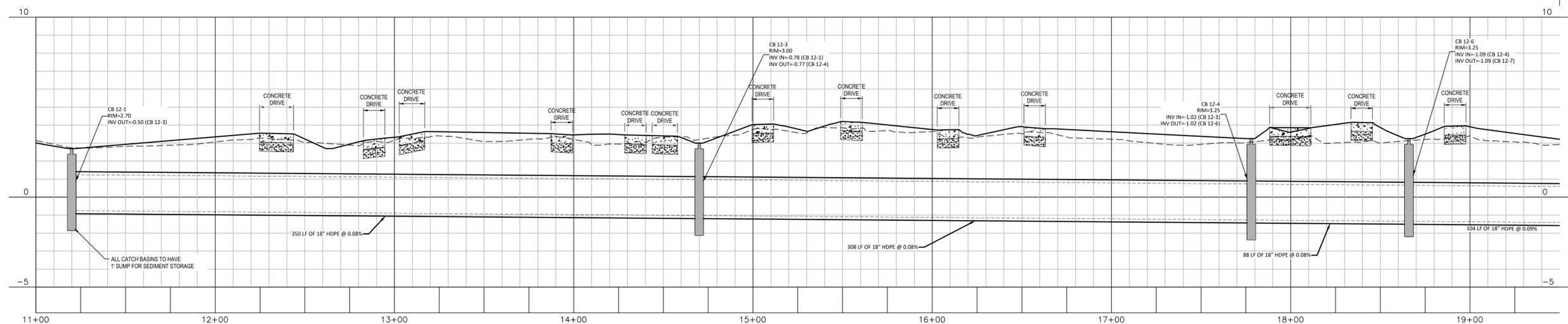
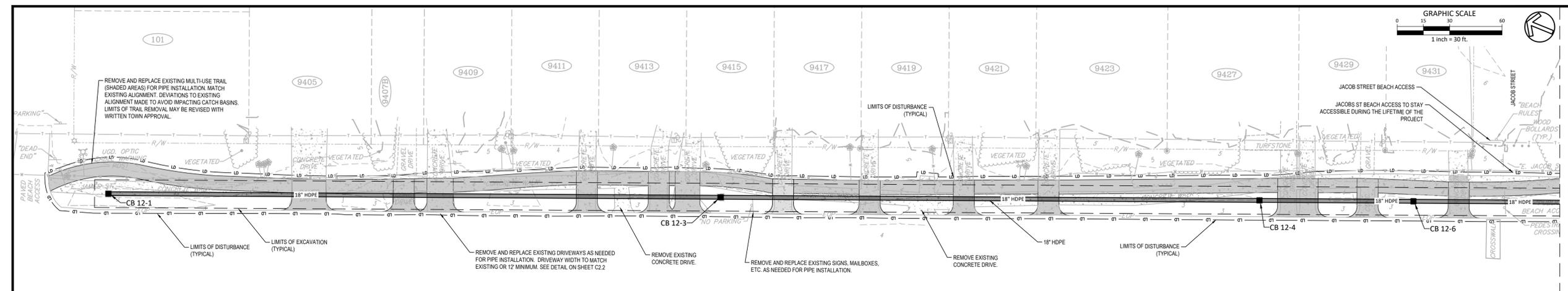
NO.	DATE	REVISIONS	DESCRIPTION

TOPOGRAPHIC SURVEY FOR:
WITHERSRAVENEL
DARE COUNTY
NORTH CAROLINA
TOWN OF NAGS HEAD DRAINAGE PROJECT #12

DATE: 7/10/19 SCALE: 1" = 30'
CHECKED: CFC DRAWN: JCB
PROJECT NO: P705.18
CAD FILE: P705 AREA 12
SHEET: 1 of 1



C1.0



MATCHLINE STATION 19+50
(SEE BELOW FOR CONTINUATION)

MATCHLINE STATION 27+50
(SEE SHEET C2.1 FOR CONTINUATION)

NOTES:
UTILITY LOCATIONS SHOWN ARE BASED ON BEST AVAILABLE INFORMATION AND SHALL BE CONSIDERED APPROXIMATE AND POSSIBLY INCOMPLETE. CONTRACTOR SHALL VERIFY ALL UTILITY LOCATIONS PRIOR TO EXCAVATION.
FIELD CONDITIONS MAY REQUIRE DEVIATION FROM PLAN LOCATION AND TYPICAL SECTION. CONTRACTOR SHALL COORDINATE ALL DEVIATIONS WITH THE TOWN AND THE ENGINEER.
THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR APPROVAL FOR PIPES AND STRUCTURES.

McADAMS
The John R. McAdams Company, Inc.
621 Hillsborough Street
Suite 500
Raleigh, NC 27603
phone 919. 361. 5000
fax 919. 361. 2269
license number: C-0293, C-187
www.mcadamsco.com

CLIENT
TOWN OF NAGS HEAD
POST OFFICE BOX 99
NAGS HEAD, NC 27959
PHONE: 252.441.5580



**SOIOR STORMWATER
INFRASTRUCTURE
IMPROVEMENTS
CONSTRUCTION DRAWINGS
PROJECT AREA 12
NAGS HEAD, NC, 27959**



2/10/2025

REVISIONS

NO.	DATE

PLAN INFORMATION

PROJECT NO.	SRP-SW-ARP-0019.2
FILENAME	TNH22001_17-P1
CHECKED BY	HCF
DRAWN BY	JWS
SCALE	AS NOTED
DATE	1/29/25

**SHEET
STORM PLAN & PROFILE**

C2.0

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621 Hillsborough Street
Suite 500
Raleigh, NC 27603
phone 919.361.5000
fax 919.361.2269
license number: C-0293, C-187

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PROJECT AREA 12
NAGS HEAD, NC, 27959



2/10/2025

REVISIONS

NO. DATE

PLAN INFORMATION

PROJECT NO. SRP-SW-ARP-0019.2
FILENAME TNH22001_17-P1
CHECKED BY HCF
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SCALE AS NOTED
DATE 1/29/25

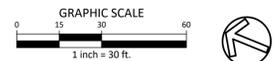
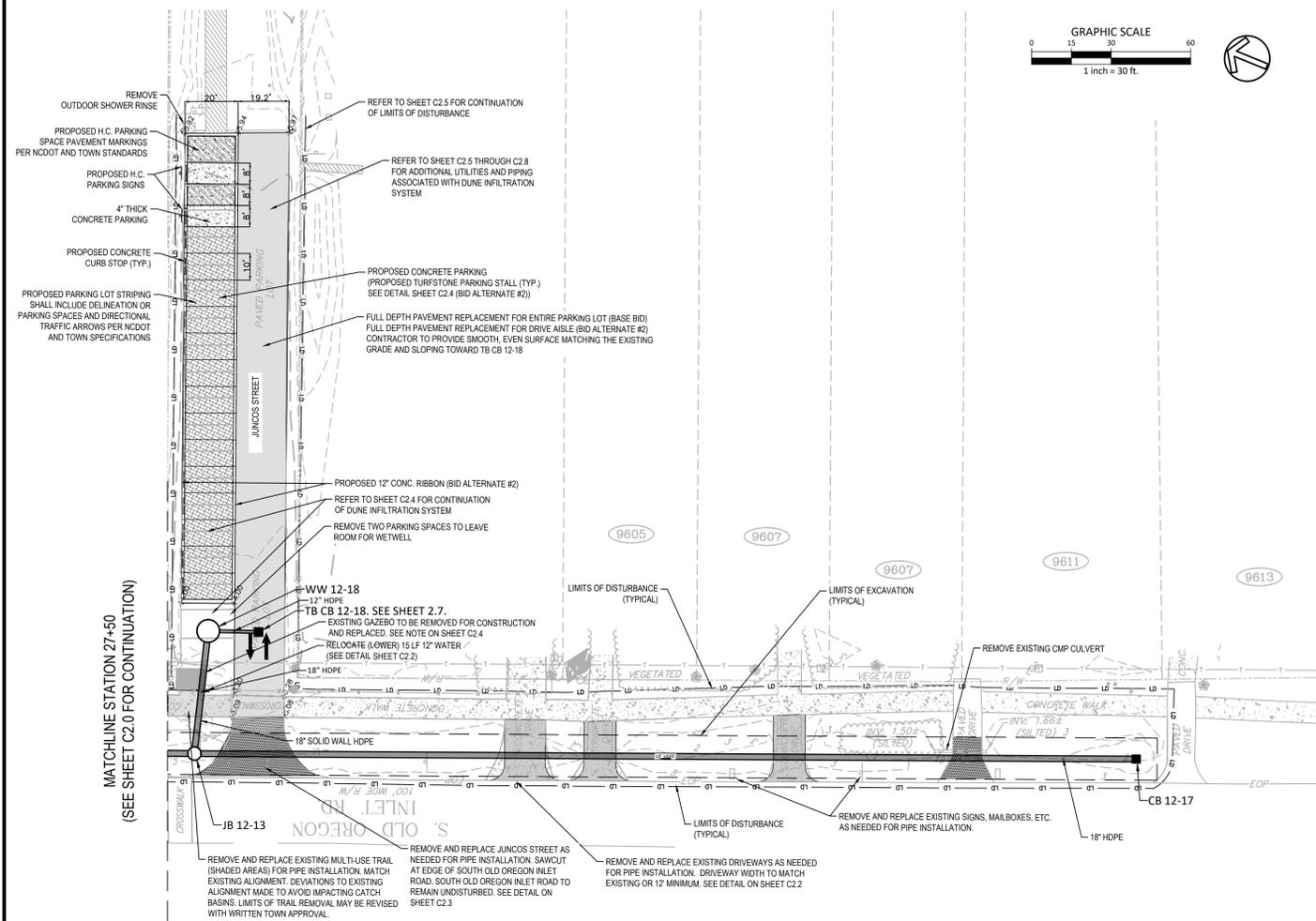
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STORM PLAN & PROFILE

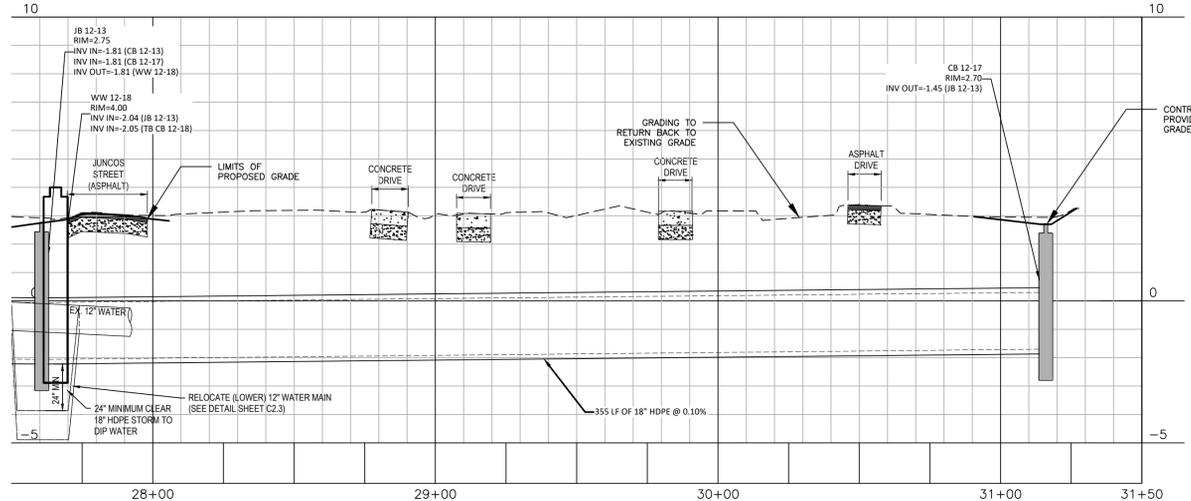
C2.1

FINAL DRAWINGS - RELEASED FOR CONSTRUCTION

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FIELD CONDITIONS MAY REQUIRE DEVIATION FROM PLAN LOCATION AND TYPICAL SECTION. CONTRACTOR SHALL COORDINATE ALL DEVIATIONS WITH THE TOWN AND THE ENGINEER.
TURFSTONE PERVIOUS PAVEMENT (BID ALTERNATE #2) REQUIRES WRITTEN APPROVAL FROM THE TOWN. CONTRACTOR SHALL CONFIRM PAVEMENT SELECTION WITH THE TOWN ENGINEER PRIOR TO PURCHASING PARKING STALL MATERIALS FOR BASE BID OR BID ALTERNATE OPTIONS.
THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR APPROVAL FOR PIPES AND STRUCTURES.



15



McADAMS

The John R. McAdams Company, Inc.
621 Hillsborough Street
Suite 500
Raleigh, NC 27603
phone 919. 361. 5000
fax 919. 361. 2269
license number: C-0293, C-187

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CLIENT

TOWN OF NAGS HEAD
POST OFFICE BOX 99
NAGS HEAD, NC 27959
PHONE: 252.441.5580



SOIIR STORMWATER INFRASTRUCTURE IMPROVEMENTS CONSTRUCTION DRAWINGS PROJECT AREA 12 NAGS HEAD, NC, 27959



2/10/2025

REVISIONS

NO. DATE

PLAN INFORMATION

PROJECT NO. SRP-SW-ARP-0019.2
FILENAME TNH22001_17_D
CHECKED BY HCF
DRAWN BY JWS
SCALE AS NOTED
DATE 1/29/25

SHEET

DETAILS

C2.2

FINAL DRAWINGS - RELEASED FOR CONSTRUCTION

CONCRETE DROP INLET
12" THRU 30" PIPE

GENERAL NOTES:
USE CLASS "B" CONCRETE THROUGHOUT.
REINFORCE ALL DROP INLETS FROM 6" TO 12" DEPTH WITH STEEL "L" ON CENTERS. USE STEEL WIRE CLOUTY WITH STD. DRAWING #40-40.
OPTIONAL CONSTRUCTION - REINFORCING JOBS 2" REINFORCING OR 4" BAR WELLS AT 12" CENTERS AS DIRECTED BY THE ENGINEER.
USE FORMS FOR THE CONSTRUCTION OF THE BOTTOM SLAB.
IF REINFORCED CONCRETE PIPE IS SET IN BOTTOM SLAB, ADD TO SLAB AS SHOWN ON STD. NO. 840-54.
MAX. DEPTH OF THIS STRUCTURE FROM TOP OF BOTTOM SLAB TO TOP ELEVATION IS 12'-0".
STD. NO. 840-54 OR 840-55 CONTROL MAXIMUM DEPTH IF PRECAST BOX IS USED.
CONSTRUCT WITH FIVE CORNER MATCHES.
SEE STANDARD NUMBER SCHEDULE FOR ATTACHMENT OF FRAMES AND GRATES NOT SHOWN.
INSTALL 2" REINFORCING AS DIRECTED BY THE ENGINEER.
INSTALL EDGE BEADING OF A MINIMUM OF 1" CORNER POST OF NO. 10W STEEL IN A POLYURETHANE SAND OR GROUT, AT EACH WEIR HOLE OR AS DIRECTED BY THE ENGINEER.
DRAWING NOT TO SCALE.

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR
CONCRETE DROP INLET
12" THRU 30" PIPE

SHEET 1 OF 1
840.14

ROCK INLET SEDIMENT TRAP TYPE C

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR
ROCK INLET SEDIMENT TRAP TYPE C

SHEET 1 OF 1
1632.03

TEMPORARY SILT FENCE

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR
TEMPORARY SILT FENCE

SHEET 1 OF 1
1605.01

MANHOLE FRAME AND COVER

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR
MANHOLE FRAME AND COVER

SHEET 1 OF 1
840.54

GRATED DROP INLET

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR
ANCHORAGE FOR FRAMES
BRICK/CONCRETE/PRECAST CONCRETE

SHEET 1 OF 1
840.25

DROP INLET FRAME AND GRATES
FOR USE WITH STD. DWG.S 840.14 AND 840.15

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR
DROP INLET FRAME AND GRATES
FOR USE WITH STD. DWG.S 840.14 AND 840.15

SHEET 1 OF 1
840.16

TRAFFIC BEARING JUNCTION BOX
FOR USE WITH PIPES 42" AND UNDER

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR
TRAFFIC BEARING JUNCTION BOX
FOR USE WITH PIPES 42" AND UNDER

SHEET 1 OF 1
840.34

TRAFFIC BEARING JUNCTION BOX
FOR USE WITH PIPES 42" AND UNDER

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR
TRAFFIC BEARING JUNCTION BOX
FOR USE WITH PIPES 42" AND UNDER

SHEET 1 OF 1
840.34

DRAINAGE STRUCTURE STEPS

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR
DRAINAGE STRUCTURE STEPS

SHEET 1 OF 1
840.66

PRECAST MANHOLE 4", 5" AND 6" DIAMETER

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR
PRECAST MANHOLE 4", 5" AND 6" DIAMETER

SHEET 1 OF 1
840.52

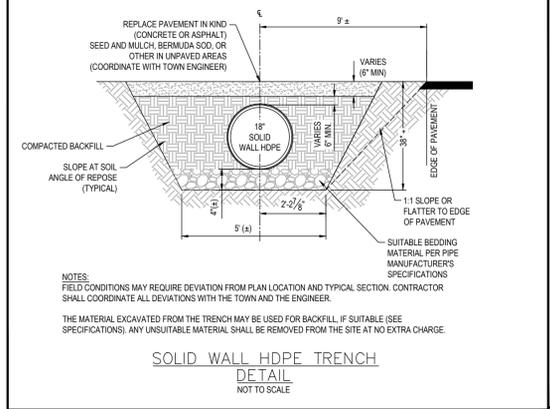
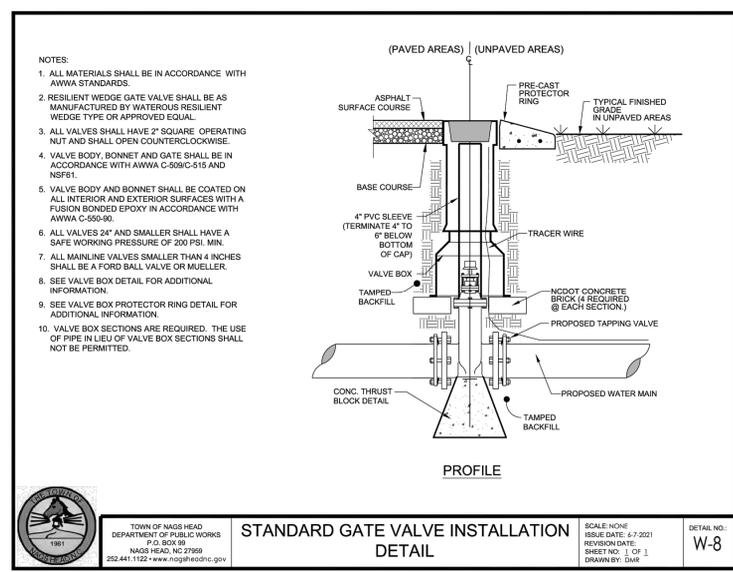
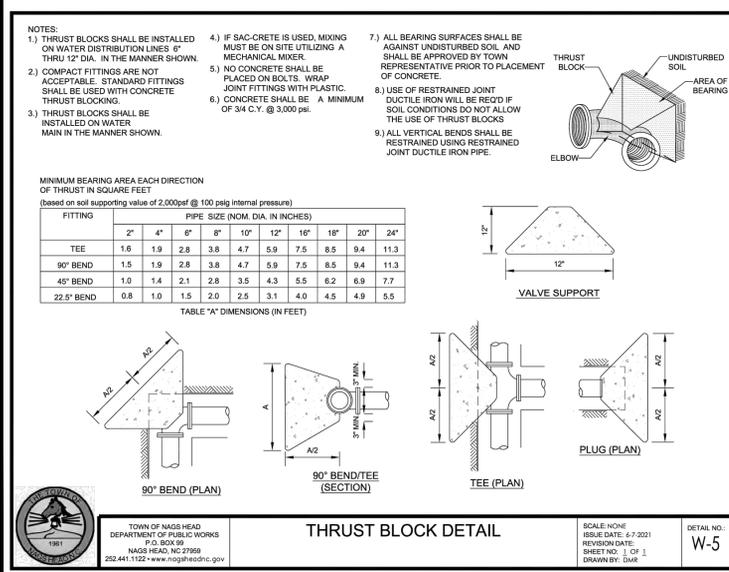
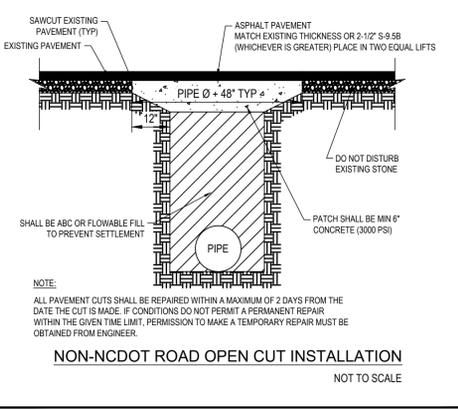
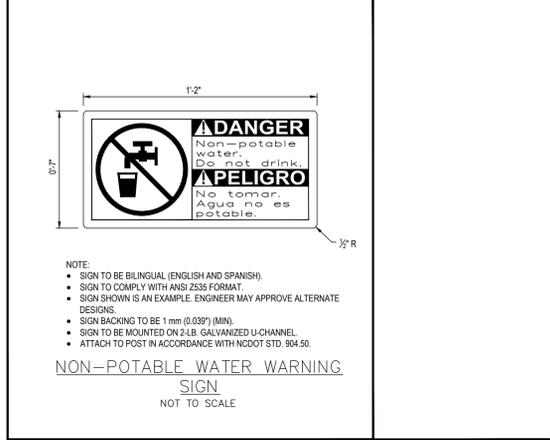
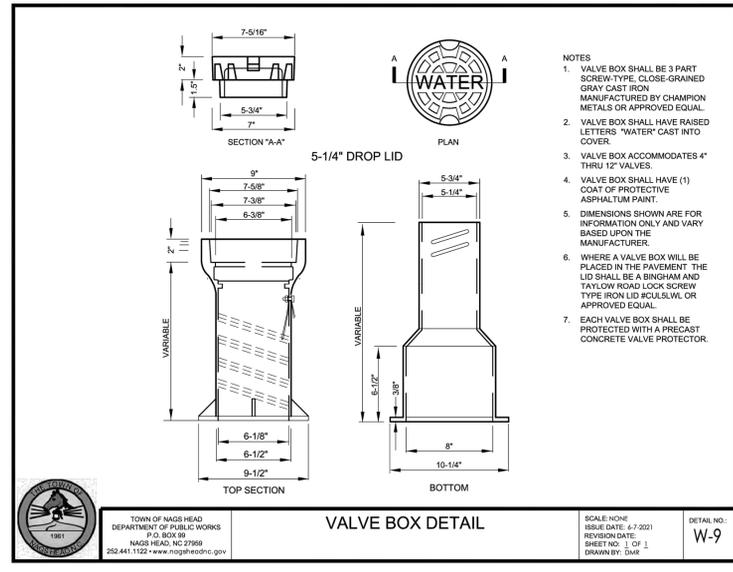
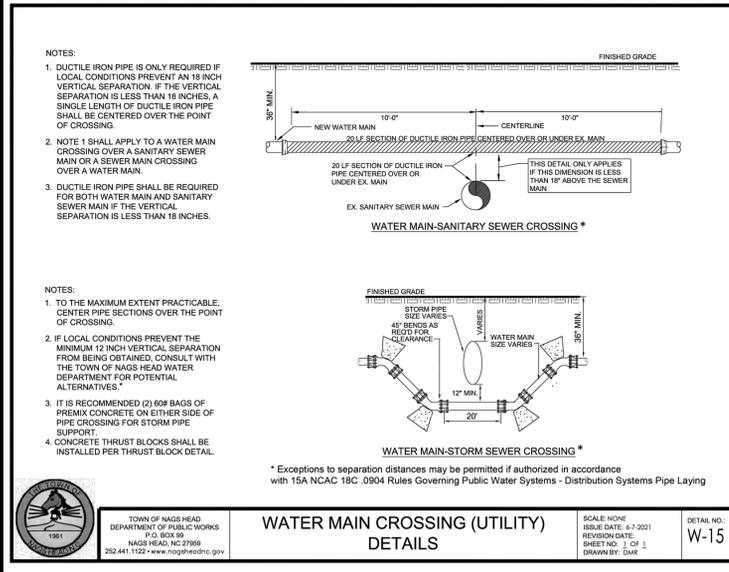
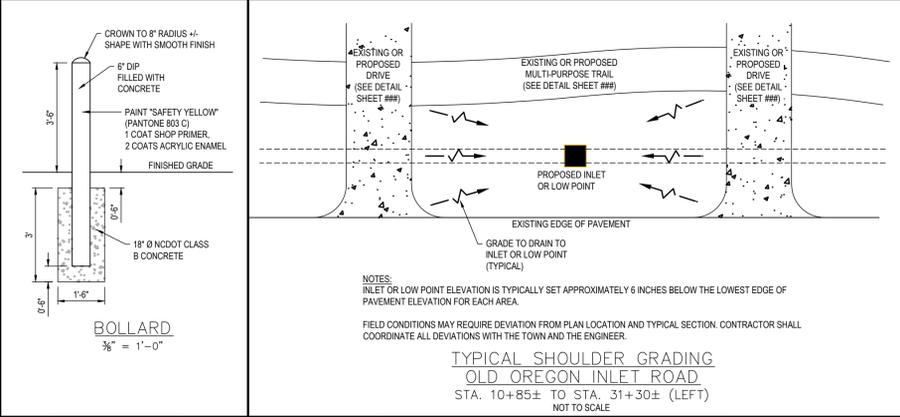
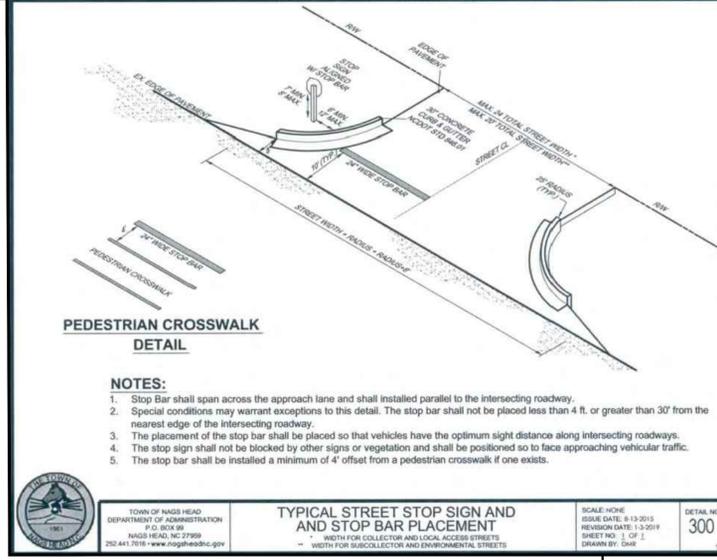
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REACTION BEARING AREAS FOR HORIZONTAL WATER PIPE BENDS

(AREAS IN SQUARE FEET)

SOIL DESCRIPTION AND ASSUMED BEARING CAPACITY (LBS/SF)

SIZE and DEGREE OF BEND	STATIC THRUST (LBS.)	SOIL DESCRIPTION AND ASSUMED BEARING CAPACITY (LBS/SF)							
		MODERATELY DRY CLAY	SOFT CLAY	GRAVEL/ COARSE SAND	DRY CLAY (ALWAYS DRY)	SAND (COMPACTED FIRM)	SAND (CLEAN, DRY)	"QUICKSAND" (VERY POOR SOIL)	ROCK (POOR)
6"		4,000 LBS./SF	2,000 LBS./SF	1,600 LBS./SF	8,000 LBS./SF	8,000 LBS./SF	4,000 LBS./SF	1,000 LBS./SF	10,000 LBS./SF
11 1/4"	1,108	1	1	1	1	1	1	2	1
22 1/2"	2,207	1	2	2	1	1	1	3	1
45°	4,238	2	3	3	1	1	2	5	1
90°	7,996	2	4	5	1	1	2	8	1
PLUG	5,655	2	3	4	1	1	2	6	1
8"									
11 1/4"	1,970	1	1	2	1	1	1	2	1
22 1/2"	3,922	1	2	3	1	1	1	4	1
45°	7,694	2	4	5	1	1	2	8	1
90°	14,215	4	8	9	2	2	4	15	2
PLUG	10,053	3	5	6	2	2	3	10	1
12"									
11 1/4"	4,433	2	3	3	1	1	2	5	1
22 1/2"	8,826	3	5	6	2	2	3	9	1
45°	17,312	5	9	11	3	3	5	18	2
90°	31,983	8	16	19	4	4	8	32	4
PLUG	22,619	6	12	14	3	3	6	23	3
16"									
11 1/4"	7,881	2	4	5	1	1	2	8	1
22 1/2"	15,691	4	8	10	2	2	4	16	2
45°	30,779	8	16	19	4	4	8	31	4
90°	56,861	15	29	35	8	8	15	57	6
PLUG	40,213	10	21	25	5	5	10	41	5
24"									
11 1/4"	17,734	5	9	11	3	3	5	18	2
22 1/2"	35,306	9	18	22	5	5	9	36	4
45°	69,252	18	35	42	9	9	18	70	7
90°	127,936	32	64	77	16	16	32	128	13
PLUG	90,478	23	46	55	12	12	23	91	10



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The John R. McAdams Company, Inc.
621 Hillsborough Street
Suite 500
Raleigh, NC 27603
phone 919. 361. 5000
fax 919. 361. 2269
license number: C-0293, C-187
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SOIOR STORMWATER INFRASTRUCTURE IMPROVEMENTS CONSTRUCTION DRAWINGS PROJECT AREA 12 NAGS HEAD, NC, 27959

2/10/2025

REVISIONS

NO.	DATE

PLAN INFORMATION

PROJECT NO. SRP-SW-ARP-0019.2
FILENAME TNH22001_17_D
CHECKED BY HCF
DRAWN BY JWS
SCALE AS NOTED
DATE 1/29/25
SHEET

DETAILS

C2.3



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Suite 500
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**SOIOR STORMWATER
INFRASTRUCTURE
IMPROVEMENTS
CONSTRUCTION DRAWINGS
PROJECT AREA 12
NAGS HEAD, NC, 27959**



2/10/2025

REVISIONS

NO. DATE

PLAN INFORMATION

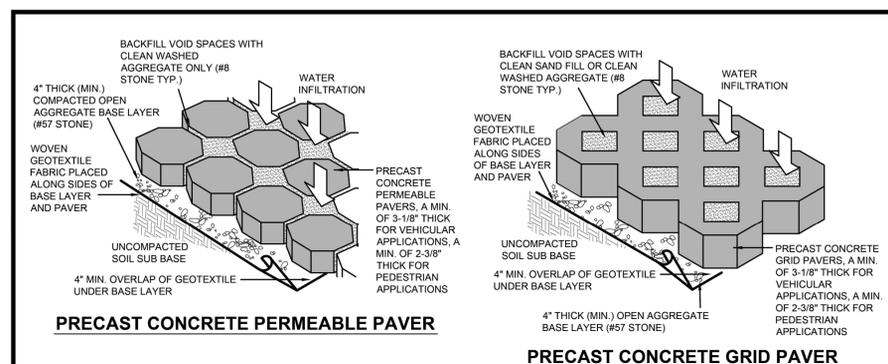
PROJECT NO. SRP-SW-ARP-0019.2
FILENAME TNH22001_17_D
CHECKED BY HCF
DRAWN BY JWS
SCALE AS NOTED
DATE 1/29/25

SHEET

DETAILS

C2.4

FINAL DRAWINGS - RELEASED FOR CONSTRUCTION



PRECAST CONCRETE PERMEABLE PAVER

PRECAST CONCRETE GRID PAVER

NOTES:

- Contractor shall submit specific product technical specifications to the Town for review and approval prior to installation.
- Other permeable pavement systems may be considered, other than those noted hereon, as approved by Town Engineering.
- Pavement section substitutions may be considered in accordance with manufacturers recommended specifications OR as designed by a North Carolina Licensed Professional Engineer.
- The pavement surface course installation shall be continuous and level.
- Town Engineering shall be contacted for review and approval of the base layer and nonwoven geotextile fabric layer in advance of the paver installation.
- A final inspection shall be conducted by the Town Engineering.
- Edge restraints shall be constructed along the perimeter of the paver installation, (see detail 104) and between paver and asphalt pavement sections.
- Aggregate fill material shall be installed flush with the finished pavement surface.
- For paver installations that utilize clean sand fill as the media type to backfill paver void spaces, a nonwoven geotextile layer shall be installed above the aggregate base layer.



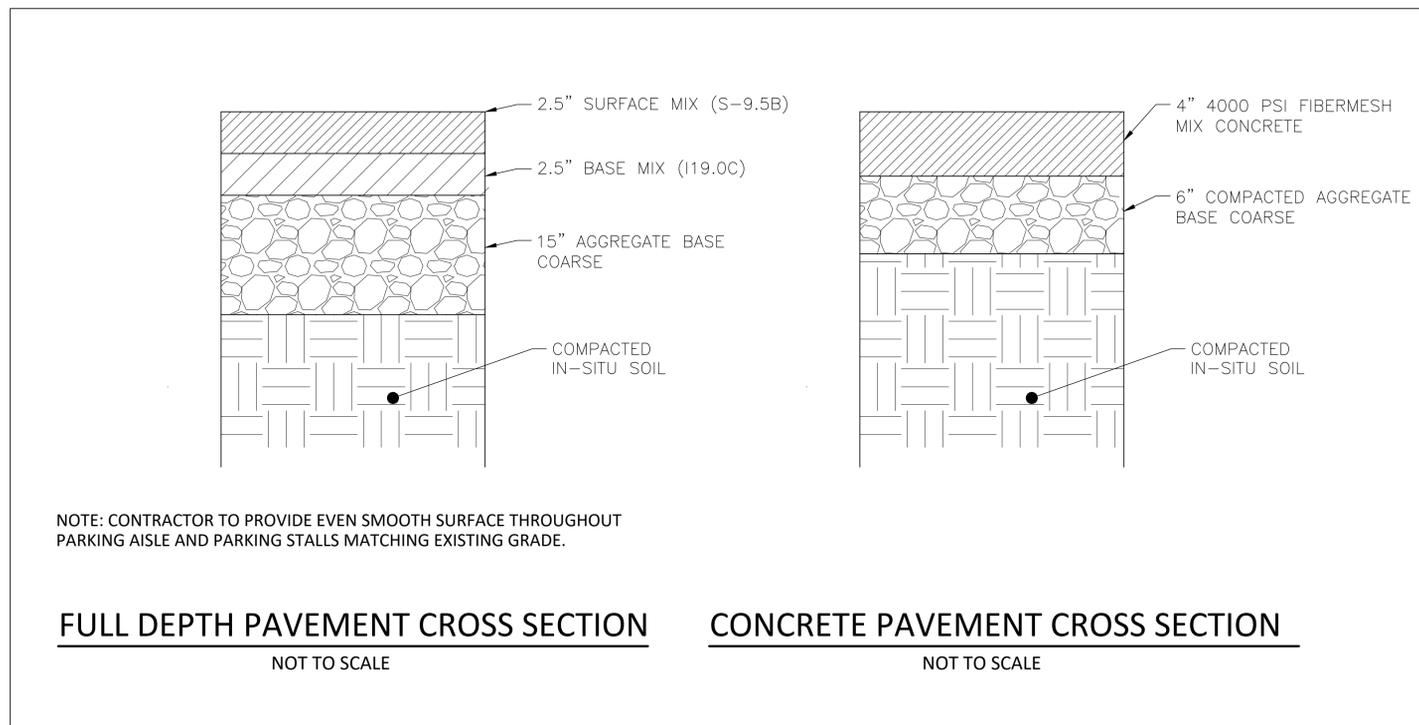
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DEPARTMENT OF ADMINISTRATION
P.O. BOX 99
NAGS HEAD, NC 27959
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**TYPICAL RESIDENTIAL PERMEABLE
PAVER INSTALLATION DETAIL**
(REFER TO DETAIL 104 FOR EDGE RESTRAINT OPTIONS)

SCALE: NONE
ISSUE DATE: 7-9-2015
REVISION DATE: 1-3-2019
SHEET NO. 1 OF 1
DRAWN BY: DAK

DETAIL NO.:
102

BID ALTERNATE #2



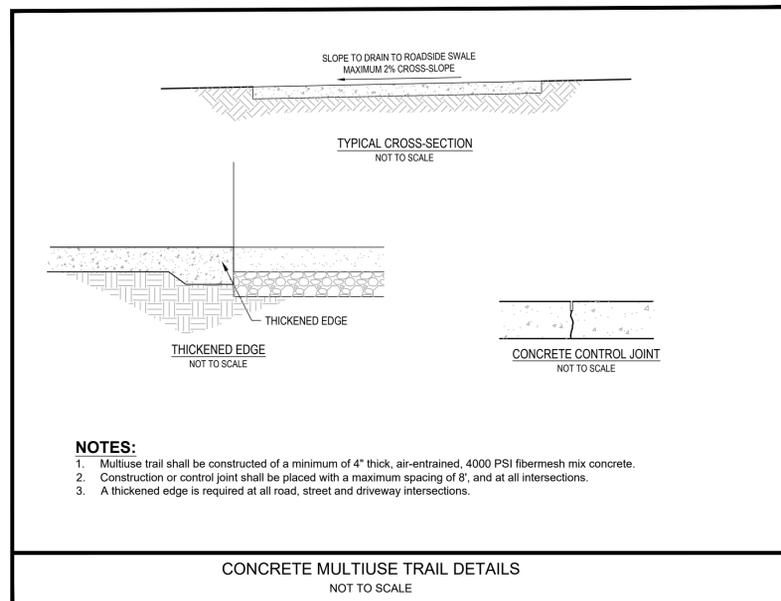
NOTE: CONTRACTOR TO PROVIDE EVEN SMOOTH SURFACE THROUGHOUT PARKING AISLE AND PARKING STALLS MATCHING EXISTING GRADE.

FULL DEPTH PAVEMENT CROSS SECTION

NOT TO SCALE

CONCRETE PAVEMENT CROSS SECTION

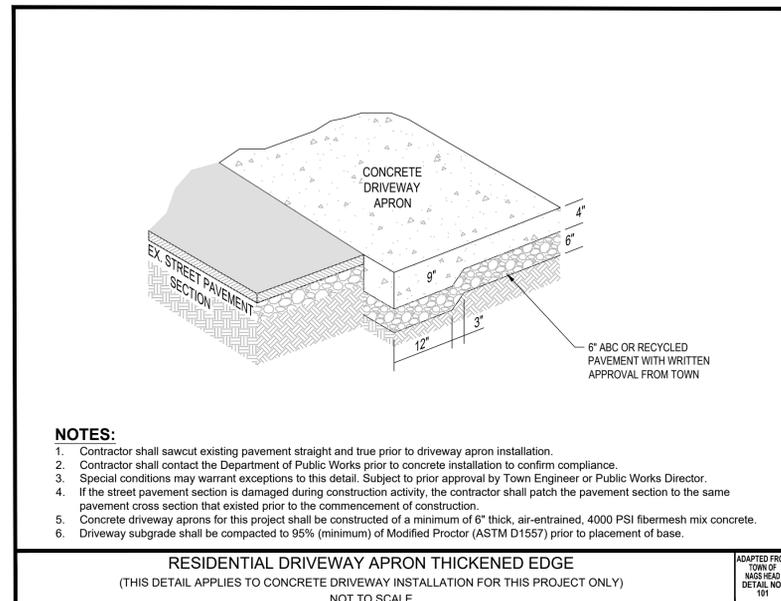
NOT TO SCALE



NOTES:

- Multiuse trail shall be constructed of a minimum of 4" thick, air-entrained, 4000 PSI fiber mesh mix concrete.
- Construction or control joint shall be placed with a maximum spacing of 8', and at all intersections.
- A thickened edge is required at all road, street and driveway intersections.

CONCRETE MULTIUSE TRAIL DETAILS
NOT TO SCALE

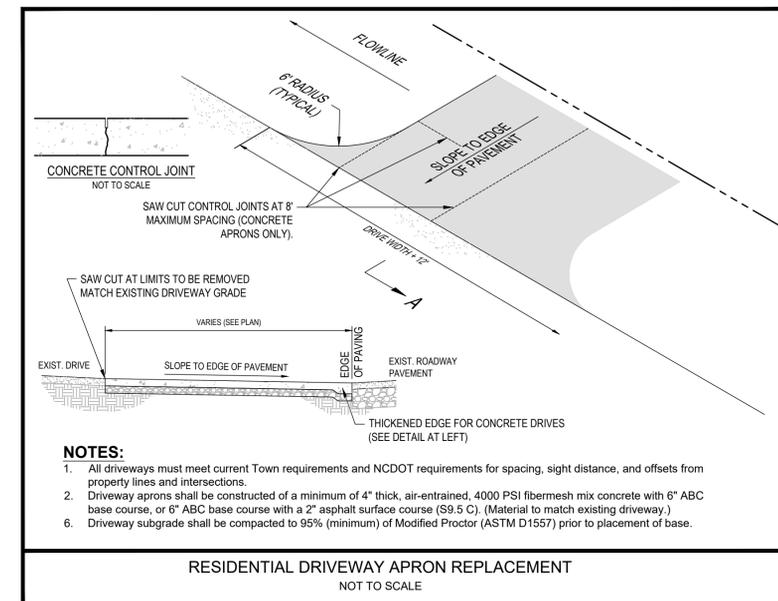


NOTES:

- Contractor shall sawcut existing pavement straight and true prior to driveway apron installation.
- Contractor shall contact the Department of Public Works prior to concrete installation to confirm compliance.
- Special conditions may warrant exceptions to this detail. Subject to prior approval by Town Engineer or Public Works Director.
- If the street pavement section is damaged during construction activity, the contractor shall patch the pavement section to the same pavement cross section that existed prior to the commencement of construction.
- Concrete driveway aprons for this project shall be constructed of a minimum of 6" thick, air-entrained, 4000 PSI fiber mesh mix concrete.
- Driveway subgrade shall be compacted to 95% (minimum) of Modified Proctor (ASTM D1557) prior to placement of base.

RESIDENTIAL DRIVEWAY APRON THICKENED EDGE
(THIS DETAIL APPLIES TO CONCRETE DRIVEWAY INSTALLATION FOR THIS PROJECT ONLY)
NOT TO SCALE

ADAPTED FROM
TOWN OF
NAGS HEAD
DETAIL NO.
101



NOTES:

- All driveways must meet current Town requirements and NCDOT requirements for spacing, sight distance, and offsets from property lines and intersections.
- Driveway aprons shall be constructed of a minimum of 4" thick, air-entrained, 4000 PSI fiber mesh mix concrete with 6" ABC base course, or 6" ABC base course with a 2" asphalt surface course (S9.5 C). (Material to match existing driveway.)
- Driveway subgrade shall be compacted to 95% (minimum) of Modified Proctor (ASTM D1557) prior to placement of base.

RESIDENTIAL DRIVEWAY APRON REPLACEMENT
NOT TO SCALE

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SOIOR STORMWATER INFRASTRUCTURE IMPROVEMENTS CONSTRUCTION DRAWINGS PROJECT AREA 12 NAGS HEAD, NC, 27959

FINAL DRAWING
RELEASED FOR CONSTRUCTION



REVISIONS

NO.	DATE	DESCRIPTION
1	02/04/2025	RELEASED FOR CONSTRUCTION

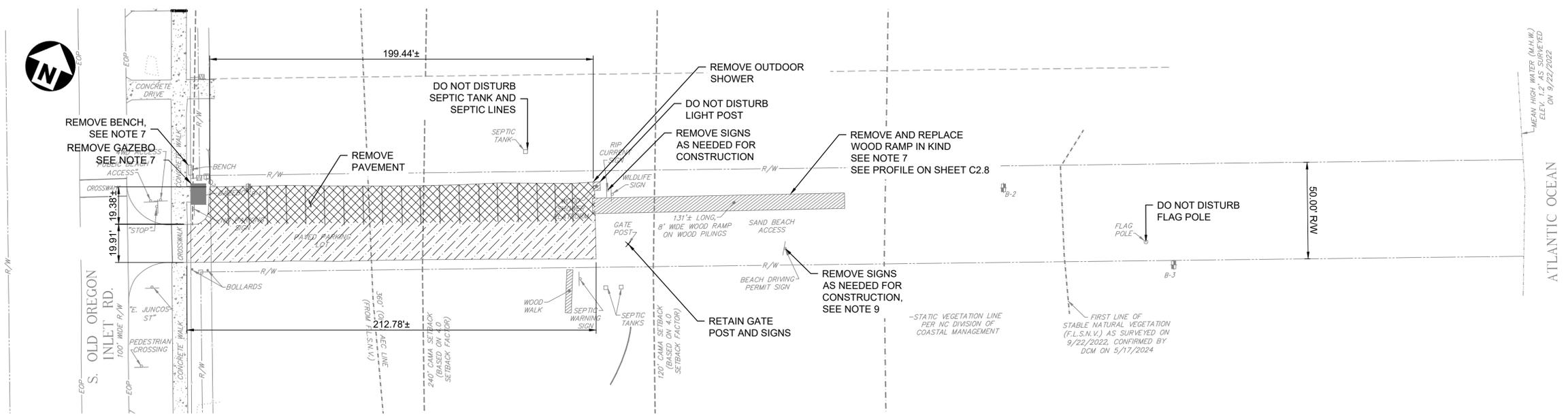
PLAN INFORMATION

PROJECT NO. 220494-03
 FILENAME
 CHECKED BY KCZ
 DRAWN BY YIS
 SCALE AS NOTED
 DATE 10/18/2024

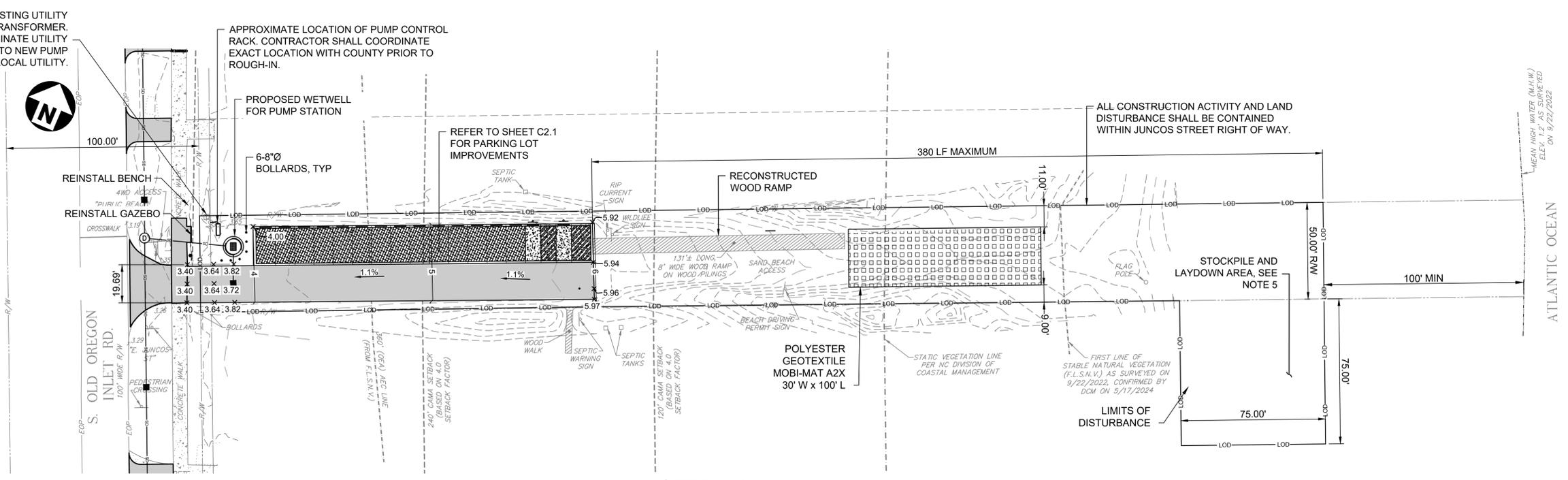
SHEET

DUNE INFILTRATION UTILITY
PLAN & PROFILE (1 OF 3)

C2.5



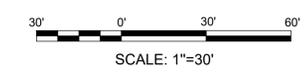
EXISTING CONDITIONS / DEMOLITION PLAN



SITE PLAN

NOTES:

- THE INFORMATION PROVIDED ON THIS SHEET RELATES TO THE INSTALLATION OF THE WETWELL, FORCEMAIN, INFILTRATION CHAMBERS, AND OVERFLOW PIPE.
- OVERALL ADS STORM TECH STRUCTURE AREA IS 2,150 SF UNDER MOBI-MAT.
- MOBI-MAT POLYETHYLENE GEOTEXTILE OVERALL AREA 3,000 SF. MOBI-MAT SHALL BE INSTALLED AS PER MANUFACTURER'S RECOMMENDATIONS.
- STORM DRAIN IMPROVEMENTS UP TO WETWELL PROVIDED BY MCADAMS.
- STOCKPILING AND LAYDOWN WITHIN PAVED PARKING AREA ALONG JUNCOS STREET AND WITHIN BEACH AREA SETBACK SHALL BE 100 FT FROM MEAN HIGH WATER AND CONFORM WITH SCHEDULE AND ACCESSIBILITY REQUIREMENTS DESCRIBED ON SHEET C0.1.
- MEAN HIGH WATER AND LOW WATER ELEVATIONS BASED UPON NOAA STATION 8651370, DUCK, NC.
- GAZEBO, BENCH, AND WOOD RAMP SHALL BE RE-INSTALLED BY CONTRACTOR IN THEIR ORIGINAL LOCATION ONCE CONSTRUCTION OF DRAINAGE SYSTEM AND WETWELL IS COMPLETED.
- DO NOT DISTURB EXISTING SIGNS AT THE INTERSECTION OF S. OREGON INLET ROAD AND JUNCOS STREET.
- ALL SIGNS REMOVED DURING CONSTRUCTION SHALL BE STORED APPROPRIATELY AND REPLACED IN KIND ONCE CONSTRUCTION ACTIVITY IS COMPLETED.
- REFER TO BOLLARD DETAILS ON SHEET C2.3.



FINAL DRAWING
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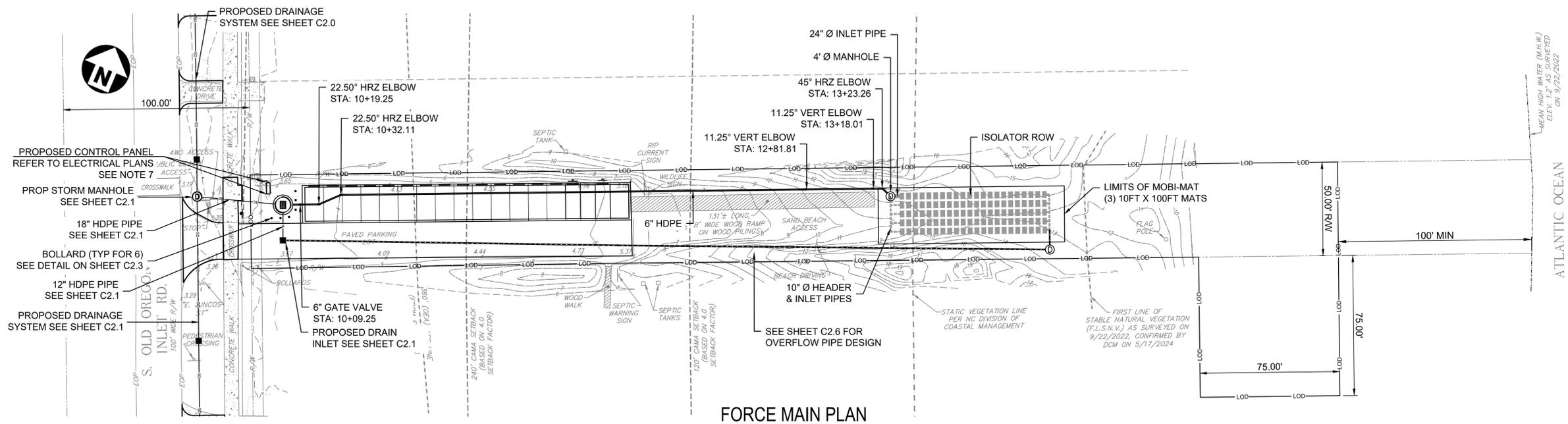
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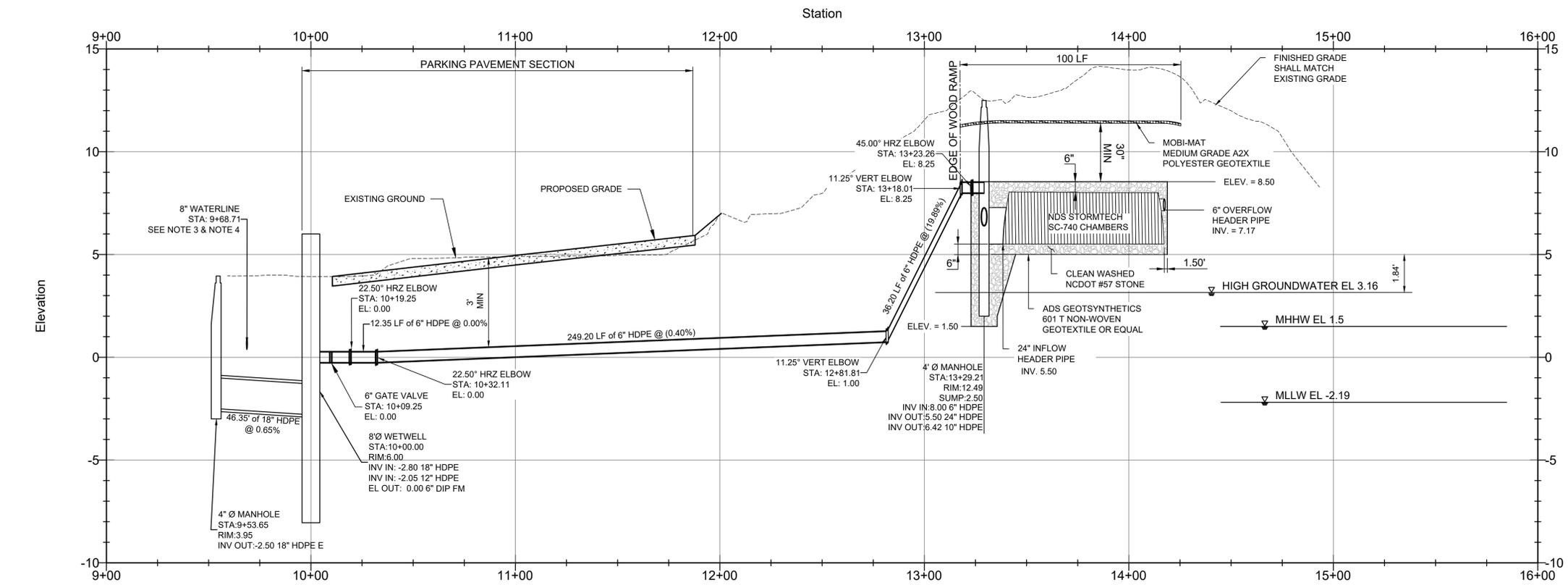
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621 Hillsborough Street
Suite 500
Raleigh, NC 27603
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fax 919. 361. 2269
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www.mcadamsco.com

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FORCE MAIN PLAN



FORCE MAIN PROFILE VIEW

NOTES:

- CONTRACTOR SHALL NOT DISTURB EXISTING LIGHT POLE ADJACENT TO EXISTING DUNE WALKOVER RAMP.
- ELEVATION (EL) OF FORCE MAIN IS NOTED AT CENTER OF LINE OF PIPE, UNLESS NOTE AS AN INVERT (INV).
- EXISTING WATERLINE ASSUMED TO HAVE 3 FT OF COVER. CONTRACTOR SHALL VERIFY LOCATION OF EXISTING WATERLINE BEFORE STARTING WORK.
- CURRENT STORMWATER DESIGN BY MCADAMS ASSUMES THAT THE EXISTING WATERLINE IS IN CONFLICT WITH PROPOSED 18" HDPE PIPE AND REQUIRES RELOCATION.
- MOBI-MAT SHALL HAVE A MINIMUM OF 12" OF SAND OVER THE TOP OF THE MAT.
- MOBI-MAT SHALL COVER THE EXTENTS OF THE GRAVEL AREA OF THE INFILTRATION SYSTEM.
- CONTRACTOR SHALL COORDINATE WITH POWER COMPANY TO PROVIDE POWER SERVICE TO PROPOSED LOCATION OF CONTROL PANEL.
- PIPING FROM THE WETWELL TO THE 6" GATE VALVE SHALL BE DUCTILE IRON.
- PIPING FROM THE 6" GATE VALVE TO THE MANHOLE SHALL BE HDPE SDR-9 WITH BUTT FUSION JOINTS. ALL 6" BEND FITTINGS SHALL BE HDPE AND OF SAME MANUFACTURER AS THE PIPE.
- 6" GATE VALVE SHALL HAVE MJ ENDS.
- HDPE PIPE SHALL HAVE AN MJ ADAPTER FUSED ON THE END THAT CONNECTS TO THE 6" GATE VALVE.
- MJ JOINTS ON THE 6" GATE VALVE SHALL BE RESTRAINED USING MEGALUGS, OR APPROVED EQUAL.
- PROVIDE ANTIFLOTATION COLLAR ON MANHOLE BASE



FINAL DRAWING
RELEASED FOR CONSTRUCTION

**SOIOR STORMWATER
INFRASTRUCTURE
IMPROVEMENTS
CONSTRUCTION DRAWINGS
PROJECT AREA 12
NAGS HEAD, NC, 27959**

FINAL DRAWING
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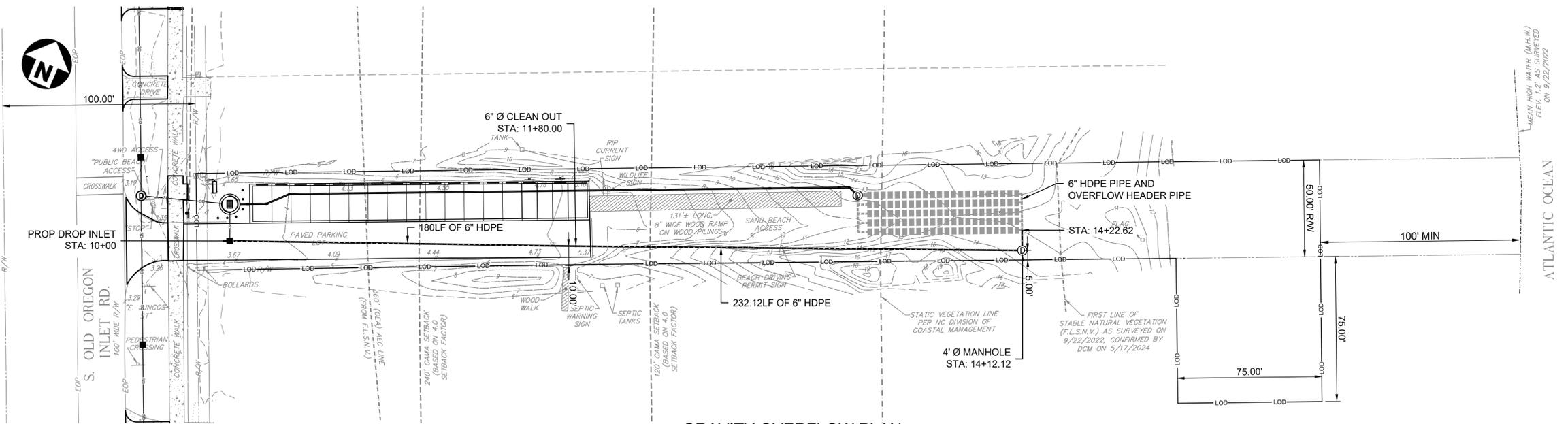
PLAN INFORMATION

PROJECT NO. 220494-03
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 DRAWN BY YIS
 SCALE AS NOTED
 DATE 10/18/2024

SHEET

**DUNE INFILTRATION UTILITY
PLAN & PROFILE (2 OF 3)**

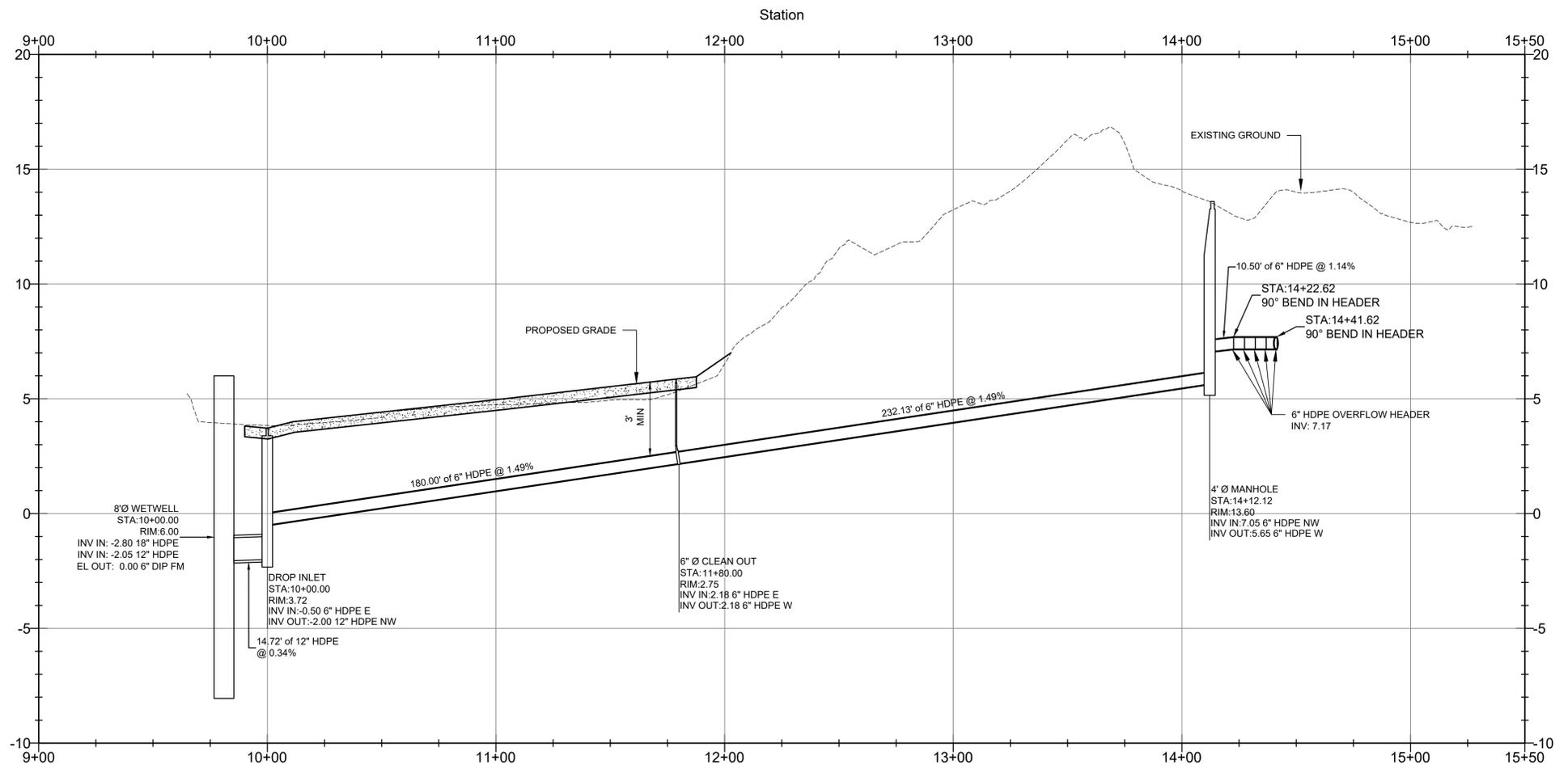
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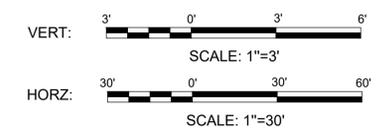
GRAVITY OVERFLOW PLAN

NOTES:

1. PIPE INVERT IS MEASURED AT CENTER OF MH.
2. PIPE LENGTH IS MEASURED TO CENTER OF MH.
3. OVERFLOW PIPE OUTLETS TO THE PROPOSED DROP INLET.
4. REFER TO SHEET C2.1 FOR DRAINAGE SYSTEM CONNECTING TO THE PROPOSED WET WELL.
5. PROVIDE ANTILOTTATION COLLAR ON ALL MANHOLE BASES.
6. MANHOLES SHALL BE PRE-CAST CONCRETE. REFER TO SHEET C.2.2



GRAVITY OVERFLOW PROFILE VIEW



**SOIOR STORMWATER
 INFRASTRUCTURE
 IMPROVEMENTS
 CONSTRUCTION DRAWINGS
 PROJECT AREA 12
 NAGS HEAD, NC, 27959**

FINAL DRAWING
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SHEET

**DUNE INFILTRATION UTILITY
 PLAN & PROFILE (3 OF 3)**

C2.7

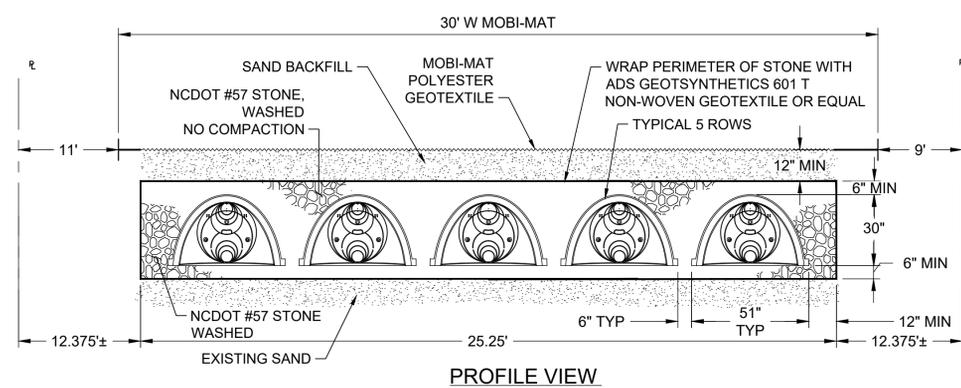
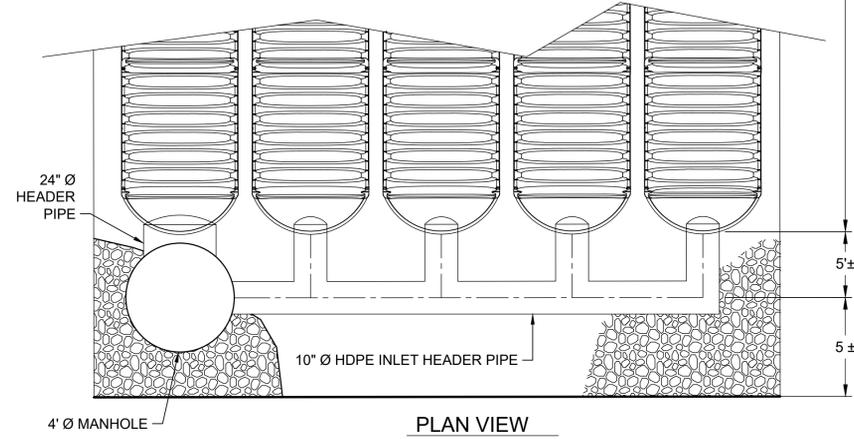
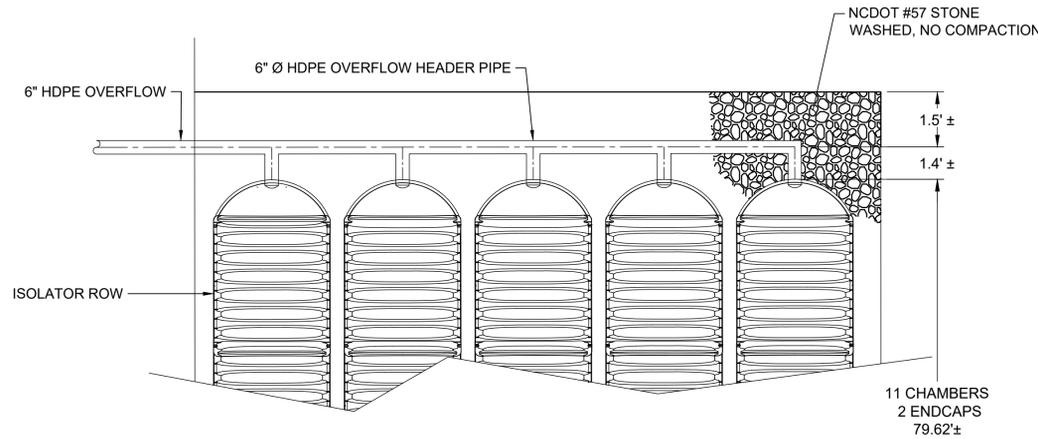


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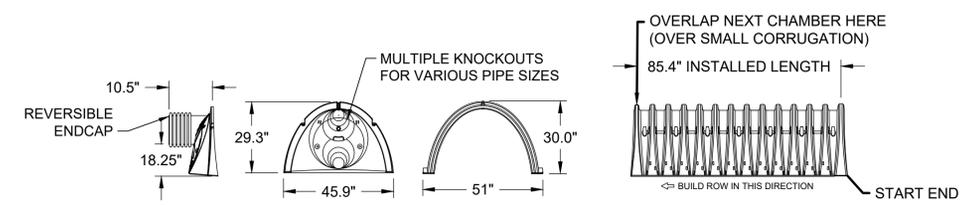
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NDS STORMTECH SC-740 CHAMBERS NOT TO SCALE

- NOTE:**
1. ALL CHAMBER ROWS SHALL HAVE ADS GEO SYNTHETICS 601T NON WOVEN GEOTEXTILE OR EQUAL PLACED ON TOP OF THE 6" NCDOT #57 STONE BEFORE INSTALLING THE CHAMBERS.

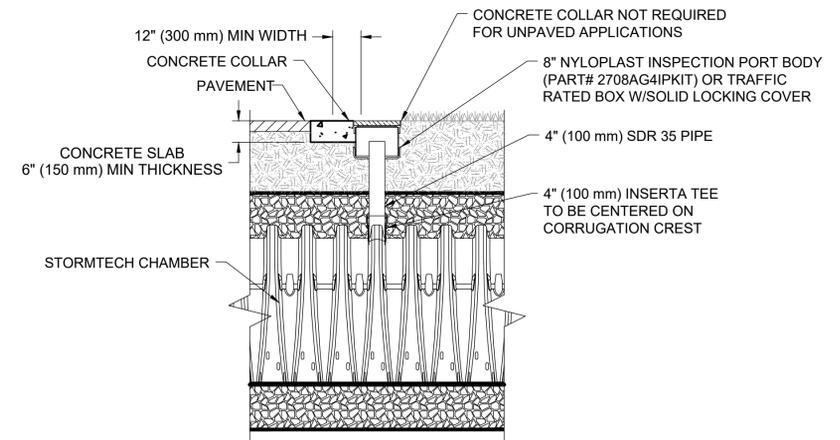


NOMINAL CHAMBER SPECIFICATIONS

SIZE (W X H X INSTALLED LENGTH)	51.0" X 30.0" X 85.4"
CHAMBER STORAGE	45.9 CUBIC FEET
MINIMUM INSTALLED STORAGE*	74.9 CUBIC FEET
WEIGHT	75.0 lbs.

*ASSUMES 6" (152 mm) STONE ABOVE, BELOW, AND BETWEEN CHAMBERS

NDS STORMTECH SC-740 CHAMBERS SPECIFICATIONS NOT TO SCALE



NOTE:
INSPECTION PORTS MAY BE CONNECTED THROUGH ANY CHAMBER CORRUGATION CREST.

4" PVC INSPECTION PORT DETAIL NOT TO SCALE

- NOTE:**
1. INSTALL TWO (2) INSPECTION PORTS ON THE ISOLATOR ROW.
 2. INSPECTION PORT #1 SHALL BE INSTALLED IN THE MIDDLE OF THE MIDDLE CHAMBER.
 3. INSPECTION PORT #2 SHALL BE INSTALLED IN THE MIDDLE OF THE LAST CHAMBER BEFORE THE OVERFLOW HEADER.

SOIOR STORMWATER INFRASTRUCTURE IMPROVEMENTS CONSTRUCTION DRAWINGS PROJECT AREA 12 NAGS HEAD, NC, 27959

FINAL DRAWING
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SHEET

DUNE INFILTRATION
DETAILS 1 OF 2

C2.8

FINAL DRAWING
RELEASED FOR CONSTRUCTION



PLAN INFORMATION

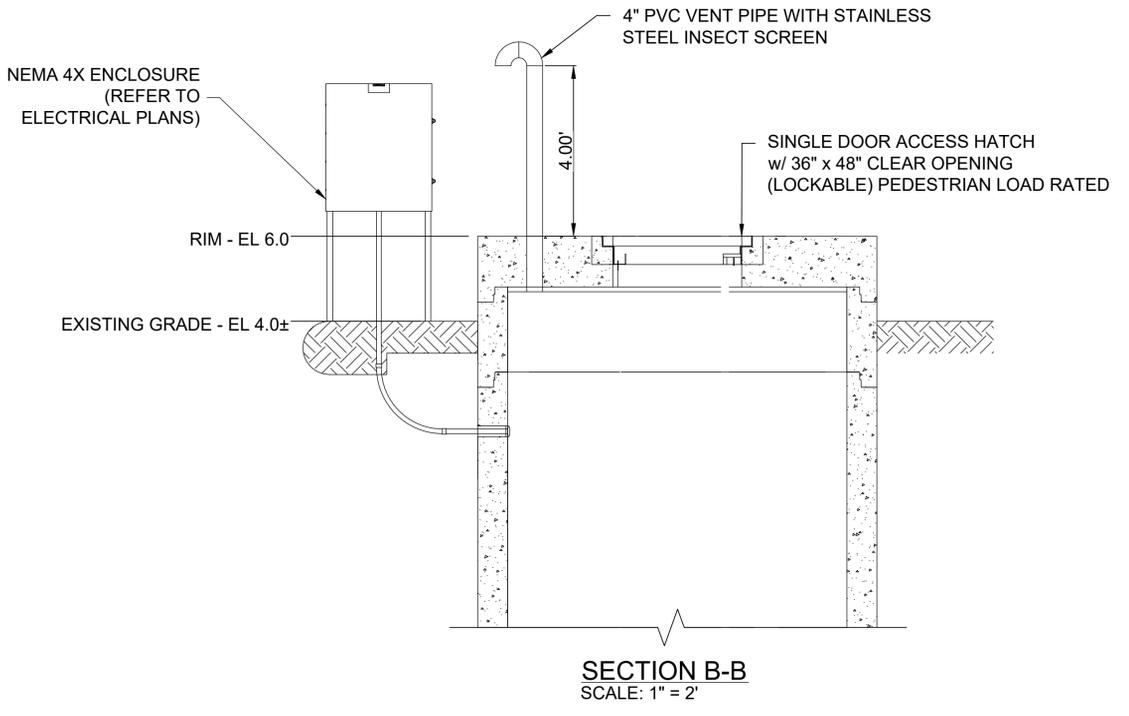
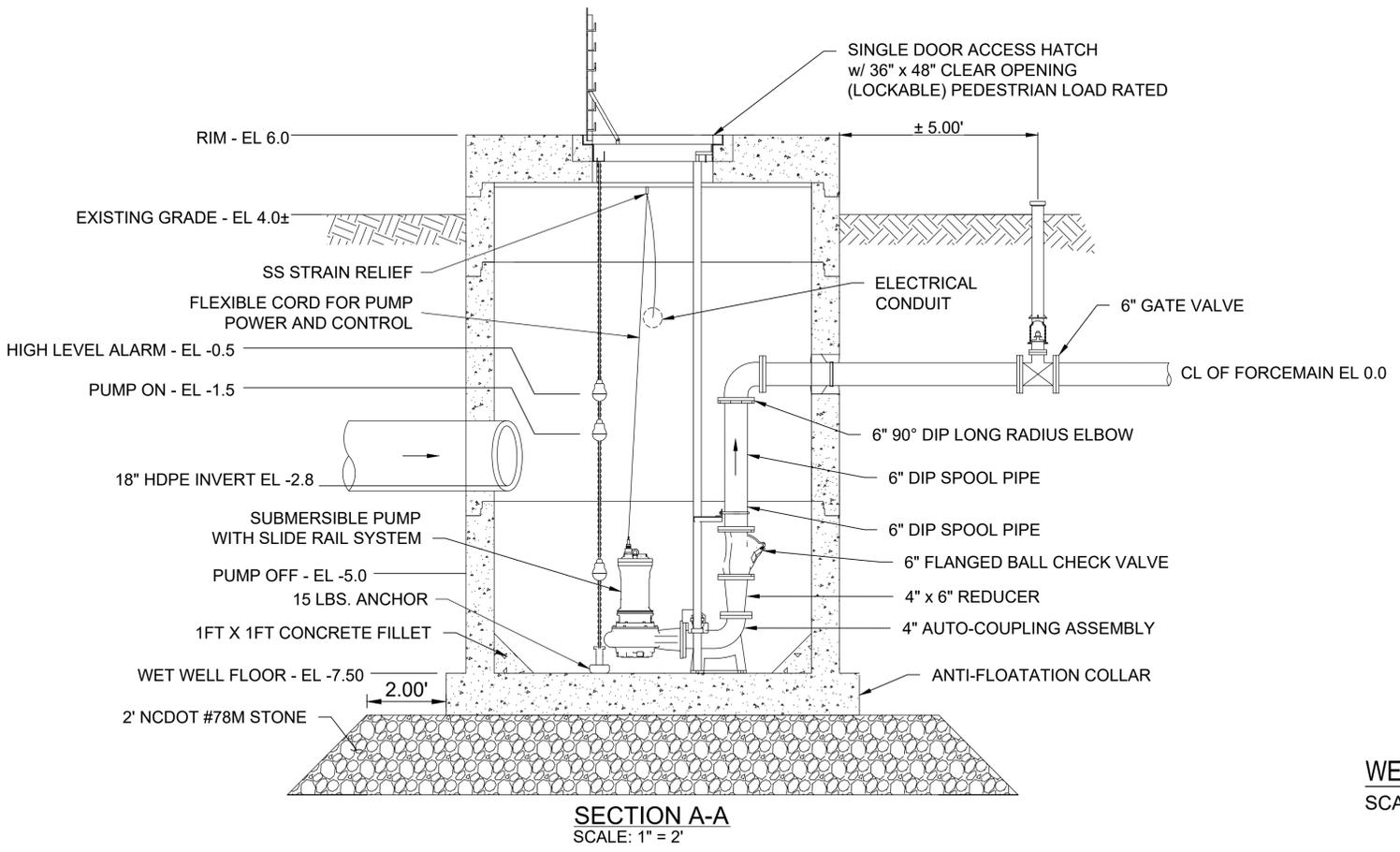
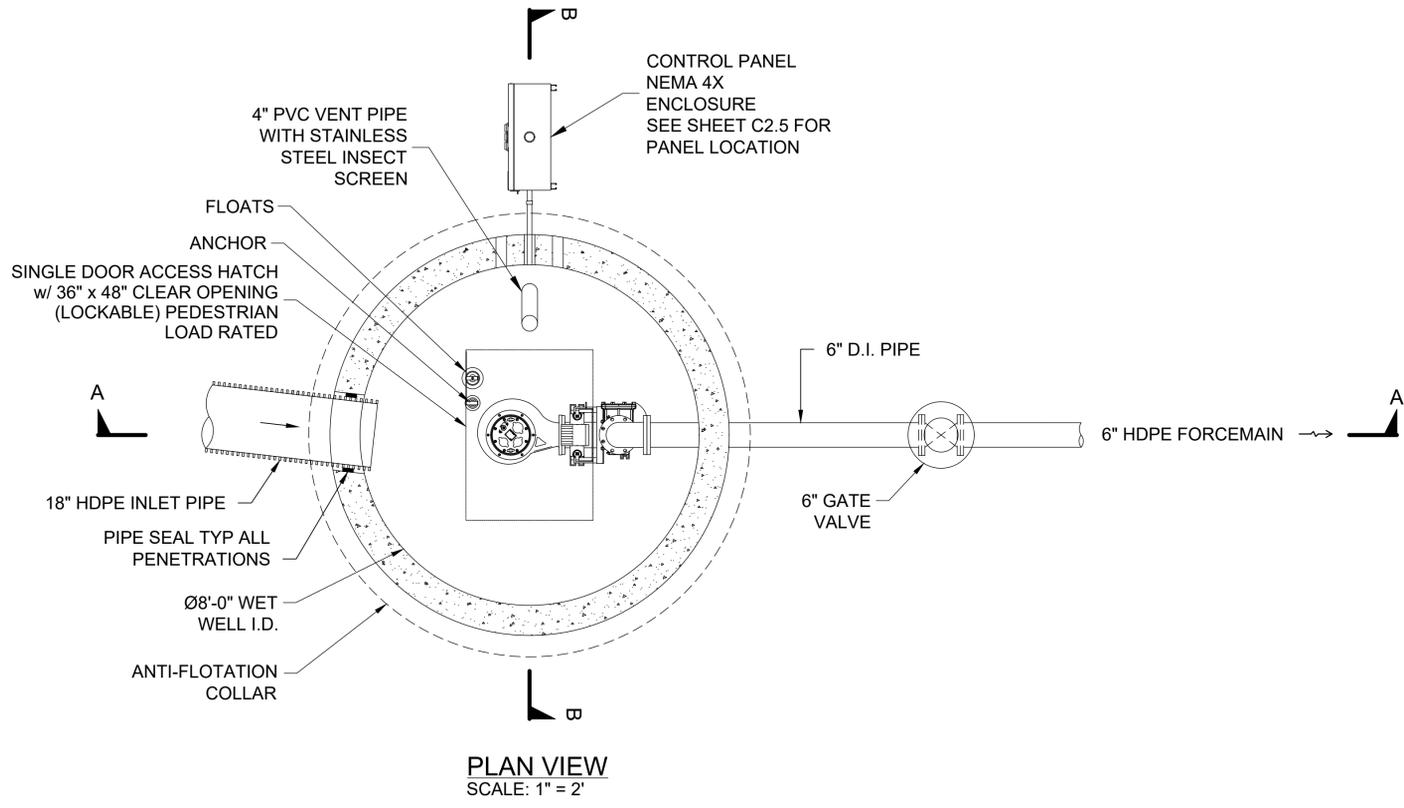
PROJECT NO.	220494-03
FILENAME	
CHECKED BY	KCZ
DRAWN BY	YIS
SCALE	AS NOTED
DATE	10/18/2024

SHEET

**DUNE INFILTRATION
 DETAILS 2 OF 2**

SYSTEM CHARACTERISTICS	
APPLICATION	PUMP
DESIGN FLOW (gpm)	485 GPM
TOTAL DYNAMIC HEAD (Ft.)	32
STATIC HEAD (Ft.)	13.5

- NOTES:**
- DESIGN BASED UPON 4" SIMPLEX BARNES SUBMERSIBLE NON CLOG SERIES 4SCDG75N, 208V-3PHASE, 7.5 HP 1750 RPM, Ø7.68" IMPELLER, 6" DISCHARGE PIPE.
 - PROVIDE WATER TIGHT SLEEVE SEALS FOR ALL PENETRATIONS.
 - PROVIDE ANTI-FLOATATION COLLAR AND BUOYANCY CALCULATIONS. SEALED AND SIGNED BY A LICENSED PROFESSIONAL ENGINEER.
 - ALL SLIDE RAIL SYSTEM AND INTERIOR HARDWARE SHALL BE 304 STAINLESS STEEL.



WETWELL NON-CLOG PUMP STATION
 SCALE: 1" = 2"

C:\WA\2024\04\03\01 CAD\Drawings\SheetSet\Site Plans\Enbhdwg_2/10/2025 12:08:25 PM.svdans.kvllm.yml



McADAMS

The John R. McAdams Company, Inc.
621 Hillsborough Street
Suite 500
Raleigh, NC 27603
phone 919. 361. 5000
fax 919. 361. 2269
license number: C-0293, C-187
www.mcadamsco.com

CLIENT

TOWN OF NAGS HEAD
POST OFFICE BOX 99
NAGS HEAD, NC 27959
PHONE: 252.441.5580



SOOIR STORMWATER INFRASTRUCTURE IMPROVEMENTS CONSTRUCTION DRAWINGS PROJECT AREA 12 NAGS HEAD, NC, 27959

FINAL DRAWING
RELEASED FOR CONSTRUCTION



REVISIONS 2/10/2025

NO.	DATE	RELEASED FOR CONSTRUCTION
1	02/04/2025	RELEASED FOR CONSTRUCTION

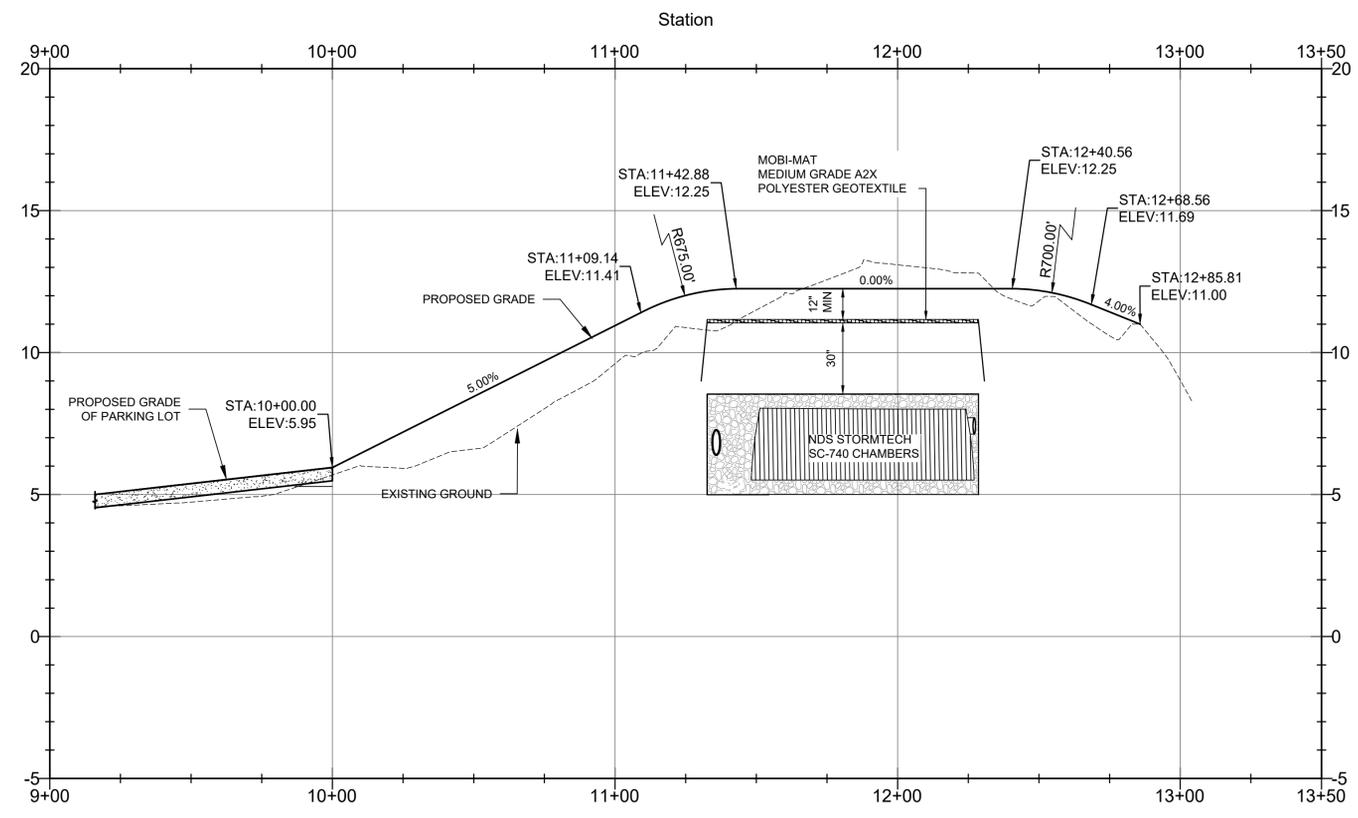
PLAN INFORMATION

PROJECT NO. 220494-03
 FILENAME
 CHECKED BY KCZ
 DRAWN BY YIS
 SCALE AS NOTED
 DATE 10/18/2024

SHEET

DUNE WALKOVER AND VEHICLE ACCESS PROFILES

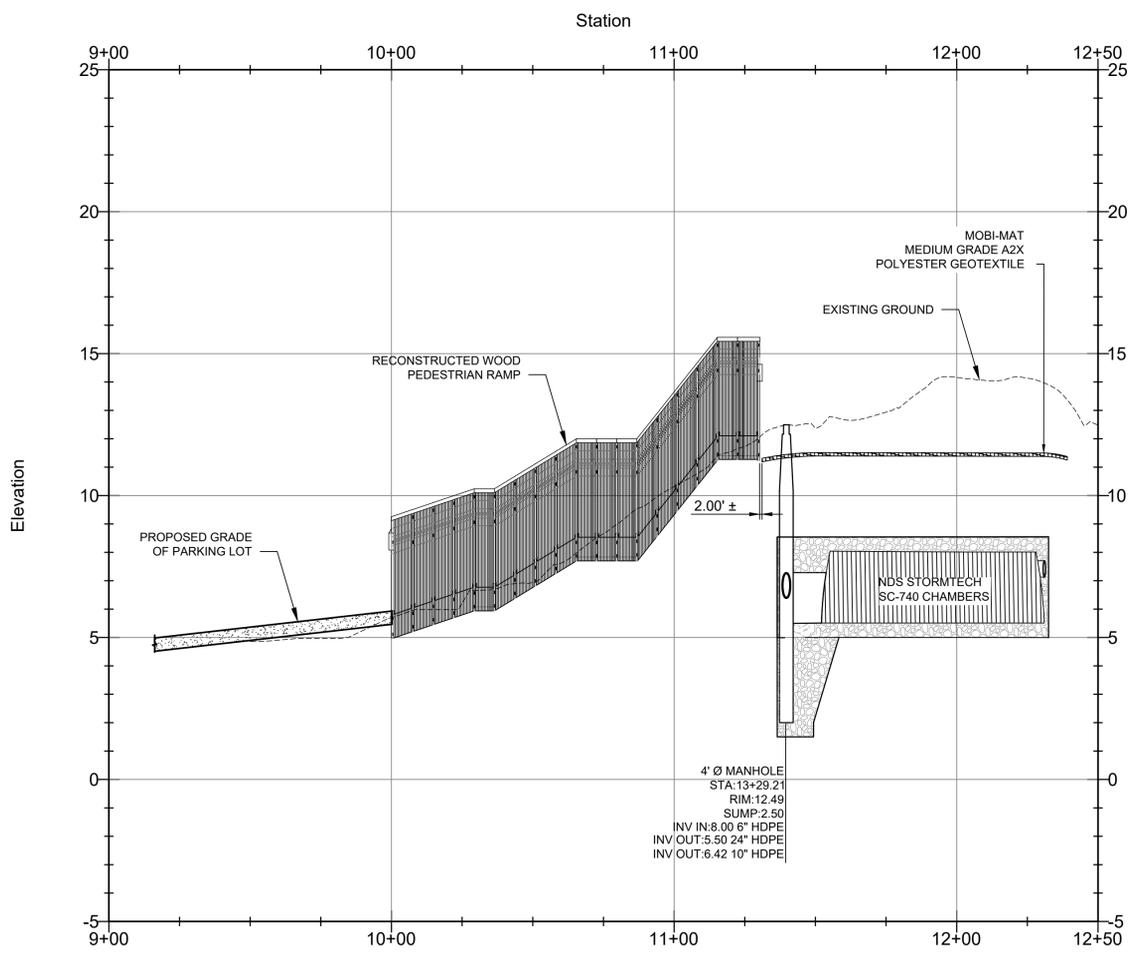
C2.10



VEHICLE ACCESS PROFILE VIEW

NOTES:

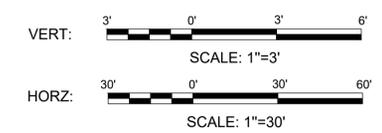
1. PROFILE SHOWN IS CUT ALONG THE SECOND ROW OF CHAMBERS FROM THE SOUTH.
2. MOBI-MAT SHALL BE PLACED 30" ABOVE THE GEOTEXTILE ENCAPSULATING THE STORM CHAMBERS, DIRECTLY OVER THE STORM CHAMBERS.
3. CONTRACTOR SHALL ADJUST SLOPE AS NEEDED ON THE OCEAN SIDE OF DUNE TO CONSTRUCT AN ACCESSIBLE PATH.



WALKOVER RAMP PROFILE VIEW

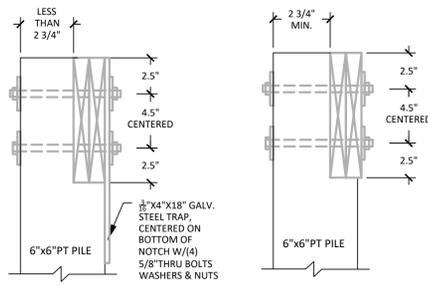
NOTE:

1. CONTRACTOR SHALL VERIFY EXISTING PAVEMENT AND DUNE GRADE FOR TYING IN PEDESTRIAN RAMP BEFORE RECONSTRUCTING THE WALKOVER RAMP.

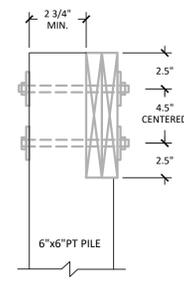


FINAL DRAWING
RELEASED FOR CONSTRUCTION

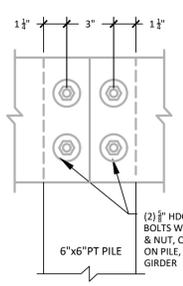
C:\WA\2024\09\20 CAD\Drawings\Walkover_PP.dwg, 2/10/2025 11:09:08 AM, Sanjiv S. Venkatasubramanian



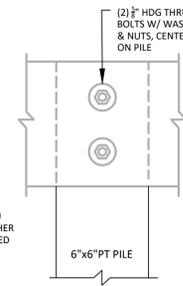
NOTCHED PILE CONNECTION GREATER THAN 50% CROSS SECTION
SECTION VIEW



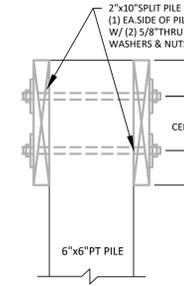
NOTCHED PILE CONNECTION LESS THAN 50% CROSS SECTION
SECTION VIEW



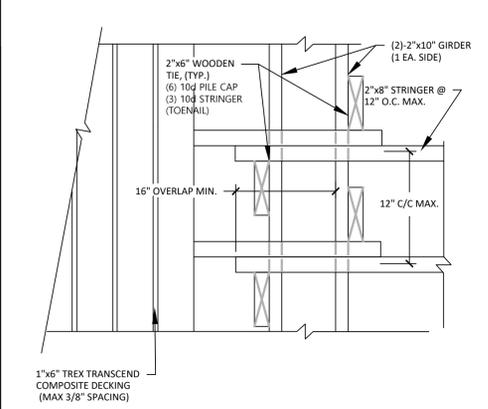
GIRDER SPLICE AT PILE CONNECTION
SIDE VIEW



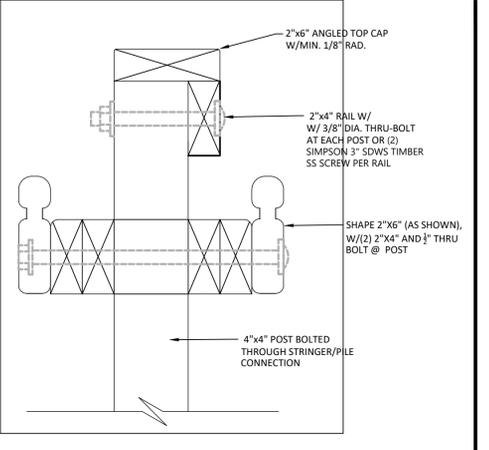
TYPICAL GIRDER TO PILE CONNECTION
SIDE VIEW



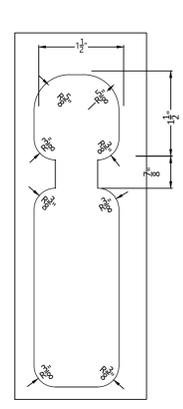
TYPICAL GIRDER TO PILE CONNECTION
SECTION VIEW



WOOD TIE/STRINGER DETAIL
SCALE: NONE

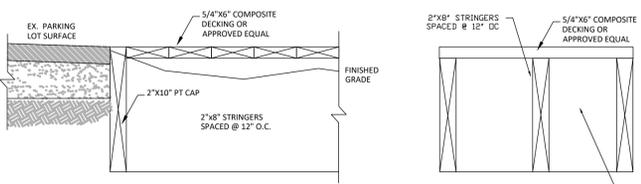


RAIL WRAPAROUND DETAIL
SCALE: NONE

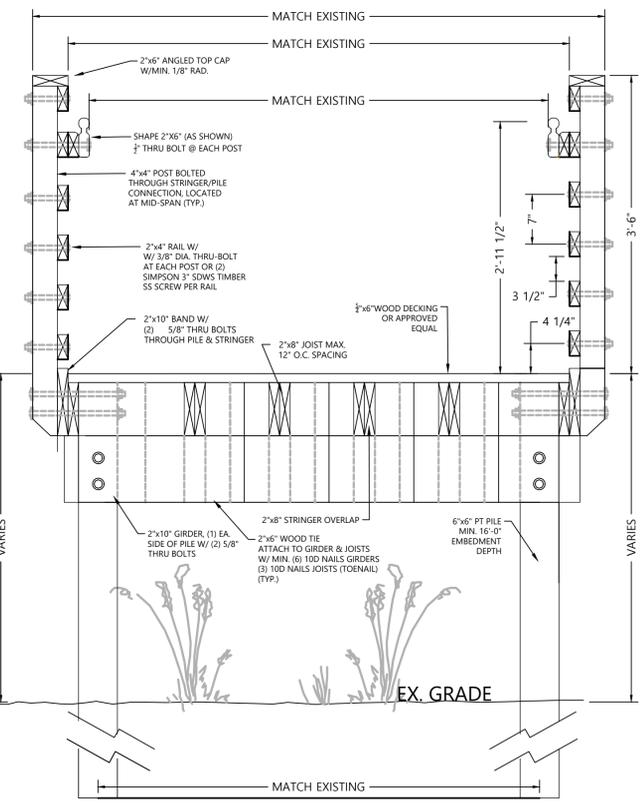


HANDRAIL DETAIL
SCALE: 1-1/2"=1'-0"

GIRDER/PILE CONNECTION DETAILS
SCALE: NONE



AT GRADE DECK DETAIL
SCALE: NONE



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

NOTES:

DIVISION 1 - GENERAL REQUIREMENTS
2018 NORTH CAROLINA STATE BUILDING CODE

DESIGN LIVE LOADS

DECK AREA	60 PSF
STAIRS	100 PSF or 300 LBS CONCENTRATED LOAD

DESIGN DEAD LOADS

DECK AREA	10 PSF
STAIRS	10 PSF

DIVISION 1 - GENERAL CONDITIONS

- IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE ALLOWABLE CONSTRUCTION LOADS, WIND LOADS, AND TO PROVIDE PROPER DESIGN AND CONSTRUCTION OF FALSEWORK, FORMWORK, BRACING, SHEETING, SHORING, ECT. DURING THE ERECTION AND CONSTRUCTION PHASES.
- ALL WORK SPECIFIED HEREIN SHALL BE INSPECTED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, THE BUILDING CODE AND ALL LOCAL ORDINANCES. ALL CONSTRUCTION TO CONFORM TO THE LATEST REQUIREMENTS NOTED IN THE NC STATE BUILDING CODE (2018 EDITION) WITH SPECIAL CONSIDERATION GIVEN TO CHAPTER 45 REGARDING HIGH WIND ZONES AND CHAPTER 46 REGARDING COASTAL AND FLOOD PLAIN CONSTRUCTION STANDARDS. THE CONTRACTOR SHALL COORDINATE THE REQUIRED INSPECTION WORK WITH THE TOWN OF NAGS HEAD
- ITS IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONFORM TO ALL STANDARDS, PROVISIONS, REQUIREMENTS, METHODS OF CONSTRUCTIONS, AND USES OF MATERIALS, IN STRUCTURES PROVIDED BY THE NORTH CAROLINA BUILDING CODE, CURRENT EDITION, AND ANY OTHER LOCAL AGENCIES, AND IN ACCORDANCE WITH PROPER ENGINEERING AND CONSTRUCTION PRACTICES.
- ALL 5/4x6 DECKING SHALL BE FASTENED USING STAINLESS STEEL SCREWS EQUALLY SPACED AND PER MFG. RECOMMENDATIONS
- ALL FRAMING SHALL BE TRUE & EXACT.
- BOLTED FASTENERS SHALL NOT BE OVERTIGHTENED. LAG BOLT CONNECTIONS SHALL BE TIGHTENED SO THAT ELEMENTS COME TOGETHER WITHOUT STRIPPING OUT THE WOOD IN PRE-DRILLED HOLES. THROUGH BOLT CONNECTIONS SHALL BE TIGHTENED SO THAT WASHERS BEGIN TO PRESS INTO THE WOOD SUBSTRATE. ALL THROUGH BOLT CONNECTIONS SHALL HAVE A FLAT WASHER ON BOTH SIDES AND LOCK WASHER UNDER NUTS.
- ALL COUNTERSUNK HOLES SHALL BE FILLED WITH AN APPROVED SEALANT.
- CUTS, ABRASIONS, NOTCHED MEMBERS, AND BOLT HOLES BORED AFTER PRESERVATIVE TREATMENT SHALL BE TREATED WITH THE SAME PRESERVATIVE AS THE TYPE USE TO TREAT THE PRODUCT. WHEN FIELD APPLICATIONS OF THE PRESERVATIVE ARE REQUIRED, THE MATERIALS SHALL BE FURNISHED, PREPARED, AND APPLIED IN ACCORDANCE WITH AWPA STANDARD M4.

DIVISION 2 - FOOTINGS & FOUNDATIONS

- PRESUMPTIVE SOIL BEARING CAPACITY ASSUMED TO BE 1 TON/SF FOR LOOSE SAND. PRESUMPTIVE PILE BEARING CAPACITY IS ASSUMED TO BE 1 TON/FT OF EMBEDMENT. NOTIFY ENGINEER IN THE EVENT THAT ACTUAL SOIL CONDITIONS DIFFER.
- THE PROPOSED PILES SHALL BE A MIN OF 8" X 8" AND 6" X 6" ROUND AND SQUARE TREATED TIMBER PILES, RESPECTIVELY WITH AN EMBEDMENT DEPTH OF 16'-0" MIN, UNLESS OTHERWISE NOTED HEREON. ROUND TIMBER PILE SHALL AND SHALL MEET THE REQUIREMENTS OF ASTM D25.
- THE MINIMUM PRESERVATIVE RETENTION REQUIREMENTS OF ALL SQUARE TIMBER PILES SHALL BE 0.6 PCF.
- THE MINIMUM PRESERVATIVE RETENTION REQUIREMENTS OF ALL ROUND TIMBER PILES SHALL BE 0.8 PCF.
- PILES SHALL BE IN ONE PIECE. SPLICES ARE NOT ACCEPTABLE.
- PILES SHALL BE INSTALLED SO AXIAL ALIGNMENT IS PLUMB.
- PILES MAY BE PLACED BY AUGER, JETTING, OR DROP HAMMER. PILING SHALL RECEIVE A FINAL SET BY DROP HAMMER OR OTHER APPROVED METHODS, ACCEPTABLE BY THE BUILDING INSPECTOR.
- ALL TIMBER PILES SHALL BE PRESSURE TREATED AND A MINIMUM OF NO. 2 SOUTHERN PINE.
- UTILIZE (2) 1/2" DIA. GALVANIZED STEEL BOLTS AT EACH PILING TO GIRDER CONNECTION UNLESS OTHERWISE NOTED. PILING SHOULD BE NOTCHED SO THAT IF THE CROSS-SECTION IS REDUCED BY 50%, UTILIZE 4"x18" GALVANIZED STRAP WITH (4) 1/2" GALVANIZED STEEL THROUGH BOLTS AT EACH GIRDER TO PILING CONNECTION WHERE PILING IS NOTCHED MORE THAN 50%.
- ALL GALV. THRU BOLTS FOR PILE CAP TO PILE CONNECTIONS SHALL CONFORM TO ASTM A325 SPECIFICATIONS AND SHALL USE OVERSIZED OGEE WASHERS AND NUTS ON EACH END.
- NAILS AND SPIKES SHALL BE DRIVEN WITH HEADS COUNTERSUNK 1/16" BELOW THE SURFACE OF THE WOOD
- USE BOLTED CONNECTIONS FOR STRINGER, SLEEPER AND PILE CONNECTIONS.
- BLOCKING SHALL BE FASTENED WITH NAILS.
- CONTRACTOR SHALL FIELD LOCATE JOISTS. THIS MAY VARY FROM PLAN LAYOUT.
- COMPOSITE DECK BOARDS SHALL BE FASTENED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDED GUIDELINES. (2-3/4" LENGTH #6 OR #10 SCREWS).
- THE WOOD DECK HAS BEEN SPECIFIED AS TREX TRANSCENDING 1"x6" TO MEET COMMERCIAL LOADING REQUIREMENTS. IF ALTERNATIVE DECKING IS PROPOSED, CONTACT DESIGN ENGINEER IF ALTERNATE DECKING IS PROPOSED.
- ANY QUESTIONS ARISING DURING CONSTRUCTION SHALL BE DIRECTED TO THE DESIGN ENGINEER.
- PILE CAPS AND STRINGERS SHALL HAVE A MIN. RETENTION REQUIREMENT OF 0.60 PCF CHROMATED COPPER ARSENATE.

DIVISION 3 - CONCRETE,

DIVISION 6 - TIMBER

- ALL STRUCTURAL WOOD MEMBERS SHALL BE TREATED OF SOUTHERN PINE GRADE #2.
- DECKING JOIST SHALL BE TREATED 2" X 8" #2 SOUTHERN PINE, @ 16" O.C. (U.O.N.)
- STAIR STRINGERS SHALL BE TREATED 2" X 12", #2 SOUTHERN PINE, @ 12" O.C. MAXIMUM.
- FASTENING SHALL ADHERE TO TABLE 2304.9.1.4
- ALL RIM JOISTS SHALL BE FASTENED WITH MIN. 10D THREADED NAILS OR #10 X 3" MIN. WOOD SCREWS SPACED @ 6" O.C.
- ALL CONNECTIONS AND FASTENERS SHALL BE CAPABLE OF DEVELOPING FULL CAPACITY OF THE STRUCTURAL MEMBERS ACCORDING TO THE NATIONAL DESIGN SPECIFICATION (NDS) FOR WOOD CONSTRUCTION AND NDS SUPPLEMENT.
- ALL THRU BOLTS FOR PILE TO PILE CONNECTIONS SHALL CONFORM TO ASTM FG154 GRADE 55. SPECIFICATIONS AND SHALL USE OGEE WASHERS, LOCK WASHERS AND NUTS.

McADAMS
The John R. McAdams Company, Inc.
621 Hillsborough Street
Suite 500
Raleigh, NC 27603
phone 919. 361. 5000
fax 919. 361. 2269
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CLIENT
TOWN OF NAGS HEAD
POST OFFICE BOX 99
NAGS HEAD, NC 27959
PHONE: 252.441.5580



**SOOIR STORMWATER
INFRASTRUCTURE
IMPROVEMENTS
CONSTRUCTION DRAWINGS
PROJECT AREA 12
NAGS HEAD, NC, 27959**



2/10/2025

REVISIONS

NO.	DATE

PLAN INFORMATION

PROJECT NO.	SRP-SW-ARP-0019.2
FILENAME	TNH22001_17_D1
CHECKED BY	HCF
DRAWN BY	JWS
SCALE	AS NOTED
DATE	1/29/25

SHEET

DUNE WALKOVER DETAILS

C2.11

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McADAMS

The John R. McAdams Company, Inc.
621 Hillsborough Street
Suite 500
Raleigh, NC 27603
phone 919. 361. 5000
fax 919. 361. 2269
license number: C-0293, C-187

CLIENT

TOWN OF NAGS HEAD
POST OFFICE BOX 99
NAGS HEAD, NC 27959
PHONE: 252.441.5580



SOOIR STORMWATER
INFRASTRUCTURE
IMPROVEMENTS
CONSTRUCTION DRAWINGS
PROJECT AREA 12
NAGS HEAD, NC, 27959



REVISIONS

NO. DATE

PLAN INFORMATION

PROJECT NO. SRP-SW-ARP-0019.2
FILENAME TNH22001_17-EC
CHECKED BY HCF
DRAWN BY JWS
SCALE AS NOTED
DATE 1/29/2025
SHEET

EROSION CONTROL NOTES

C3.0

On cut and fill slopes 2:1 or steeper Centipede shall be applied at the rate of 5 pounds per acre and add 20# of Sericea Lespedeza from January 1 - December 31.

Fertilizer shall be 10-20-20 analysis. A different analysis of fertilizer may be used provided the 1-2-2 ratio is maintained and the rate of application adjusted to provide the same amount of plant food as a 10-20-20 analysis and as directed.

TEMPORARY SEEDING:

Fertilizer shall be the same analysis as specified for Seeding and Mulching and applied at the rate of 400 pounds and seeded at the rate of 50 pounds per acre. Sweet Sudan Grass, German Millet or Bromont Millet shall be used in summer months and Rye Grain during the remainder of the year. The Engineer will determine the exact dates for using each kind of seed.

FERTILIZER TOPDRESSING:

Fertilizer used for topdressing on all roadway areas except slopes 2:1 and steeper shall be 10-20-20 grade and shall be applied at the rate of 500 pounds per acre. A different analysis of fertilizer may be used provided the 1-2-2 ratio is maintained and the rate of application adjusted to provide the same amount of plant food as 10-20-20 analysis and as directed.

Fertilizer used for topdressing on slopes 2:1 and steeper and waste and borrow areas shall be 16-8-8 grade and shall be applied at the rate of 500 pounds per acre. A different analysis of fertilizer may be used provided the 2-1-1 ratio is maintained and the rate of application adjusted to provide the same amount of plant food as 16-8-8 analysis and as directed.

SUPPLEMENTAL SEEDING:

The kinds of seed and proportions shall be the same as specified for Seeding and Mulching, with the exception that no centipede seed will be used in the seed mix for supplemental seeding. The rate of application for supplemental seeding may vary from 25# to 75# per acre. The actual rate per acre will be determined prior to the time of topdressing and the Contractor will be notified in writing of the rate per acre, total quantity needed, and areas on which to apply the supplemental seed. Minimum tillage equipment, consisting of a soil seeder shall be used for incorporating seed into the soil as to prevent disturbance of existing vegetation. A doobuster (ball and chain) may be used where degree of slope prevents the use of a soil seeder.

MULCHING:
Mulch and tack shall be in accordance with NCDOT Specification Section 1060.5. mulch shall be applied in accordance with NCDOT Specification 1615. An approved rolled erosion control product (RECP). May be used in lieu of straw mulch.

MOWING:

The minimum mowing height on this project shall be 4 inches.

STABILIZATION REQUIREMENTS:

Stabilization for this project shall comply with the time frame guidelines as specified by the NCG-01000 general construction permit effective April 1, 2019 issued by the North Carolina Department of Environmental Quality Division of Water Resources. Temporary or permanent ground stabilization shall occur within 7 calendar days from the last land-disturbing activity, with the following exceptions in which temporary or permanent ground cover shall be provided in 14 calendar days from the last land-disturbing activity:

- Slopes between 2:1 and 3:1, with a slope length of 10 ft. or less
Slopes 3:1 or flatter, with a slope of length of 50 ft. or less
Slopes 4:1 or flatter

The stabilization timeframe for High Quality Water (HQW) Zones shall be 7 calendar days with no exceptions for slope grades or lengths. High Quality Water Zones (HQW) Zones are defined by North Carolina Administrative Code 15A NCAC 06A.0105 (25). Temporary and permanent ground cover stabilization shall be achieved in accordance with the provisions in this contract and as directed.

SEEDING AND MULCHING: (cont)

The kinds of seed and fertilizer, and the rates of application of seed, fertilizer, and limestone, shall be as stated below. During periods of overlapping dates, the kind of seed to be used shall be determined. All rates are in pounds per acre.

All Roadway Areas

Table with 2 columns: Date (March 1 - August 31, September 1 - February 28) and Seed/Fertilizer/Limestone types and rates.

Waste and Borrow Locations

Table with 2 columns: Date (March 1 - August 31, September 1 - February 28) and Seed/Fertilizer/Limestone types and rates.

Note: 50# of Bahagrass may be substituted for either Centipede or Bermudagrass only upon Engineer's request.

Approved Tall Fescue Cultivars

Table listing various cultivars such as 06 Dust, Essential, Kitty Hawk 2000, etc., with corresponding seed and fertilizer rates.

EROSION CONTROL NOTES:

- See Plan & Profile sheets (Sheets C3.1 through C3.2), for erosion control plan and area specific notes.
All disturbed areas shall be prepped and seeded in accordance with Section 1660 of the NCDOT Standard Specifications.
See sheet C2.2 for Erosion Control Details.
Any area disturbances by contractor not shown on the construction drawings are to be permitted through the appropriate permitting agency.
Adequate erosion control measures must be installed, maintained, and adjusted as needed during the demolition or clearing and grubbing phases as well as throughout the life of the project and until permanent vegetation is established.

Self-Inspection:

Notification of the Division of Energy, Mining and Land Resources (DEMLR) Sediment and Erosion Control Self-Inspection Program:

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. 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 must be conducted after each phase of the project, and continued until permanent ground cover is established in accordance with NCGS 113a-54.1 and 15a NCAC 4B.0101.

The self-inspection report form is available from: https://doe.nc.gov/about/divisions/energy-mineral-land-resources/erosion-sediment-control/forms

If you have questions or cannot access the form, please contact DEMLR Washington Regional Office at (252)946-6481.

CONSTRUCTION SEQUENCE

- Obtain plan approval and Land Disturbing Permit.
Schedule and hold preconstruction conference at least one week prior to beginning construction.
See Plan & Profile Sheets C3.1 through C3.2 for Erosion Control Plan and Sheet C2.2 for Erosion Control Details.
Install Temporary Silt Fence along right of way adjacent to existing multi-use trail to remain or proposed multi-use trail to be replaced (See Plan & Profile Sheets C3.1 through C3.2).
The contractor is responsible for the design and execution of a dewatering plan. All discharge from any dewatering activities shall made through approved sediment filter bags, in a manner to prevent damage to property or discharge onto or across streets or roads.
Working in a linear manner, excavate, install, and backfill infiltration trench and install inlets as shown on the plan.
As work progresses, remove and replace driveways as indicated on the plan.
Install sod, or seed and mulch areas as they are brought to finished grade in accordance with schedule on this sheet.
Install and maintain Inlet Protection Devices at all inlets.
As infiltration trench and driveway construction progresses, install Temporary Silt Fence along the edge of pavement.
Inspect all erosion and sediment control devices weekly and after each rainfall event. Remove accumulated sediment when devices reach capacity and repair any damaged immediately.
When all areas have been brought to finished grade and stabilized, call for inspection.
When site is approved, remove all temporary sediment and erosion control devices and stabilize any resulting disturbed areas.

Disturbed Area:

Area 12 79,440 SF 1.8 Acres



Know what's below. Call before you dig.

FINAL DRAWINGS - RELEASED FOR CONSTRUCTION

PART III SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION C: REPORTING

1. Occurrences That Must be Reported

- Permittees shall report the following occurrences:
(a) Visible sediment deposition in a stream or wetland.
(b) Oil spills if:
- They are 25 gallons or more,
- They are less than 25 gallons but cannot be cleaned up within 24 hours,
- They cause sheen on surface waters (regardless of volume), or
- They are within 100 feet of surface waters (regardless of volume).
(c) Releases of hazardous substances in excess of reportable quantities under Section 311 of the Clean Water Act (Ref: 40 CFR 110.3 and 40 CFR 117.3) or Section 102 of CERCLA (Ref: 40 CFR 302.4) or G.S. 143-215.85.
(d) Anticipated bypasses and unanticipated bypasses.

2. Reporting Timeframes and Other Requirements

After a permittee becomes aware of an occurrence that must be reported, he shall contact the appropriate Division regional office within the timeframes and in accordance with the other requirements listed below. Occurrences outside normal business hours may also be reported to the Department's Environmental Emergency Center personnel at (800) 858-0368.

PART III SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION B: RECORDKEEPING

1. E&SC Plan Documentation

The approved E&SC plan as well as any approved deviation shall be kept on the site. The approved E&SC plan must be kept up-to-date throughout the coverage under this permit. The following items pertaining to the E&SC plan shall be kept on site and available for inspection at all times during normal business hours.

2. Additional Documentation to be Kept on Site

In addition to the E&SC plan documents above, the following items shall be kept on the site and available for inspectors at all times during normal business hours, unless the Division provides a site-specific exemption based on unique site conditions that make this requirement not practical:

- (a) This General Permit as well as the Certificate of Coverage, after it is received.
(b) Records of inspections made during the previous twelve months. The permittee shall record the required observations on the Inspection Record Form provided by the Division or a similar inspection form that includes all the required elements. Use of electronically-available records in lieu of the required paper copies will be allowed if shown to provide equal access and utility as the hard-copy records.

3. Documentation to be Retained for Three Years

All data used to complete the e-NOI and all inspection records shall be maintained for a period of three years after project completion and made available upon request. [40 CFR 122.41]

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 is 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.

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

PART II, SECTION G, 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:

- (a) The E&SC 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&SC plan authority has approved these items,
(b) 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,
(c) 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 sited, designed and maintained dewatering tanks, wait tanks, and filtration systems,
(d) Vegetated, upland areas of the sites 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,
(e) Velocity dissipation devices such as check dams, sediment traps, and riprap are provided at the discharge points of all dewatering devices, and
(f) 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

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

Table with 3 columns: Site Area Description, Stabilize within this many calendar days after ceasing land disturbance, Timeframe variations.

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.

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.

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 onsite.

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.

CONCRETE WASHOUTS

- Do not discharge concrete or cement slurry from the site.
Dispose of, or recycle settled, hardened concrete residue in accordance with local and state solid waste regulations and at an approved facility.
Manage washout from mortar mixers in accordance with the above item and in addition place the mixer and associated materials on impervious barrier and within lot perimeter silt fence.
Install temporary concrete washouts per local requirements, where applicable. If an alternate method or product is to be used, contact your approval authority for review and approval. If local standard details are not available, use one of the two types of temporary concrete washouts provided on this detail.
Locate washouts at least 50 feet from storm drain inlets and surface waters unless it can be shown that no other alternatives are reasonably available. At a minimum, install protection of storm drain inlet(s) closest to the washout which could receive spills or overflow.
Locate washouts in an easily accessible area, on level ground and install a stone entrance pad in front of the washout. Additional controls may be required by the approving authority.
Install at least one sign directing concrete trucks to the washout within the project limits. Post signage on the washout itself to identify this location.
Remove leavings from the washout when at approximately 75% capacity to limit overflow events. Replace the tarp, sand bags or other temporary structural components when no longer functional. When utilizing alternative or proprietary products, follow manufacturer's instructions.
At the completion of the concrete work, remove remaining leavings and dispose of in an approved disposal facility. Fill pit, if applicable, and stabilize any disturbance caused by removal of washout.
See detail this sheet.

NCG01 GROUND STABILIZATION AND MATERIALS HANDLING

EFFECTIVE: 04/01/19



McADAMS

The John R. McAdams Company, Inc.
621 Hillsborough Street
Suite 500
Raleigh, NC 27603
phone 919. 361. 5000
fax 919. 361. 2269
license number: C-0293, C-187

www.mcadamsco.com

CLIENT

TOWN OF NAGS HEAD
POST OFFICE BOX 99
NAGS HEAD, NC 27959
PHONE: 252.441.5580



**SOOIR STORMWATER
INFRASTRUCTURE
IMPROVEMENTS
CONSTRUCTION DRAWINGS
PROJECT AREA 12
NAGS HEAD, NC, 27959**



2/10/2025

REVISIONS

NO. DATE

PLAN INFORMATION

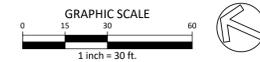
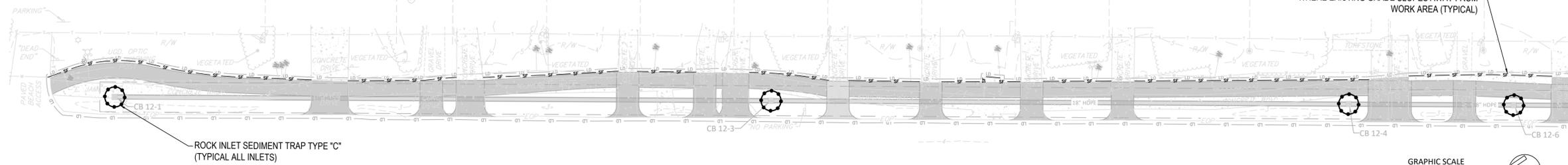
PROJECT NO. SRP-SW-ARP-0019.2
FILENAME TNH22001_17-EC
CHECKED BY HCF
DRAWN BY JWS
SCALE AS NOTED
DATE 1/29/25

SHEET

EROSION CONTROL (SOOIR)

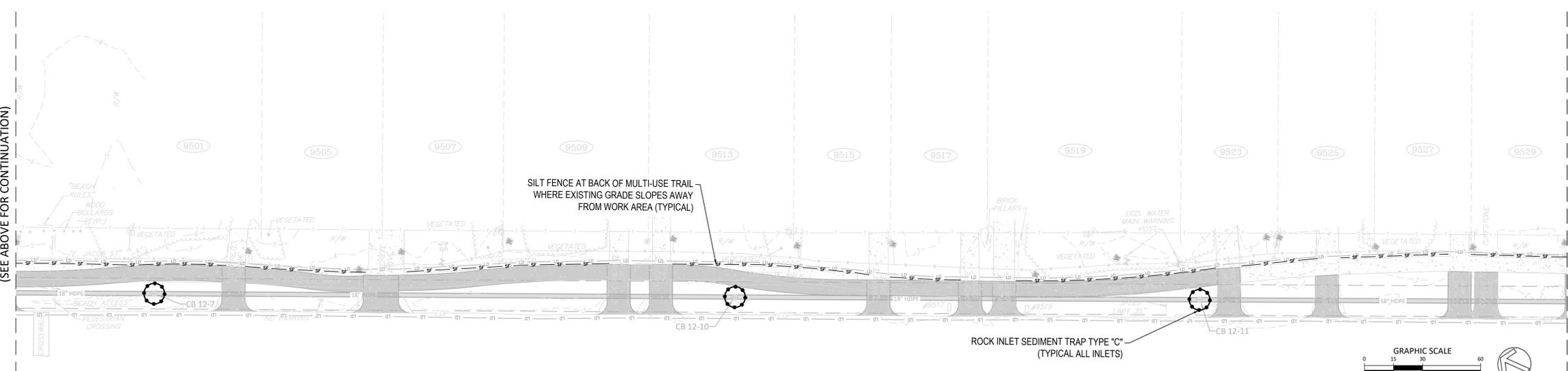
C3.1

FINAL DRAWINGS - RELEASED FOR CONSTRUCTION



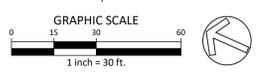
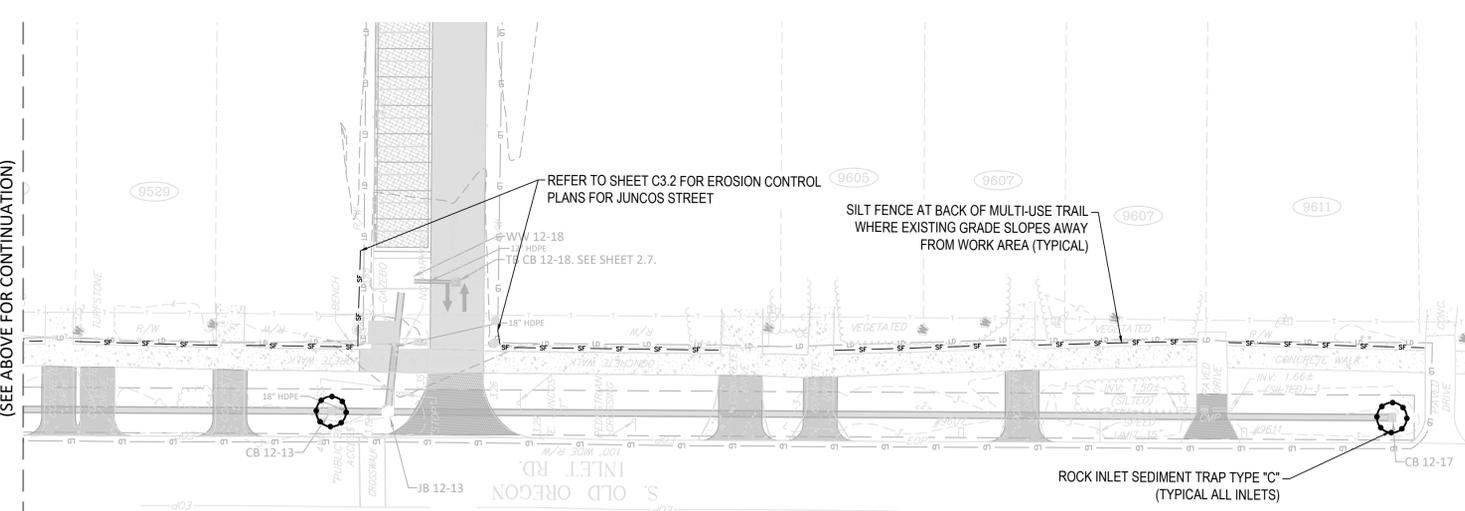
MATCHLINE STATION 19+00
(SEE ABOVE FOR CONTINUATION)

MATCHLINE STATION 19+00
(SEE BELOW FOR CONTINUATION)



MATCHLINE STATION 27+00
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The John R. McAdams Company, Inc.
621 Hillsborough Street
Suite 500
Raleigh, NC 27603
phone 919. 361. 5000
fax 919. 361. 2269
license number: C-0293, C-187

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CLIENT

TOWN OF NAGS HEAD
POST OFFICE BOX 99
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PHONE: 252.441.5580



SOIOR STORMWATER INFRASTRUCTURE IMPROVEMENTS CONSTRUCTION DRAWINGS PROJECT AREA 12 NAGS HEAD, NC, 27959



2/10/2025

REVISIONS

NO. DATE

PLAN INFORMATION

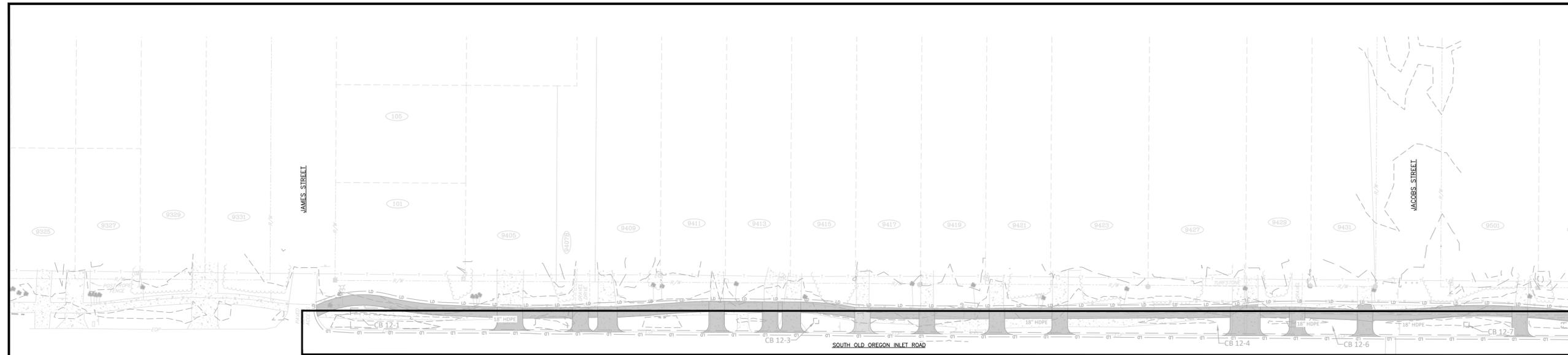
PROJECT NO. SRP-SW-ARP-0019.2
FILENAME TNH22001_17-TC
CHECKED BY HCF
DRAWN BY JWS
SCALE AS NOTED
DATE 1/29/25

SHEET

TRAFFIC CONTROL PLAN

C4.0

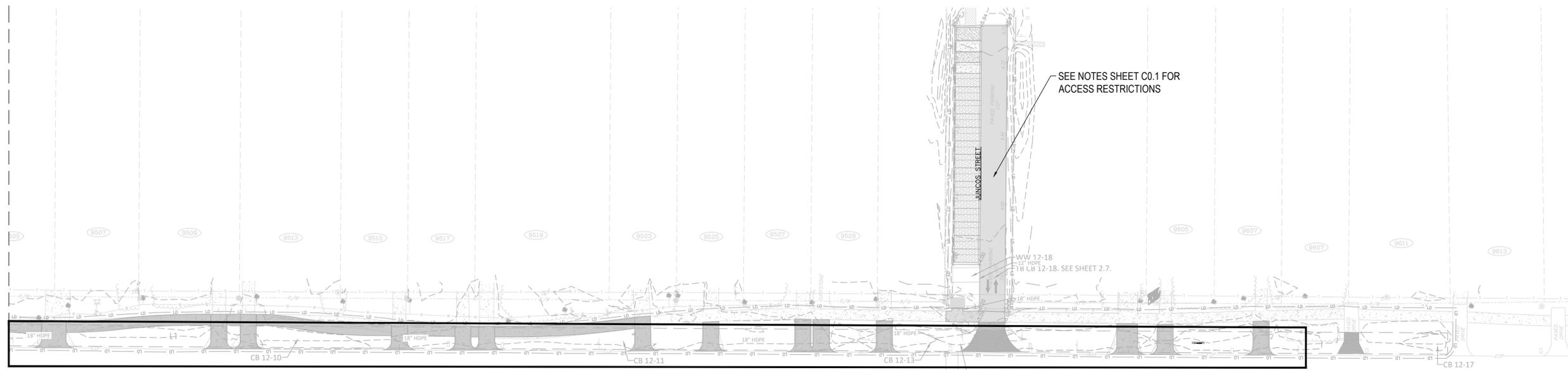
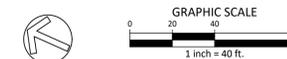
FINAL DRAWINGS - RELEASED FOR CONSTRUCTION



MATCHLINE STATION 20+50
(SEE BELOW FOR CONTINUATION)

APPROXIMATE WORK ZONE AREA
SEE TRAFFIC CONTROL NOTES BELOW

PROJECT AREA 12



MATCHLINE STATION 20+50
(SEE ABOVE FOR CONTINUATION)

APPROXIMATE WORK ZONE AREA
SEE TRAFFIC CONTROL NOTES BELOW

PROJECT AREA 12



NOTES:

1. WORK ZONE SIGNS PER NCDOT STANDARD DETAIL 1101.02 SHEET 1 OF 14 REQUIRED.
2. CONTRACTOR SHALL CLOSE ROADWAY SHOULDER IN ACCORDANCE WITH NCDOT STANDARD DETAIL 1101.04 SHEET 1 IN CONSTRUCTION AREA DAILY.
3. CONSTRUCTION SHALL CLOSE 1 LANE PER NCDOT STANDARD DETAIL 1101.02 SHEET 1 OF 14 TO INSTALL CROSS PIPES. APPROPRIATE TRAFFIC CONTROL MEASURES, INCLUDING FLAGGING, SHALL BE USED TO MAINTAIN TRAFFIC FLOW DURING CONSTRUCTION. SEE NCDOT STANDARD DETAIL 1150.01.
4. ALL TRENCHES SHALL BE FILLED AT THE END OF CONSTRUCTION EACH DAY.



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621 Hillsborough Street
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2/10/2025

REVISIONS

NO. DATE

PLAN INFORMATION

PROJECT NO. SRP-SW-ARP-0019.2
FILENAME TNH22001_17-TC1
CHECKED BY HCF
DRAWN BY JWS
SCALE AS NOTED
DATE 1/29/25

SHEET

TRAFFIC CONTROL NOTES

C4.1

FINAL DRAWINGS - RELEASED FOR CONSTRUCTION

TRAFFIC CONTROL PHASING:

THE CONTRACTOR SHALL FOLLOW THE CONSTRUCTION PROCEDURE FOR MAINTENANCE OF TRAFFIC AS SHOWN IN THE TRAFFIC CONTROL PLAN. THE CONTRACTOR SHALL COMPLETE THE REQUIREMENTS OF EACH CONSTRUCTION PHASE IN SEQUENCE. WHEN A CONSTRUCTION PHASE IS DIVIDED INTO STEPS THE CONTRACTOR SHALL COMPLETE THE REQUIREMENTS OF EACH STEP IN SEQUENCE (EXAMPLE: THE REQUIREMENTS OF PHASE I SHALL BE COMPLETED BEFORE PROCEEDING TO PHASE II; THE REQUIREMENTS FOR STEP 1 OF PHASE I SHALL BE COMPLETED BEFORE PROCEEDING TO STEP 2 OF PHASE I). WHEN A DESIGNATION TO BEGIN CERTAIN WORK HAS BEEN MADE IN THE PHASING, THE CONTRACTOR WILL HAVE MET THE REQUIREMENTS ONCE THE WORK IS BEGUN AND MAY CONTINUE TO OTHER STEPS OR PHASES AS REQUIRED. WHEN A DESIGNATION TO COMPLETE CERTAIN WORK HAS BEEN MADE, THE CONTRACTOR MAY PROCEED TO OTHER STEPS OR PHASES AS REQUIRED ONLY ONCE THE DESCRIBED WORK IS COMPLETED. ALL WORK DESCRIBED IN THE PROJECT PHASING SHALL BE PERFORMED BY THE CONTRACTOR EXCEPT WHERE IT IS SPECIFIED FOR CERTAIN WORK TO BE PERFORMED BY OTHERS.

PAVEMENT MARKINGS AND MARKERS

1. THE CONTRACTOR SHALL REINSTALL THERMOPLASTIC PAVEMENT MARKINGS AND RAISED REFLECTIVE PAVEMENT MARKERS ON THE FINAL SURFACE IN PAVEMENT REPAIR AREAS AS NEEDED. THE CONTRACTOR SHALL CONTACT THE NCDOT AND/OR THE TOWN OF NAGS HEAD, AS APPLICABLE, A MINIMUM OF 48 HOURS PRIOR TO THE COMPLETION OF ANY PREMARKING FOR FINAL PAVEMENT MARKINGS TO ARRANGE FOR AN INSPECTION OF THE PROPOSED MARKING ALIGNMENT.
2. TEMPORARY PAVEMENT MARKINGS, IF NEEDED, SHALL BE INSTALLED AND MAINTAINED BY THE CONTRACTOR DURING THE COURSE OF CONSTRUCTION, UNTIL PERMANENT MARKINGS ARE COMPLETE, AT NO EXPENSE TO THE OWNER.
3. THE CONTRACTOR SHALL ADJUST PROPOSED PAVEMENT MARKING LINES AS NEEDED TO MEET EXISTING PAVEMENT MARKING LINES.

TRAFFIC CONTROL SEQUENCE:

INGRESS AND EGRESS SHALL BE MAINTAINED TO ALL PROPERTIES ALONG THE PROJECT AT THE END OF EVERY WORK DAY. RESIDENTS SHALL BE CONTACTED A MINIMUM OF 24 HOURS PRIOR TO WORK BEGINNING THAT WILL INTERRUPT DRIVEWAY ACCESS DURING THE DAY.

THE FOLLOWING STREETS SHALL BE CLOSED USING NCDOT STANDARD DRAWING 1101.03, TEMPORARY ROAD CLOSURES:

THE FOLLOWING AREAS SHALL BE CLOSED AS NEEDED USING NCDOT STANDARD DRAWING 1101.02, TEMPORARY LANE CLOSURES, AND 1101.04, TEMPORARY SHOULDER CLOSURES:

SOUTH OLD OREGON INLET ROAD - PROJECT AREA #12:

USING NCDOT STANDARD DRAWING 1101.02, TEMPORARY LANE CLOSURES, AND 1101.04, TEMPORARY SHOULDER CLOSURES, THE CONTRACTOR SHALL WORK IN A CONTINUOUS MANNER TO CONSTRUCT THE PROPOSED INFILTRATION TRENCHES AND PIPE CROSSINGS ALONG SOUTH OLD OREGON INLET ROAD.

PROJECT SCHEDULING:

1. IMPROVEMENTS WITHIN THE SOUTH OLD OREGON INLET ROAD (SOOIR) RIGHT OF WAY: WORK ALONG SOOIR INCLUDING BUT NOT LIMITED TO TRAFFIC CONTROL, DEMOLITION, EROSION CONTROL, UTILITY RELOCATION, HOPE PIPE INSTALLATION, INLET INSTALLATION, GRADING, AND STABILIZATION MAY BE PERFORMED STARTING ON OR AFTER SEPTEMBER 15, 2025, AND IS EXPECTED TO BE COMPLETED ON OR BEFORE MAY 15, 2026.
 2. IMPROVEMENTS AT JUNCOS STREET INCLUDING BUT NOT LIMITED TO TRAFFIC CONTROL, DEMOLITION, EROSION CONTROL, UTILITY RELOCATION, GAZEBO REMOVAL (AND STORAGE), WET WELL INSTALLATION, DUNE INFILTRATION CONSTRUCTION, WALKWAY RECONSTRUCTION, AND STABILIZATION MAY BE PERFORMED STARTING ON OR AFTER DECEMBER 15, 2025 AND IS EXPECTED TO BE SUBSTANTIALLY COMPLETED ON OR BEFORE MAY 15, 2026. DURING THIS TIME THE CONTRACTOR SHALL MAINTAIN VEHICULAR BEACH ACCESS TO THE OCEANFRONT AS NOTED BELOW.
 3. THE JUNCOS STREET BEACH ACCESS SHALL REMAIN ACCESSIBLE BY ALL PERMITTED VEHICLES FROM SEPTEMBER 15, 2025 THROUGH JANUARY 4, 2026. PARKING MAY BE REDUCED IF APPROVED IN WRITING BY THE TOWN. ADDITIONALLY, THE CONTRACTOR SHALL NOT DISRUPT EMERGENCY VEHICULAR ACCESS TO THE OCEANFRONT VIA THE VEHICULAR BEACH ACCESS FOR MORE THAN 14 TOTAL CALENDAR DAYS OR MORE THAN 10 CONSECUTIVE CALENDAR DAYS DURING THE DURATION OF THIS CONTRACT. THE CONTRACTOR SHALL NOTIFY THE TOWN, IN WRITING, AT LEAST 14 CALENDAR DAYS PRIOR TO ANY CLOSURE OF THE VEHICULAR BEACH ACCESS THAT WOULD PREVENT EMERGENCY VEHICLES FROM ACCESSING THE OCEANFRONT VIA JUNCOS STREET.
 4. THE JUNCOS STREET BEACH ACCESS SHALL REMAIN ACCESSIBLE BY ALL PERMITTED VEHICLES FROM SEPTEMBER 15, 2025 THROUGH DECEMBER 15, 2025. FROM DECEMBER 15, 2025 TO MAY 15, 2026, THE CONTRACTOR MAY PROHIBIT PARKING IN THE JUNCOS STREET LOT AND PEDESTRIAN BEACH ACCESS, BUT SHALL NOT DISRUPT EMERGENCY VEHICULAR ACCESS TO THE OCEANFRONT VIA THE VEHICULAR BEACH ACCESS FOR MORE THAN 14 TOTAL CALENDAR DAYS OR MORE THAN 10 CONSECUTIVE CALENDAR DAYS.
- 4.1. PARKING, PEDESTRIAN ACCESS, AND VEHICULAR BEACH ACCESS SHALL BE FULLY RESTORED AND OPEN TO THE PUBLIC ON OR BEFORE MAY 15, 2026.
 - 4.2. THE CONTRACTOR SHALL NOTIFY THE TOWN, IN WRITING, AT LEAST 14 CALENDAR DAYS PRIOR TO ANY CLOSURE OF THE VEHICULAR BEACH ACCESS THAT WOULD PREVENT EMERGENCY VEHICLES FROM ACCESSING THE OCEANFRONT VIA JUNCOS STREET.
 5. EXCEPT AS NOTED ABOVE, CONSTRUCTION ACTIVITY AT JUNCOS STREET THAT WILL NOT OCCUPY MORE THAN 2 PARKING SPACES OR DISRUPT VEHICULAR BEACH ACCESS TO THE OCEANFRONT MAY BE PERMISSIBLE AT ALL TIMES DURING THIS CONTRACT WITH WRITTEN TOWN APPROVAL. THE CONTRACTOR IS REQUIRED TO REQUEST THIS ALLOWANCE FROM THE TOWN, IN WRITING, AT LEAST 14 CALENDAR DAYS IN ADVANCE OF COMMENCING ANY SUCH ACTIVITY.

TRAFFIC CONTROL GENERAL NOTES:

THE FOLLOWING GENERAL NOTES SHALL APPLY AT ALL TIMES FOR THE DURATION OF THE CONSTRUCTION PROJECT, EXCEPT WHEN OTHERWISE NOTED IN THE PLAN, OR DIRECTED BY THE ENGINEER PER THE ENCROACHMENT AGREEMENT LOCATED ON THE PROJECT SPECIFICATIONS.

- A. THE TRAFFIC CONTROL PLANS FOR THIS PROJECT CONSIST OF DETAIL DRAWINGS, STANDARD DETAIL DRAWINGS, AND NORTH CAROLINA DEPARTMENT OF TRANSPORTATION (NCDOT) ROADWAY STANDARD DRAWINGS SHOWING TRAFFIC CONTROL DEVICES TO BE USED WHERE VARIOUS TYPES OF CONSTRUCTION ACTIVITIES ARE OCCURRING ON THE PROJECT. THESE DRAWINGS ARE FOR TYPICAL SITUATIONS AND SHOULD BE ADAPTED TO THE ACTUAL FIELD CONDITIONS, SUCH AS WHEN PHYSICAL DIMENSIONS ARE NOT ATTAINABLE, OR WHEN MORE THAN ONE DRAWING IS APPLIED SIMULTANEOUSLY RESULTING IN DUPLICATE SIGNING, OR UNDESIRED OVERLAPPING OF DEVICES. WHEN THESE SITUATIONS ARISE, THE CONTRACTOR AT THE DIRECTION OF THE ENGINEER SHALL BE RESPONSIBLE FOR ADAPTING THE TRAFFIC CONTROL PLAN TO FIELD CONDITIONS TO PROVIDE SAFE AND EFFICIENT TRAFFIC MOVEMENT. MODIFICATIONS MAY INCLUDE: MOVING, SUPPLEMENTING, COVERING, OR REMOVAL OF DEVICES.
- B. INGRESS AND EGRESS SHALL BE MAINTAINED TO ALL PROPERTIES ALONG THE PROJECT AT ALL TIMES. SPECIAL ATTENTION SHALL BE PAID TO FIRE HYDRANTS SO THAT ACCESS TO THE HYDRANTS ARE NOT OBSTRUCTED.
- C. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRAFFIC CONTROL AND SHALL ADHERE TO THE PROVISIONS OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) (MOST CURRENT EDITION).
- D. TRAFFIC CONTROL DEVICES MUST BE IN PLACE AT ALL TIMES DURING CONSTRUCTION.

PEDESTRIAN TEMPORARY DETOURS AND DIVERSION NOTES:

- E. CONTRACTOR SHALL PROVIDE FOR THE SAFE PASSAGE OF PEDESTRIANS THROUGH THE CONSTRUCTION SITE WHEN IT IS NECESSARY TO CLOSE THE EXISTING SIDEWALK.
- F. WHEN SIDEWALKS, CROSSWALKS OR OTHER PEDESTRIAN PATHWAYS ARE CLOSED TEMPORARY FACILITIES SHALL BE CLEARLY MARKED AND INCLUDE ACCESSIBILITY FEATURES CONSISTENT WITH THE FEATURES PRESENT IN THE EXISTING PEDESTRIAN FACILITIES.
- G. TEMPORARY PEDESTRIAN PATHWAYS SHALL BE A FIRM STABLE, SLIP RESISTANCE SURFACE. THE PATHWAY SHALL BE CONSTRUCTED OF CONCRETE, ASPHALT OR NON SLIP STEEL PLATE. GRANULAR SURFACE FOR SHORT TERM TEMPORARY PEDESTRIAN PATHWAY IS ACCEPTABLE.
- H. DIFFERENCES IN PATHWAY LEVELS SHALL NOT EXCEED 1/2-INCH. CHANGES IN LEVELS UP TO 1/4-INCH MAY BE VERTICAL AND WITHOUT EDGE TREATMENT. LEVEL CHANGES BETWEEN 1/4-INCH TO 1/2-INCH SHALL BE BEVELED AT 1:2 MINIMUM. THE BEVEL SHALL BE APPLIED ACROSS THE ENTIRE LEVEL CHANGE. LEVEL CHANGES GREATER THAN 1/2-INCH SHALL BE ACCOMPLISHED BY MEANS OF A 12:1 MAX RAMP OR IN ACCORDANCE WITH THE TOWN OF NAGS HEAD STANDARDS.
- I. WHERE PEDESTRIAN PATHWAYS ARE EXPOSED TO ADJACENT CONSTRUCTION, EXCAVATION DROP-OFFS, TRAFFIC OR OTHER HAZARDS, IT SHALL BE PROTECTED WITH A PEDESTRIAN BARRICADE OR CHANNELIZING DEVICES.
- J. PEDESTRIANS ROUTED INTO NORMAL AUTOMOBILE TRAFFIC LANES SHALL BE PROTECTED FROM TRAFFIC USING PEDESTRIAN BARRICADES OR CHANNELIZING DEVICES.
- K. PEDESTRIAN BARRICADES OR CHANNELIZING DEVICES SHALL BE CONTINUOUS, IMMOVABLE, STABLE, RIGID, AND VISIBLE BARRIER THAT IS FREE OF SPLINTERED, JAGGED, AND SHARP SURFACES AND EDGES. CAUTION TAPES, CONES, DRUMS, SAWHORSES, AND A-FRAMES ARE NOT CONSIDERED EFFECTIVE SUBSTITUTIONS FOR THIS PURPOSE.
- L. DURING WORKING HOURS, AT LEAST ONE WORKER SHALL BE ASSIGNED THE RESPONSIBILITY TO ESCORT ELDERLY, DISABLED OR ANY PEDESTRIAN IN NEED OF ASSISTANCE THROUGH THE CONSTRUCTION SITE. THE WORKER ASSIGNED THIS RESPONSIBILITY MAY ALSO PARTICIPATE IN OTHER CONSTRUCTION ACTIVITIES HOWEVER, THE ASSIGNED WORKER SHALL BE AWARE OF HIS OR HER RESPONSIBILITY FOR PROVIDING PEDESTRIAN ASSISTANCE.
- M. PEDESTRIAN PATHWAYS SHALL BE REESTABLISHED AT THE END OF EACH WORK DAY OPERATIONS AND DURING CONSTRUCTION INACTIVITY, UNLESS OTHERWISE INDICATED IN THE PHASING PLAN.
- N. CONTRACTOR TO MAINTAIN ACCESS TO TRANSIT STOPS FOR BOTH PEDESTRIANS AND BUSES.

TIME RESTRICTIONS

- O. ANY NIGHT WORK PERFORMED BY THE CONTRACTOR SHALL BE LIGHTED IN ACCORDANCE WITH NCDOT AND MUTCD STANDARDS. ALL NIGHT WORK MUST MEET THE REQUIREMENTS OF LOCAL ORDINANCES.

LANE CLOSURE REQUIREMENTS

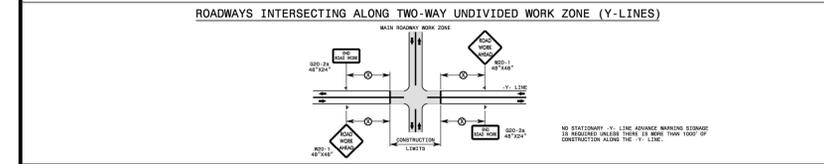
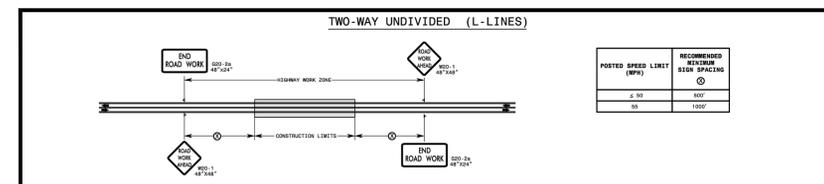
- P. LANE CLOSURES SHALL BE REMOVED AS SOON AS PRACTICAL AFTER WORK BEHIND THE CLOSURE IS COMPLETED OR WHEN A LANE CLOSURE IS NO LONGER NEEDED.
- Q. THE CONTRACTOR SHALL CLOSE THE OPEN TRAVEL LANE ADJACENT TO WORK AREA WHEN PERSONNEL OR EQUIPMENT ARE WORKING WITHIN 10 FEET OF AN OPEN TRAVEL LANE. USE ROADWAY STANDARD NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY GUARDRAIL OR BARRIER.
- R. CONTRACTOR SHALL MAINTAIN EXISTING TRAFFIC PATTERNS AND LANE CONFIGURATIONS AT THE END OF EACH DAYS OPERATION AND DURING CONSTRUCTION INACTIVITY, EXCEPT AS OTHERWISE INDICATED IN THE PHASING PLAN.
- S. CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL FOR APPROPRIATE LANE CLOSURES FOR SURVEYING PERFORMED BY THE OWNER OR OWNER'S REPRESENTATIVE.

PAVEMENT EDGE DROP OFF REQUIREMENTS

- T. THE MAXIMUM DIFFERENCE IN ELEVATION BETWEEN OPEN TRAVEL LANES SHALL BE 1.5 INCHES.
- U. THE CONTRACTOR SHALL BACKFILL AT A 6:1 SLOPE TO THE EDGE AND ELEVATION OF EXISTING PAVEMENT IN THE AREAS ADJACENT TO AN OPEN TRAVEL LANE THAT HAS A DROP OFF THAT EXCEEDS 2-INCHES. WHEN THE BASE COURSE HAS NOT BEEN PLACED AND BACKFILL IS REQUIRED, THE CONTRACTOR SHALL BACKFILL WITH COMPACTED MATERIAL, AS APPROVED BY THE ENGINEER, AT NO EXPENSE TO THE OWNER. WHEN THE BASE COURSE HAS BEEN PLACED AND BACKFILL IS REQUIRED, THE CONTRACTOR SHALL BACKFILL WITH ABC AT NO EXPENSE TO THE OWNER.

SIGNING

- V. EXISTING TRAFFIC SIGNAGE SHALL BE MOVED OR OTHERWISE MAINTAINED BY THE CONTRACTOR AS APPROPRIATE DURING CONSTRUCTION.
- W. ALL NECESSARY TRAFFIC CONTROL SIGNING SHALL BE IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.
- X. WHEN LANE CLOSURES ARE NOT IN EFFECT, CHANNELIZING DEVICES IN WORK AREAS SHALL BE SPACED NO GREATER THAN TWICE THE POSTED SPEED LIMIT, EXCEPT 10-FEET ON CENTER IN RADII, AND SHALL BE SET 3' OFF THE EDGE OF AN OPEN TRAVEL WAY.

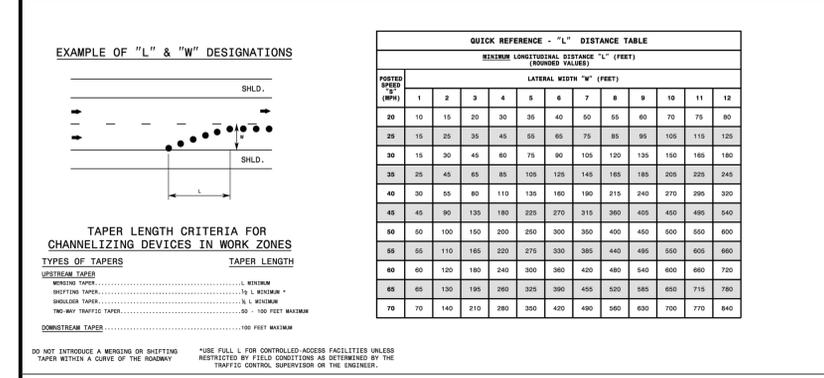


GENERAL NOTES

- DO NOT INSTALL ADVANCE WARNING SIGNS MORE THAN 3 DAYS PRIOR TO BEGINNING OF WORK UNLESS COVERED.
- SIGNS SHOWN ARE REQUIRED FOR WORK ZONES THAT WILL REMAIN IN EFFECT LONGER THAN 72 CONSECUTIVE HOURS.
- ALL SIGN SPACING DIMENSIONS ARE APPROXIMATE. FIELD ADJUST AS NECESSARY OR AS DIRECTED.
- ERECT SIGNS PER RSD 1110.01. PAYMENT FOR WOOD POSTS, 3/8" STEEL U-CHANNEL AND SQUARE STEEL TUBING POSTS WITH SIGNS WILL BE MADE ACCORDING TO STANDARD SPECIFICATIONS FOR WORK ZONE SIGNS.
- WHEN NECESSARY, USE SPLICING IN ACCORDANCE WITH RSD, 1110.01.
- DO NOT BACK BRACE SIGN SUPPORTS.

LEGEND

- STATIONARY SIGN
- DIRECTION OF TRAFFIC FLOW



QUICK REFERENCE - "L" DISTANCE TABLE

POSTED SPEED (MPH)	MINIMUM LONGITUDINAL DISTANCE "L" (FEET) (ROUNDED VALUES)											
	1	2	3	4	5	6	7	8	9	10	11	12
20	10	15	20	30	35	40	50	55	60	70	75	80
25	15	25	30	45	55	65	75	85	95	105	115	125
30	20	35	45	60	75	90	105	120	135	150	165	180
35	25	45	65	85	105	125	145	165	185	205	225	245
40	30	55	80	110	135	160	190	215	240	270	295	320
45	40	70	100	130	160	190	220	250	280	310	340	370
50	50	85	120	155	190	225	260	295	330	365	400	435
55	60	100	140	180	220	260	300	340	380	420	460	500
60	70	120	165	210	255	300	345	390	435	480	525	570
65	80	140	190	240	290	340	390	440	490	540	590	640
70	90	160	215	270	320	370	420	470	520	570	620	670

GENERAL NOTES

- TABLE FOR "L" DISTANCE IS BASED ON CHANNELIZATION TAPER FORMULA FROM THE MUTCD. WHERE:

SPEED LIMIT **FORMULA**

40 MPH OR LESS $L_{min} = \frac{W \cdot S^2}{60}$

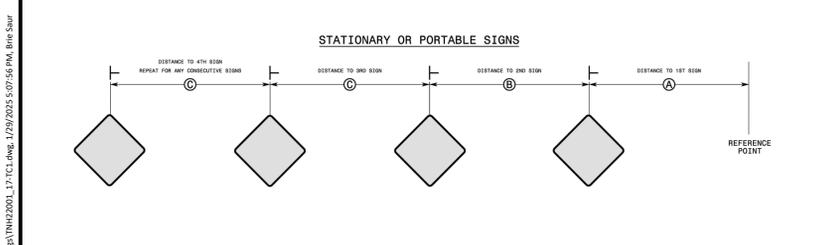
45 MPH OR GREATER $L_{min} = W \cdot S$

L = MINIMUM TAPER LENGTH IN FEET (LONGITUDINAL DISTANCE)
W = WIDTH OF OFFSET IN FEET (LATERAL DISTANCE)
S = EXISTING POSTED SPEED LIMIT PRIOR TO THE IMPLEMENTATION OF A WORK ZONE SPEED LIMIT REDUCTION

- "L" DISTANCE IS FOR APPLICATION WITH CHANNELIZING DEVICE AND PAVEMENT MARKING TAPERS AND TRANSITIONS. CHANNELIZING DEVICES INCLUDE DRUMS, CONES, TUBULAR MARKERS, BARRIERS, RAISED ASPHALT ISLANDS, AND VERTICAL PANELS.

ADVANCE WARNING SIGN SPACING CHART

POSTED SPEED LIMIT (MPH)	RECOMMENDED DISTANCE BETWEEN SIGNS (FEET)
≤ 35	200
40-50	300
55	500
CONTROLLED ACCESS ROAD (C.A.S.)	1000



GENERAL NOTES

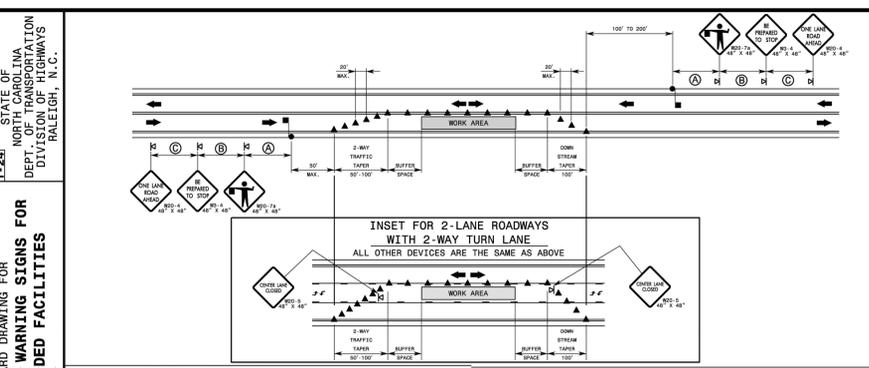
- REFER TO THE LATEST EDITION OF THE MUTCD.
- USE THIS STANDARD DRAWING IN CONJUNCTION WITH OTHER TRAFFIC CONTROL ROADWAY STANDARD DRAWINGS WHERE SIGN SPACING DISTANCES A, B, C, ARE SPECIFIED.
- APPLY THE ADVANCE WARNING SIGN SPACING CHART WHERE A SERIES OF 2 OR MORE SIGNS ARE USED. ALL SIGN SPACING DIMENSIONS ARE APPROXIMATE. FIELD ADJUST AS VARIOUS CONDITIONS OCCUR, SUCH AS LIMITED SIGHT DISTANCE, OBSTRUCTION INTERFERENCE, ETC.

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR WORK ZONE ADVANCE WARNING SIGNS FOR TWO-WAY UNDIVIDED FACILITIES

SHEET 3 OF 3

1101.01



GENERAL NOTES FOR FLAGGING OPERATIONS

- REFER TO RSD, 1101.11, SHEETS 1 & 4, FOR "L" DISTANCE AND SIGN SPACING.
- INSTALL LANE CLOSURES WITH THE TRAFFIC FLOW, BEGINNING WITH DEVICES ON THE UPSTREAM SIDE OF TRAFFIC.
- REMOVE LANE CLOSURES AGAINST THE TRAFFIC FLOW, BEGINNING WITH DEVICES ON THE DOWNSTREAM SIDE OF TRAFFIC.
- FOR POSTED SPEED LIMITS BELOW AS MIN. CHANNELIZING DEVICE SPACING SHALL BE 20 FEET IN THE TAPERS AND THE SHIFTS AND 40 FEET IN THE TANGENTS. FOR POSTED SPEED LIMITS GREATER THAN OR EQUAL TO 45 MPH, CHANNELIZING DEVICES SPACING SHALL BE 40 FEET IN THE TAPERS AND THE SHIFTS AND 80 FEET IN THE TANGENTS.
- EXTEND LANE CLOSURES AT THE BUFFER SPACE SIGN THAT STOPPING SIGHT DISTANCE IS PROVIDED TO THE FLAGGER (REFER TO RSD, 1101.11, SHEET 2).
- DO NOT STOP ALL DIRECTIONS OF TRAFFIC FOR MORE THAN 5 MINUTES AT A TIME.
- DRUMS OR SKINNY DRUMS MAY BE USED IN LIEU OF CONES. REFER TO RSD, 1180.01.
- USE FLAGGERS TO CONTROL TRAFFIC AT INTERSECTIONS AFFECTED BY THE LANE CLOSURE. SIGNALS SHOULD BE SET TO FLASHING RED (OR FLASHING RED/WHITE) SIGNALS ALONG INTERSECTIONS PLACE SIGNALS IN THE FLASH MODE AND USE LAW ENFORCEMENT.
- REFER TO THE CURRENT MUTCD FOR FLAGGER CONTROL, REQUIREMENTS, AND PROCEDURES.
- DO NOT EXCEED A 1 MILE LANE CLOSURE LENGTH UNLESS OTHERWISE SHOWN IN THE TWP OR AS DIRECTED BY THE ENGINEER.

GENERAL NOTES FOR PILOT CAR OPERATIONS

- IF VEHICLE QUEUES WILL REACH WITHIN 100' OF EITHER SIDE OF ACTIVE RAILROAD TRACKS, STOPPING WITHIN THE GRADE CROSSING. PROVIDE OFFICER OR FLAGGER EVEN IF AUTOMATIC WARNING MEASURES ALREADY EXIST.
- THIS DETAIL IS APPLICABLE FOR OPERATIONS IN PLACE FOR 72 HOURS OR LESS. FOR LONGER DURATION OPERATIONS, STAGING AND PAVEMENT MARKINGS MAY NEED TO BE ALTERED.
- USE PILOT CARS WHEN DIRECTED BY THE ENGINEER.
- IF ROADWAY WIDTH IS LESS THAN 25 FEET, (E.P. TO E.P.) CONES MAY NOT BE REQUIRED ALONG WORK AREA IF USING A PILOT CAR.
- CONES ARE ALWAYS REQUIRED IN THE UPSTREAM AND DOWNSTREAM TAPERS.
- MOUNT SIGN (200-A) "PILOT CAR FOLLOW ME" AT A CONSPICUOUS POSITION ON THE REAR OF THE PILOT VEHICLE.
- USERS APPROVED BY THE ENGINEER, DO NOT INSTALL MORE THAN ONE (1) MILE OF LANE CLOSURE, MEASURED FROM THE BEGINNING OF THE MERGE TAPER TO THE END OF THE LANE CLOSURE.
- CONVEY RESIDENTS AND BUSINESSES WITHIN THE LANE CLOSURE LIMITS ABOUT METHODS OF SAFE EGRESS AND CROSSING ALTERNATIVES DURING FLAGGING AND PILOT CAR OPERATIONS.

LEGEND

- FLAGGER
- CONE
- PORTABLE SIGN
- DIRECTION OF TRAFFIC FLOW

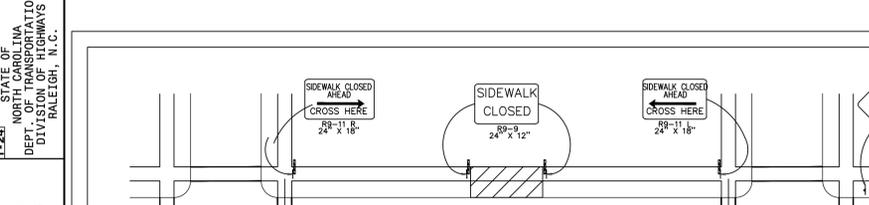
TRAFFIC CONTROL DESIGN TABLES

"L" DISTANCE AND CHANNELIZING DEVICE TAPER CRITERIA

DESIGN SPEED (MPH)	MINIMUM SIGHT DISTANCE STOPPING SIGHT DISTANCE (FEET)	MINIMUM LONGITUDINAL BUFFER SPACE (FEET)
30	200	85
35	250	100
40	300	120
45	360	150
50	420	240
55	490	290
60	570	345
65	645	400
70	730	470
75	820	540
80	910	615

GENERAL NOTES

- TABLES ARE BASED ON THE AASHTO GREEN BOOK "A POLICY ON GEOMETRIC DESIGN OF HIGHWAYS AND STREETS" AND THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES". MINIMUM SIGHT DISTANCE VALUES ARE FOR PASSENGER CAR VEHICLES ON WET AND LEVEL ROADWAYS. CONSULT THE AASHTO GREEN BOOK TO MAKE FINAL DETERMINATION OF STOPPING SIGHT DISTANCE REQUIREMENTS.
- BUFFER SPACE TABLE IS BASED ON THE BRAKING DISTANCE PORTION OF STOPPING SIGHT DISTANCE FOR WET AND LEVEL PAVEMENTS.
- USE OF STOPPING SIGHT DISTANCE IN TRAFFIC CONTROL PLAN APPLICATIONS INCLUDES PROVIDING SIGHT DISTANCE FOR TRAFFIC APPROACHING A LANE CLOSURE. PROVIDE 2-LANE, 2-WAY ROADWAYS STOPPING SIGHT DISTANCE TO THE FLAGGER. FOR LANE CLOSURES ON MULTILANE ROADWAYS PROVIDE STOPPING SIGHT DISTANCE TO THE BEGINNING OF THE LANE CLOSURE MERGE TAPER, OR FLASHING ARROW BOARD. EXTEND LANE CLOSURES AT THE BUFFER SPACE SIGN THAT STOPPING SIGHT DISTANCE IS PROVIDED.



PEDESTRIAN DETOUR

NOTE:

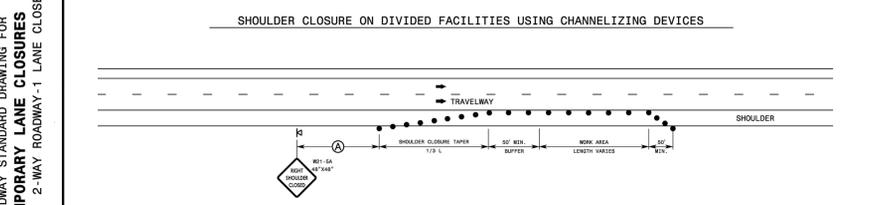
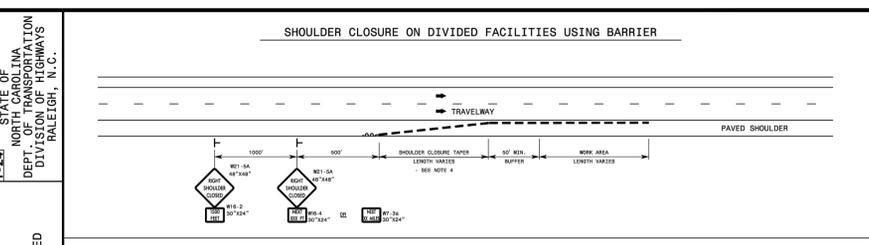
- USE APPROPRIATE TRAFFIC CONTROL MEASURES AS NECESSARY.

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR TRAFFIC CONTROL DESIGN TABLES BUFFER SPACE & SIGHT DISTANCE

SHEET 1 OF 2

1101.02



GENERAL NOTES

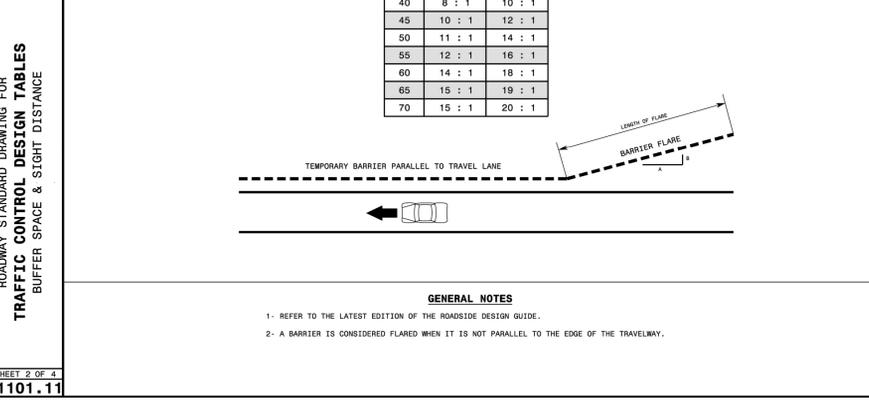
- PLACE SHOULDER CLOSURE SIGNS ON THE SAME SIDE AS THE SHOULDER THAT IS CLOSED.
- PLACE DRUMS IN THE SHOULDER TAPER AT THE MAXIMUM SPACING EQUAL IN FEET TO THE POSTED SPEED LIMIT. THE MAXIMUM SPACING OF DRUMS ALONG THE WORK AREA IS EQUAL IN FEET TO 2 TIMES THE POSTED SPEED LIMIT.
- USE STATIONARY SIGNS FOR OPERATIONS IN EFFECT LONGER THAN 72 HOURS.
- REFER TO RSD, 1101.11, SHEETS 1, 3 & 4, FOR "L" DISTANCE, BARRIER FLARE RATES, AND SIGN SPACING.

LEGEND

- DRUM
- STATIONARY SIGN
- PORTABLE SIGN
- PORTABLE CONCRETE BARRIER
- DIRECTION OF TRAFFIC FLOW
- TEMPORARY CRASH CUSHION

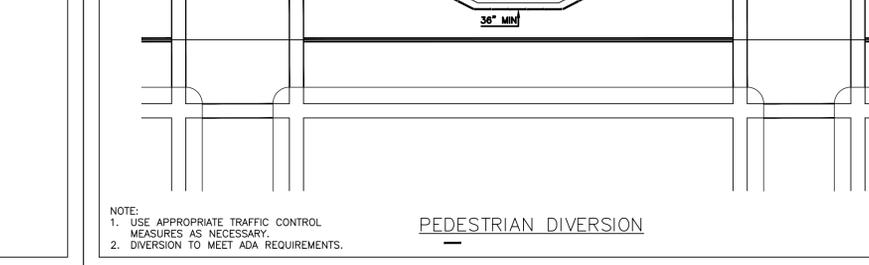
TEMPORARY BARRIER FLARE RATES

POSTED SPEED LIMIT (MPH)	UNANCHORED (A-B)	ANCHORED (A-B)
≤ 30	7 : 1	8 : 1
35	8 : 1	9 : 1
40	8 : 1	10 : 1
45	10 : 1	12 : 1
50	11 : 1	14 : 1
55	12 : 1	16 : 1
60	14 : 1	18 : 1
65	15 : 1	19 : 1
70	15 : 1	20 : 1



GENERAL NOTES

- REFER TO THE LATEST EDITION OF THE ROADSIDE DESIGN GUIDE.
- A BARRIER IS CONSIDERED FLARED WHEN IT IS NOT PARALLEL TO THE EDGE OF THE TRAVELWAY.



PEDESTRIAN DIVERSION

NOTE:

- USE APPROPRIATE TRAFFIC CONTROL MEASURES AS NECESSARY.
- DIVERSION TO MEET ADA REQUIREMENTS.

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR TEMPORARY SHOULDER CLOSURES

SHEET 1 OF 2

1101.04

McADAMS

The John R. McAdams Company, Inc.
621 Hillsborough Street
Suite 500
Raleigh, NC 27603
phone 919. 361. 5000
fax 919. 361. 2269
license number: C-0293, C-187

www.mcadamsco.com

CLIENT

TOWN OF NAGS HEAD
POST OFFICE BOX 99
NAGS HEAD, NC 27959
PHONE: 252.441.5580



SOOIR STORMWATER INFRASTRUCTURE IMPROVEMENTS CONSTRUCTION DRAWINGS PROJECT AREA 12 NAGS HEAD, NC, 27959

2/10/2025

REVISIONS

NO.	DATE

PLAN INFORMATION

PROJECT NO. SRP-SW-ARP-0019.2
FILENAME TNH22001_17-TC1
CHECKED BY HCF
DRAWN BY JWS
SCALE AS NOTED
DATE 1/29/25

SHEET

TRAFFIC CONTROL DETAILS

C4.2



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The John R. McAdams Company, Inc.
Suite 500
621 Hillsborough Street
Raleigh, NC 27603
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SOOIR STORMWATER
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PROJECT AREA 12
NAGS HEAD, NC, 27959



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TRAFFIC CONTROL DETAILS

C4.3

ROADWAY STANDARD DRAWING FOR CONES
28 INCH CONE
36 INCH CONE
GENERAL NOTES
1- ACHIEVE BALLASTING BY USING SPECIAL WEIGHTED BASES SUCH AS SAND BAG RINGS, DOUBLING CONES, OR BASES THAT CAN BE FILLED WITH BALLAST...

ROADWAY STANDARD DRAWING FOR DRUMS
TIRE BALLAST
GENERAL NOTES
1- BALLASTING SHALL BE ACHIEVED BY THE SAND BAG, TIRE-SIDEWALL, OR PREFORMED WEIGHTED BASE METHODS...

ROADWAY STANDARD DRAWING FOR PORTABLE WORK ZONE SIGNS
LATERAL CLEARANCE
MOUNTING HEIGHT DIMENSIONS
GENERAL NOTES
1- DIMENSIONS SHOWN ARE MINIMUM VALUES...

ROADWAY STANDARD DRAWING FOR PAVEMENT MARKINGS
CONTINUOUS LINES
10'-30'/SP SKIP LINE
2'-6'/SP MINI-SKIP LINE
3'-3'/SP MINI-SKIP LINE
3'-9'/SP MINI-SKIP LINE
STOP OR TRANSVERSE BAR
GENERAL NOTES
1- USE 6" LANE, EDGE, AND CENTER LINES ON ALL FULL CONTROL OF ACCESS FACILITIES...

ROADWAY STANDARD DRAWING FOR SKINNY DRUMS
TYPICAL BALLAST
GENERAL NOTES
1- USE BALLAST AS SPECIFIED BY THE MANUFACTURER...

ROADWAY STANDARD DRAWING FOR FLAGGERS
STOP/SLOW PADDLE
FLAGGER AND PADDLE PLACEMENT
GENERAL NOTES
1- USE HAND SIGNALING DEVICES SUCH AS STOP-SLOW PADDLES, FLASHLIGHTS TO CONTROL TRAFFIC...

ROADWAY STANDARD DRAWING FOR PAVEMENT MARKINGS
TWO-LANE, TWO-WAY ROADWAY
SHOULDER
WHITE EDGE LINES
YELLOW SKIP CENTER LINES, PASSING SIDE
YELLOW CENTER LINE, NO PASSING SIDE
DOUBLE YELLOW CENTER LINE (TWO YELLOW CENTER LINES)
PASSING/NO PASSING ZONES WILL BE DETERMINED BY THE ENGINEER.

ROADWAY STANDARD DRAWING FOR PAVEMENT MARKINGS
TWO-LANE AND MULTI-LANE ROADWAYS
SHOULDER
320' TYPICAL SPACING BETWEEN SETS OF ARROW SYMBOLS
SPACING CAN BE INCREASED OR DECREASED AS DETERMINED BY THE ENGINEER
WHITE EDGE LINES
YELLOW SKIP CENTER LINES
YELLOW CENTER LINES
LEGEND
1- EDGE LINES ARE NOT REQUIRED ALONG CURBS AND GUTTER LOCATIONS...

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ELECTRICAL NOTES:

1. GENERAL CONDITIONS:

- A. UNDER THIS SECTION THE CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIAL, EQUIPMENT, APPURTENANCES, SERVICES AND SUPERVISION FOR A COMPLETE ELECTRICAL SYSTEM AS SHOWN ON THE DRAWING. ALL MATERIAL AND EQUIPMENT SHALL BE WORKED INTO A COMPLETE, CONVENIENT, AND ECONOMICAL SYSTEM OR SYSTEMS. ALL APPARATUS, PARTS, MATERIAL, AND ACCESSORIES WHICH ARE NECESSARY TO ACCOMPLISH THIS RESULT SHALL BE PROVIDED. MANUFACTURER'S INSTRUCTIONS, WRITTEN OR OTHERWISE, SHALL BE FOLLOWED, UNLESS SUPERSEDED HERE IN. ALL ITEMS SHOWN ARE NEW AND SHALL BE PROVIDED BY THE CONTRACTOR UNLESS SPECIFICALLY STATED OTHERWISE.
 - B. PROVIDE IS DEFINED TO MEAN THAT THE CONTRACTOR SHALL FURNISH, INSTALL, ADJUST, TEST AND INTEGRATE INTO A COMPLETE SYSTEM THE ITEM INDICATED, INCLUDING ALL HARDWARE WIRING, AND MISCELLANEOUS ITEMS AS NECESSARY FOR A COMPLETE AND OPERATIONAL SYSTEM.
 - C. CONTRACTOR SHALL GIVE REQUIRED NOTICES, OBTAIN NECESSARY PERMITS, AND PAY PERMIT FEES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FEES AND CHARGES FOR TEMPORARY ELECTRICAL POWER DURING CONSTRUCTION AND SHALL PROVIDE A SERVICE NECESSARY FOR CONSTRUCTION TRAILERS AND EQUIPMENT.
 - D. THE DRAWINGS INDICATE DIAGRAMMATICALLY THE EXTENT OF THE WORK. MINOR VARIATIONS IN LOCATION OF EQUIPMENT SHALL BE MADE UPON WRITTEN APPROVAL OF THE ENGINEER AT NO ADDITIONAL CHARGE.
 - E. ALL DIMENSIONS AND ELEVATIONS NOTED ARE ENGLISH UNITS UNLESS OTHERWISE NOTED.
 - F. COOPERATE AND COORDINATE THE WORK OF THIS DIVISION WITH OTHER TRADES.
 - G. THE LATEST EFFECTIVE PUBLICATIONS OF THE FOLLOWING STANDARDS, CODES, ETC. FORM A PART OF THESE SPECIFICATIONS:
 - (1) ALL STATE AND LOCAL BUILDING CODES.
 - (2) SERVICE RULES AND REGULATIONS OF THE LOCAL ELECTRIC UTILITY COMPANY.
 - (3) AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI).
 - (4) ASTM INTERNATIONAL (ASTM).
 - (5) NORTH CAROLINA BUILDING CODE (NCBC).
 - (6) NORTH CAROLINA FIRE PREVENTION CODES (NCFPC).
 - (7) NORTH CAROLINA ENERGY CONSERVATION CODE.
 - (8) INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS (IEEE).
 - (9) NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION (NEMA).
 - (10) NATIONAL FIRE PROTECTION ASSOCIATION (NFPA).
 - (11) NATIONAL ELECTRICAL CODE (NEC).
 - (12) TELECOMMUNICATIONS INDUSTRY ASSOCIATION (TIA).
 - (13) UNDERWRITERS LABORATORIES (UL).
 - H. SUBSTANTIAL COMPLETION: UPON COMPLETION OF THE ENTIRE WORK, THE CONTRACTOR SHALL PERFORM SUCH TESTS AS REQUIRED BY THE ENGINEER. THE ENGINEER SHALL BE GIVEN 48 HOURS NOTICE BEFORE TESTS ARE MADE. THE CONTRACTOR SHALL FURNISH THE ENGINEER A CERTIFICATE OF APPROVAL FROM THE LOCAL INSPECTION AUTHORITY HAVING JURISDICTION.
 - I. IT IS THE RESPONSIBILITY OF THE OWNER TO MAINTAIN THE INTEGRITY OF THE SYSTEMS. CONTRACTOR SHALL PROVIDE OWNER WITH COMPLETE OPERATION AND MAINTENANCE INFORMATION FROM EQUIPMENT MANUFACTURERS.
 - J. COMPLETE SCHEDULES OF MATERIALS AND EQUIPMENT PROPOSED FOR INSTALLATION SHALL BE SUBMITTED TO THE ENGINEER WITHIN 30 DAYS AFTER AWARD OF THE CONTRACT. THE SCHEDULES SHALL INCLUDE CATALOG CUTS, DIAGRAMS AND SUCH OTHER DESCRIPTIVE DATA AND/OR SAMPLES AS MAY BE REQUIRED BY THE ENGINEER.
 - K. SUBMITTALS THAT DO NOT BEAR THE GENERAL CONTRACTOR'S STAMP OF APPROVAL THEREON WILL BE REJECTED WITHOUT REVIEW.
- 2. GENERAL MATERIAL REQUIREMENTS:**
- A. EQUIPMENT AND PRODUCTS TO BE USED SHALL BE REVIEWED AND APPROVED BY OWNER PRIOR TO PLACING ORDER OR PURCHASE.
 - B. ALL MATERIALS AND EQUIPMENT SHALL BE NEW AND SHALL BEAR THE LABEL OF A NATIONALLY RECOGNIZED TESTING AGENCY AND SHALL BE INSTALLED IN THE MANNER FOR WHICH IT IS DESIGNED AND APPROVED.
 - C. ALL MATERIAL, INCLUDING PULL BOXES, CONDUIT BODIES, FITTINGS AND MOUNTING HARDWARE INSTALLED ABOVE GRADE SHALL BE APPROVED WEATHERTIGHT CORROSION RESISTANT (STAINLESS STEEL OR NON-METALLIC), UNLESS NOTED OTHERWISE.
 - D. CONTRACTOR SHALL INSPECT MATERIALS DELIVERED TO SITE FOR DAMAGE. UNLOAD AND STORE WITH MINIMUM HANDLING. STORE MATERIALS ON SITE IN ENCLOSURES OR UNDER PROTECTIVE COVERING. STORE PLASTIC PIPING UNDER COVER OUT OF DIRECT SUNLIGHT. DO NOT STORE MATERIALS DIRECTLY ON THE GROUND. KEEP INSIDE OF CONDUITS, FITTINGS AND EQUIPMENT FREE OF DIRT AND DEBRIS. HANDLE CONDUIT, FITTINGS, AND OTHER ACCESSORIES IN SUCH MANNER AS TO ENSURE DELIVERY TO THE INSTALLATION LOCATION IN A SOUND UNDAMAGED CONDITION.
 - E. STARTERS, CONTROLLERS, THERMOSTATS, FAN SWITCHES, INDICATING LIGHTS, ETC.; AND CONTROL WIRING AND WIRING FOR REMOTE STATIONS REGARDLESS OF VOLTAGE SHALL BE PROVIDED UNDER THE DIVISION PROVIDING THE RESPECTIVE MOTOR AND/OR EQUIPMENT UNLESS OTHERWISE INDICATED.
 - F. SUPPORTS AND HARDWARE SHALL BE GALVANIZED STEEL. SUBMIT SHOP DRAWINGS OR CATALOG DATA FOR REVIEW AND APPROVAL. A DIELECTRIC ISOLATION SHEET SHALL BE PLACED WHERE DISSIMILAR METALS CONTACT ON THE SUPPORT.
 - G. PANELBOARDS, ENCLOSED CIRCUIT BREAKERS AND SAFETY SWITCHES, WHEN APPLICABLE, SHALL BE MANUFACTURED BY THE SAME MANUFACTURER. WIRING DEVICES SHALL BE MANUFACTURED BY ONE MANUFACTURER.
 - H. SUBSTITUTION OF MATERIAL AND EQUIPMENT: THE NAME OF A CERTAIN BRAND, MAKE, MANUFACTURER OR DEFINITE SPECIFICATION IS TO DENOTE THE QUALITY STANDARD OF ARTICLE DESIRED. SUBSTITUTION OF ANY OTHER BRAND, MAKE, OR MANUFACTURER, WHICH IN THE OPINION OF THE ENGINEER IS RECOGNIZED THE EQUAL OF THAT SPECIFIED MAY BE ACCEPTED.
 - I. PROVIDE ENGRAVED PLASTIC NAMEPLATES ON ALL DISTRIBUTION EQUIPMENT AND PANELS, SECURED BY MEANS OF STAINLESS STEEL RIVETS. TAPES AND ADHESIVES ARE NOT ACCEPTABLE.
 - J. UNLESS NOTED OTHERWISE, ALL PANEL BUSES, FEEDER CONDUCTORS AND BRANCH CIRCUIT WIRING SHALL BE COPPER. ALL WIRE SHALL BE UL LISTED, RATED FOR THE ENVIRONMENT IT IS LOCATED, RATED FOR 600 VOLTS, AND BE NO. 12AWG MINIMUM SIZE.
 - K. ALL CIRCUIT BREAKERS, FUSES AND ELECTRICAL EQUIPMENT SHALL HAVE AN INTERRUPTING RATING NOT LESS THAN THE MAXIMUM SHORT CIRCUIT CURRENT TO WHICH THEY MAY BE SUBJECTED.
- 3. GENERAL INSTALLATION REQUIREMENTS:**
- A. INSTALL MATERIALS AND EQUIPMENT IN FIRST CLASS AND WORKMANLIKE MANNER AND RUN CONCEALED, EXCEPT AS INDICATED.
 - B. POWER WIRING AND POWER CONNECTIONS TO EQUIPMENT SHALL BE PROVIDED UNDER "ELECTRICAL" UNLESS OTHERWISE INDICATED ON THE ELECTRICAL DRAWINGS. WHEN SUBSTITUTED MOTORS AND/OR EQUIPMENT REQUIRES ELECTRICAL MODIFICATIONS, THE

- COST OF THE ELECTRICAL MODIFICATIONS AND COORDINATION SHALL BE INCLUDED UNDER THE DIVISION PROVIDING THE MOTOR AND/OR EQUIPMENT.
- C. THE ELECTRICAL CONTRACTOR SHALL NOT BORE, NOTCH OR IN ANY WAY CUT INTO ANY STRUCTURAL MEMBER, WITHOUT APPROVAL FROM THE ENGINEER. THE ELECTRICAL CONTRACTOR SHALL PROVIDE SUPPORT FOR ALL ELECTRICAL EQUIPMENT TO COMPLY WITH THE REQUIREMENTS OF THE LATEST ADOPTED BUILDING CODE AND ALL LOCAL ORDINANCES.
- D. SCHEDULING, TRENCHING, LINE SHUTDOWN, DRAINAGE, TIE-IN, CONDUIT BEDDING, SUPPORTS, INSTALLATION OF NEW LINE, WALL PENETRATIONS, AND EQUIPMENT PLACEMENTS, TESTING, WARNING TAPE, BACKFILL, SURFACING, LANDSCAPING, ACTIVATION OF SERVICE, ETC., SHALL COMPLY WITH THE LOCAL BUILDING CODE STANDARDS AND REGULATIONS AND SHALL BE COORDINATED WITH THE LOCAL CODE OFFICIAL AND THE FIRE DEPARTMENTS. PRIOR APPROVAL OF AND NOTICE TO PROCEED WITH CONCEALING ELECTRICAL WIRING AND FINAL CONNECTIONS ARE REQUIRED BY THE LOCAL AUTHORITY HAVING JURISDICTION.
- E. THE OWNER'S AUTHORIZED REPRESENTATIVE SHALL WITNESS TESTING.
- F. CONTRACTOR SHALL VERIFY ALL EXISTING UTILITY LOCATIONS IN THE FIELD BEFORE STARTING WORK. THE REGIONAL NOTIFICATION CENTER (AND/OR PROPERTY OWNERS) SHALL BE NOTIFIED 48 HOURS PRIOR TO THE START OF SHUTDOWN, DIGGING OR EXCAVATION WORK. THE CONTRACTOR SHALL FIELD VERIFY THE POINTS OF CONNECTIONS AND PHASED CONSTRUCTION TIE-INS. LOCATIONS OF PIPING AND APPURTENANT FITTINGS SHOWN ON THE DRAWINGS ARE APPROXIMATE. IT IS INTENDED THAT SUCH ITEMS BE LOCATED BASED ON EXACT LOCATIONS DETERMINED IN THE FIELD AND THE SUPPLIED MATERIALS.
- G. CONTRACTOR SHALL PROVIDE ALL NECESSARY PROTECTIVE MEASURES TO SAFEGUARD EXISTING UTILITIES TO REMAIN FROM DAMAGE DURING CONSTRUCTION OF THIS PROJECT. SHOULD SPECIAL EQUIPMENT BE REQUIRED TO WORK OVER AND AROUND THE UTILITIES, CONTRACTOR SHALL BE REQUIRED TO FURNISH SUCH EQUIPMENT. THE COST OF PROTECTING UTILITIES FROM DAMAGE AND FOR FURNISHING SPECIAL EQUIPMENT SHALL BE INCLUDED IN THE PRICE BID FOR OTHER ITEMS OF CONSTRUCTION.
- H. AN ABRASION PROTECTION PAD SHALL BE USED WHERE POTABLE WATER, SEWER, AND FIRE WATER LINES CROSS WITH LESS THAN 1" CLEARANCE FROM ELECTRICAL LINES. THE PAD SHALL BE 1/16" MAX THICKNESS OF LDPE SHEET. THE LDPE PAD SHALL BE 12" LONG AND WRAP COMPLETELY AROUND ONE LINE AT THE CROSSING. SS WORM DRIVE HOSE CLAMPS SHALL BE USED TO ATTACH THE LDPE PAD TO THE PIPE. THE CLAMP SHALL BE AT LEAST 2" FROM EACH SIDE OF THE LINE BEING CROSSED.
- I. DIELECTRIC COUPLINGS/FLANGES SHALL BE USED AT DISSIMILAR METAL PIPING CONNECTIONS.
- J. SUPPORTS AND HANGERS SHALL BE GALVANIZED STEEL AND SHALL BE FROM MANUFACTURED SHAPES. FIELD BENDING IS NOT PERMITTED. PLATE MATERIAL MAY BE WELDED IN THE FIELD TO FORM SHAPES.
- K. THE ELECTRICAL CONTRACTOR SHALL INSTALL ALL CONDUITS AND WIRES WITH A MINIMUM NUMBER OF BENDS AND IN SUCH A MANNER AS TO CONFORM TO THE STRUCTURE. AVOID OBSTRUCTIONS, AND MEET ALL STRUCTURAL CODE REQUIREMENTS. THESE DRAWINGS ARE PRIMARILY DIAGRAMMATIC, AND DO NOT SHOW ALL SUCH REQUIRED BENDS, OFFSETS, FITTING, BOXES, ETC..
- L. THE ENTIRE ELECTRICAL INSTALLATION SHALL BE GROUNDED AS REQUIRED BY NATIONAL ELECTRICAL CODE. POWER CONDUITS SHALL HAVE A INSULATED COPPER, CODE SIZED GROUND WIRE INSTALLED.
- M. VEHICULAR ACCESS MUST BE PROVIDED AND MAINTAINED SERVICEABLE THROUGHOUT CONSTRUCTION.

ABBREVIATIONS

2P	TWO POLE, OR AS INDICATED
A	AMPERES
AIC	AMPERES INTERRUPTING CAPACITY
AS	AMPERE SWITCH
AWG	AMERICAN WIRE GAGE
B.E.C.	BAHAMAS ELECTRICITY CORPORATION
BLK	BLACK
BLU	BLUE
CKT	CIRCUIT
C	CONDUIT
CATV	CABLE TELEVISION
CB	CIRCUIT BREAKER
CEC	CANADIAN ELECTRICAL CODE
CO	CONDUIT ONLY
COMM	COMMUNICATIONS
CT	CURRENT TRANSFORMER
DIA	DIAMETER
DWG	DRAWING
EC	EMPTY CONDUIT
ENCL	ENCLOSURE
EX	EXISTING
EXIST	EXISTING
FHC	FIRE HOSE CABINET
FO	FIBER OPTIC
GAL	GALLON
GRN	GREEN
G	GROUND
GND	GROUND
GF	GROUND FAULT
GFI	GROUND FAULT INTERRUPTER
Hz	HERTZ, CYCLES PER SECOND
IT	INFORMATION TECHNOLOGY
KCMIL	THOUSAND CIRCULAR MILS
KW	KILOWATT
KWH	KILOWATT HOUR
KVA	KILOVOLT AMPERE
MIN	MINIMUM
NEUT	NEUTRAL WIRE
NEC	NATIONAL ELECTRICAL CODE
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
OC	ON CENTER
P	POLE
PB	PULL BOX
PC	PHOTOCELL
PH,Ø	PHASE
PVC	POLYVINYL CHLORIDE
RGS	RIGID GALVANIZED STEEL CONDUIT
RTU	REMOTE TERMINAL UNIT
SC	SHORT CIRCUIT
SCH	SCHEDULE
SPD	SURGE PROTECTION DEVICE
SS	STAINLESS STEEL
TEL	TELEPHONE
TYP	TYPICAL
UL	UNDERWRITERS LABORATORIES
V	VOLT
VS	VOLT SWITCH
W	WATT, WIRE
WHT	WHITE
XFMR	TRANSFORMER

LEGEND

	ELECTRICAL HANDHOLE
	POWER PANEL/COMMUNICATIONS CABINET



4700 FALLS OF NEUSE RD, SUITE 300
RALEIGH, NC 27609
919-781-4626
N.C. FIRM NO. F-0105



The John R. McAdams Company, Inc.
621 Hillsborough Street
Suite 500
Raleigh, NC 27603
phone 919. 361. 5000
fax 919. 361. 2269
license number: C-0293, C-187
www.mcadamsco.com

CLIENT
TOWN OF NAGS HEAD
POST OFFICE BOX 99
NAGS HEAD, NC 27959
PHONE: 252.441.5580



**SOOIR STORMWATER
INFRASTRUCTURE
IMPROVEMENTS
CONSTRUCTION DRAWINGS
PROJECT AREA 12
NAGS HEAD, NC, 27959**

FINAL DRAWING
RELEASED FOR CONSTRUCTION



REVISIONS 2/7/2025

NO.	DATE	DESCRIPTION
1	02/04/2025	RELEASED FOR CONSTRUCTION

PLAN INFORMATION

PROJECT NO.	220494-03
FILENAME	
CHECKED BY	KCZ
DRAWN BY	YIS
SCALE	AS NOTED
DATE	10/18/2024

ELECTRICAL NOTES (1 OF 2)

E0.1

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The John R. McAdams Company, Inc.
621 Hillsborough Street
Suite 500
Raleigh, NC 27603
phone 919. 361. 5000
fax 919. 361. 2269
license number: C-0293, C-187
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CLIENT

TOWN OF NAGS HEAD
POST OFFICE BOX 99
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SOIOR STORMWATER INFRASTRUCTURE IMPROVEMENTS CONSTRUCTION DRAWINGS PROJECT AREA 12 NAGS HEAD, NC, 27959

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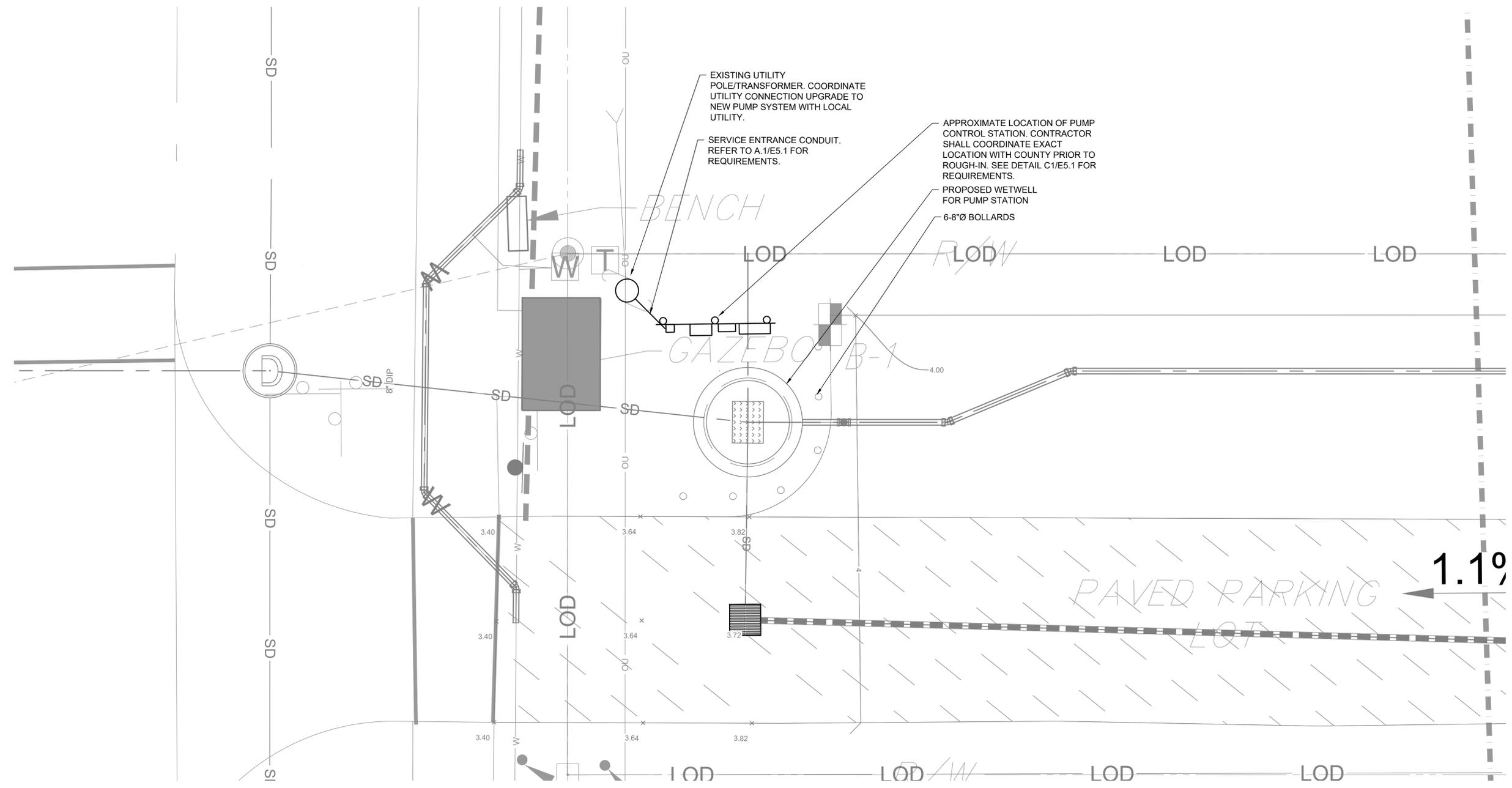
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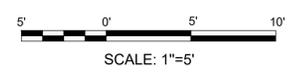
SHEET

DUNE INFILTRATION
ELECTRICAL SITE PLAN

E1.0



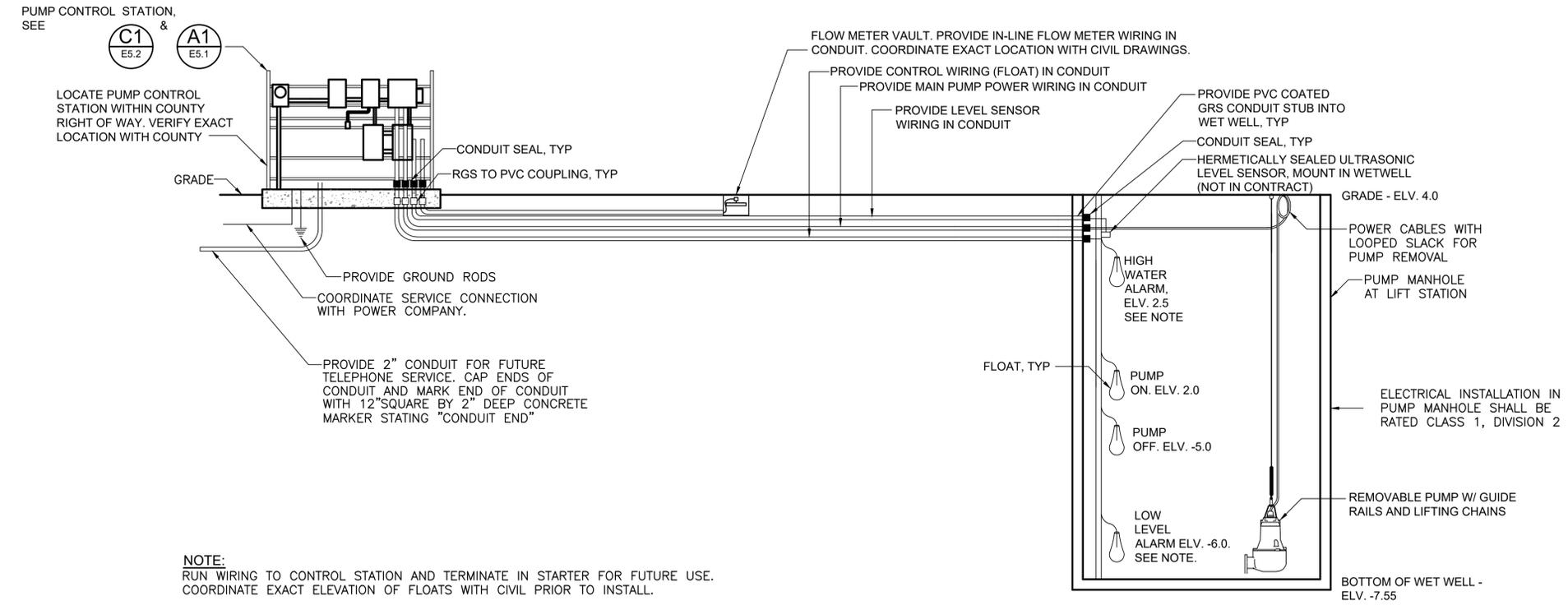
ELECTRICAL SITE PLAN



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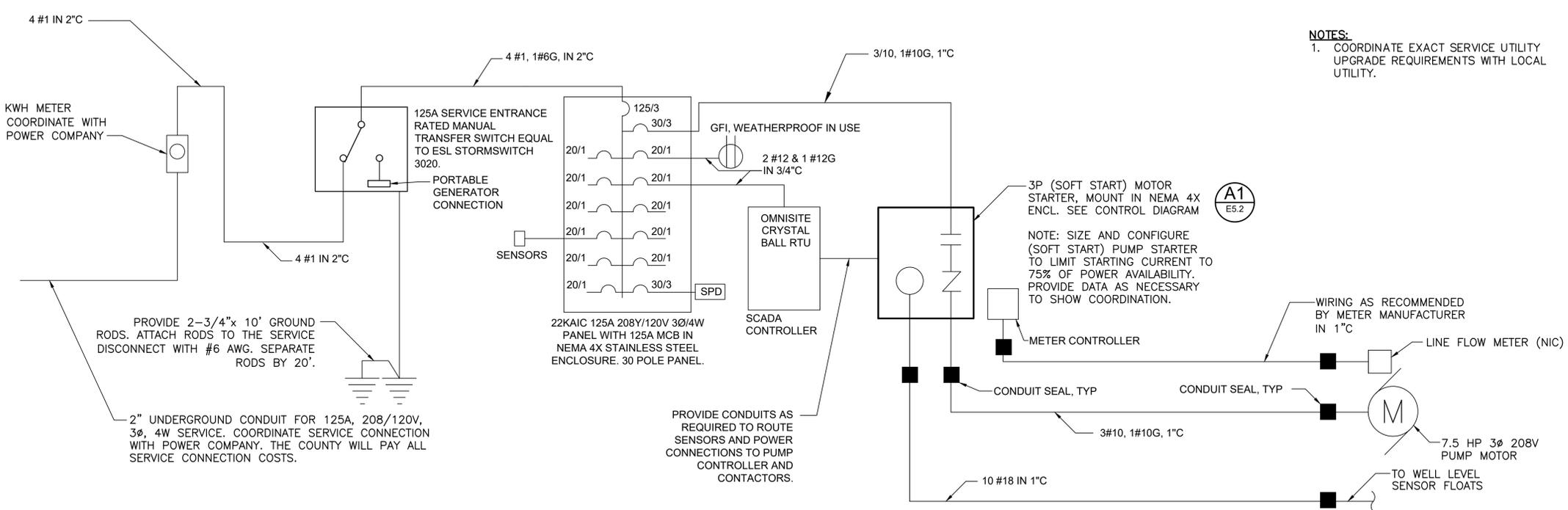


**SOIOR STORMWATER
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NOTE:
RUN WIRING TO CONTROL STATION AND TERMINATE IN STARTER FOR FUTURE USE.
COORDINATE EXACT ELEVATION OF FLOATS WITH CIVIL PRIOR TO INSTALL.

C1
E5.2
E5.1
PUMP CONTROL STATION AND LIFT STATION - ELEVATION
NTS



NOTES:
1. COORDINATE EXACT SERVICE UTILITY UPGRADE REQUIREMENTS WITH LOCAL UTILITY.

A1
E5.1
PUMP CONTROL STATION RISER DIAGRAM
NTS

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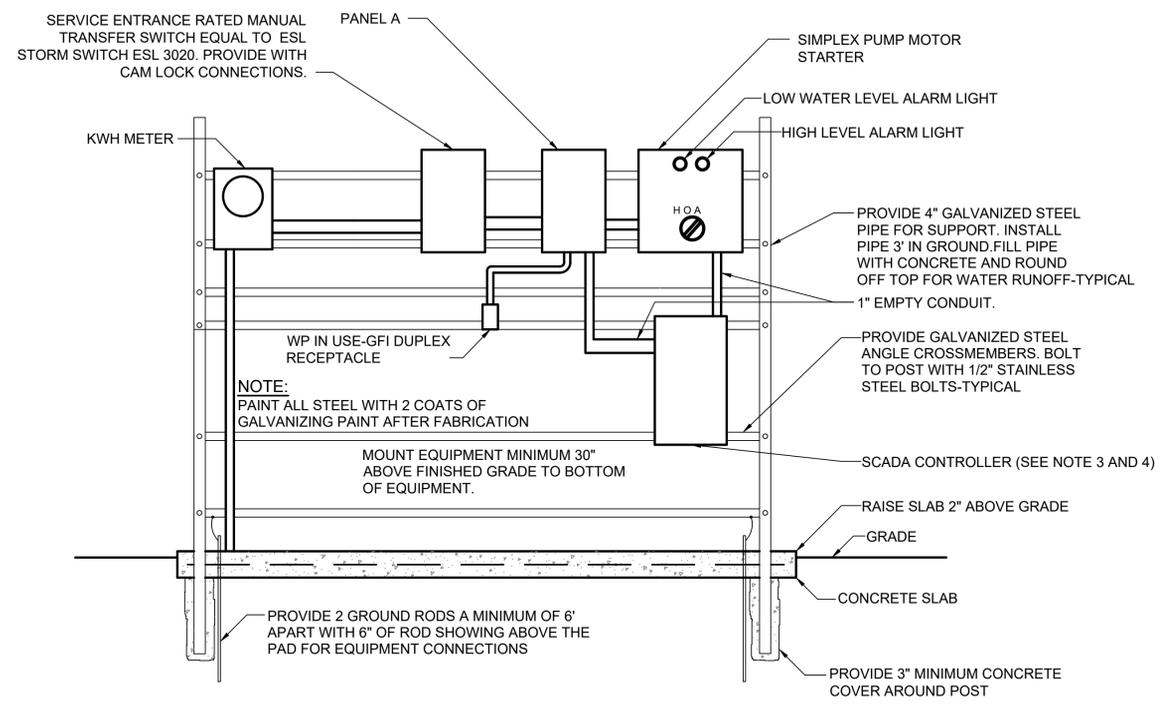
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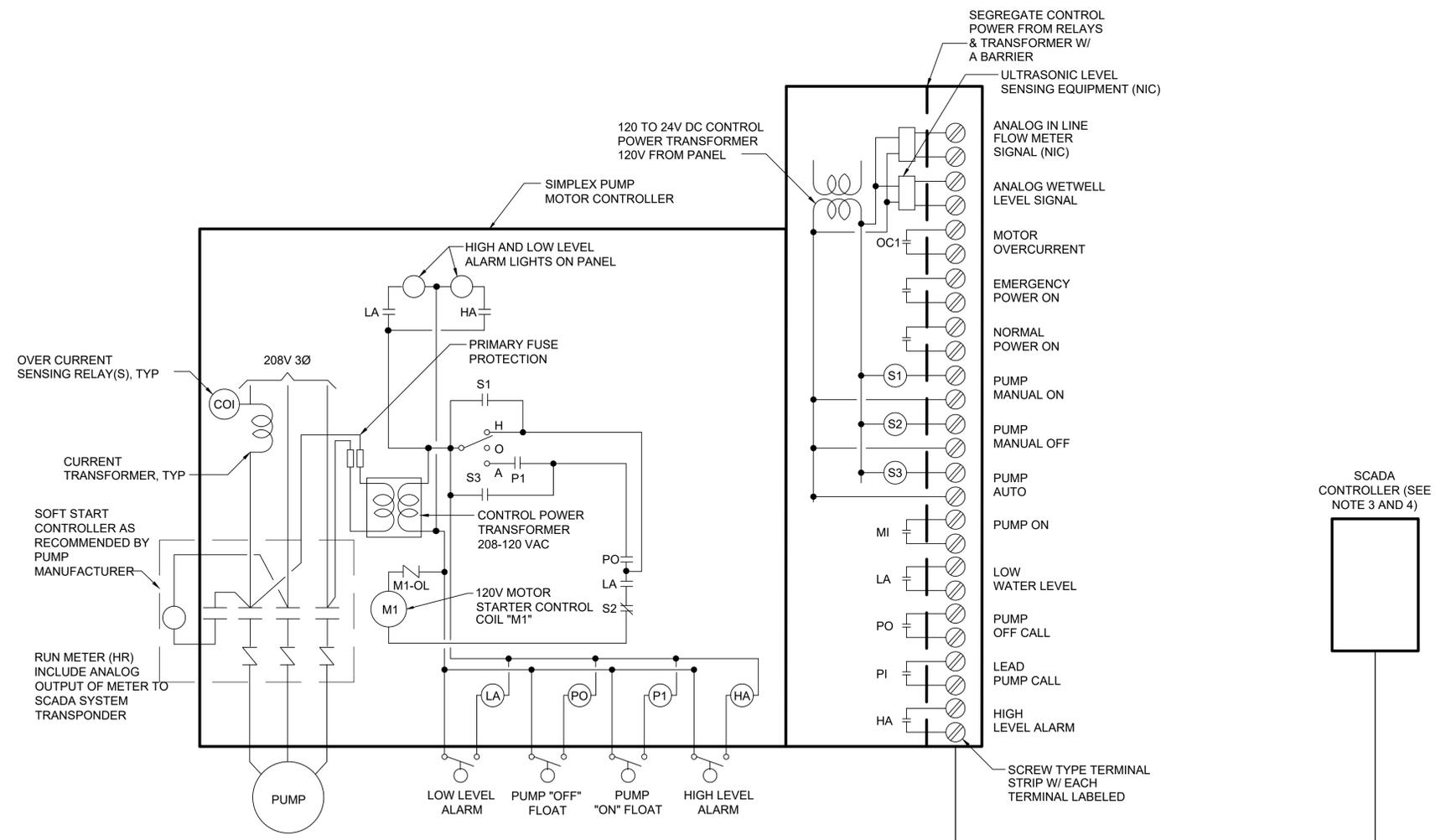
SHEET
ELECTRICAL DETAILS (1 OF 2)



- NOTE:**
- 1) FOR ELECTRICAL GENERAL NOTES, SEE SHEETS E0.1 AND E0.2.
 - 2) CREATE OPENINGS IN CONCRETE SLAB AS NEEDED FOR CONDUIT. ALL OPENING MUST BE NEAT CUTS OR BORED OPENINGS. OPENINGS MAY BE BACKFILLED WITH GRAVEL.
 - 3) PROVIDE SPACE ON FACE OF FRAMEWORK FOR SCADA/RTU & METER EQUIPMENT. COORDINATE SCADA INSTALLATION WITH ELECTRICAL POWER INSTALLATION. PROVIDE ALL SPACE, POWER CONNECTIONS, WIRING, CONDUIT, HARDWARE, SENSORS, ETC. NECESSARY FOR SENSING DATA POINTS INDICATED. SCADA DESIGN/INSTALLATION NOT IN CONTRACT
 - 4) SCADA CONTROL PANEL EQUAL TO OMNISITE CRYSTAL BALL CELLULAR PUMP STATION MONITOR/BACKUP PUMP CONTROLLER. CONTRACTOR SHALL CONNECT ALL ALARM AND CONTROL INPUT/OUTPUTS FROM PUMP CONTROL PANEL TO SCADA CONTROLLER PER MANUFACTURER INSTRUCTIONS. COORDINATE EXACT REQUIRED INPUTS AND OUTPUTS WITH OWNER. PRIOR TO INSTALLATION, CONTRACTOR SHALL MEASURE CELLULAR STRENGTH BY FOLLOWING MANUFACTURER INSTALLATION INSTRUCTIONS AND PROVIDE ADDITIONAL ANTENNA'S OR SIGNAL AMPLIFIERS AS REQUIRED FOR FUNCTIONING CELLULAR SYSTEM.



C1 CONTROL STATION - ELEVATION
E5.1 NTS



A1 TYPICAL SIMPLEX PUMP CONTROL DIAGRAM
E5.1 NTS

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SHEET
ELECTRICAL DETAILS (2 OF 2)