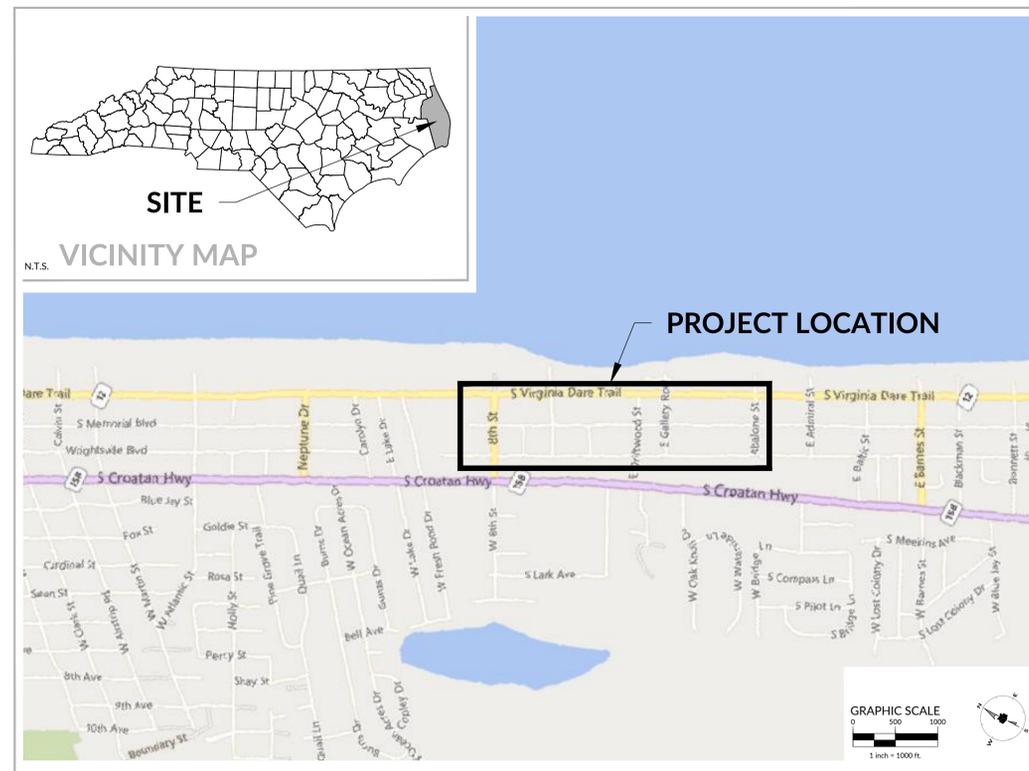


CONSTRUCTION PLANS

TOWN OF NAGS HEAD CAPITAL IMPROVEMENT PROJECT

FY24-25 WATERLINE, DRAINAGE & STREET RESURFACING PROJECT NAGS HEAD, NC 27959 | DARE COUNTY

APRIL 11, 2025



Sheet List Table

Sheet Number	Sheet Title
	COVER
G1.00	GENERAL NOTES, LEGEND AND ABBREVIATIONS
C1.00	WATER MAIN - S. MEMORIAL AVE 10+00 - 15+50
C1.01	WATER MAIN - S. MEMORIAL AVE 15+50 - 18+50
C1.02	WATER MAIN - S. ARIO ST 20+00 - 24+00
C1.03	WATER MAIN - S. ALBATROSS ST 30+00 - 35+00
C1.04	WATER MAIN - S. ALBATROSS ST 35+00 - 38+00
C1.05	WATER MAIN - S. ATLAS ST 40+00 - 44+00
C2.00	STORM SEWER ALBATROSS ST & ATLAS ST
C2.01	STORM SEWER DRIFTWOOD ST TO GALLERY ST
C2.02	STORM SEWER GALLERY ST AND ABALONE ST
C2.03	STORM SEWER ALBATROSS ST AND WRIGHTSVILLE AVE
C2.04	STORM SEWER BONNETT ST AT MEMORIAL AVE
C2.05	STORM SEWER BITTERN ST AT MEMORIAL AVE
C3.00	UTILITY DETAILS
C3.01	UTILITY DETAILS
C3.02	UTILITY DETAILS
C3.03	UTILITY DETAILS
C3.04	NCG-01
C3.05	EROSION CONTROL DETAILS
ALT 1.1	ADD ALT-1 WRIGHTSVILLE AVE
ALT 1.2	ADD ALT-1 GALLERY ROW

SURVEY BENCHMARK

BENCHMARK IS LOCAL TO SITE.
SEE SHEET G1.00 FOR BENCHMARK INFORMATION.
VERTICAL DATUM BASED ON NAVD 88.

CONFORMED

CONTACT LIST:

PROJECT MANAGER
Michael W. Strader, Jr., P.E.
WithersRavenel
8466 Caratoke Highway
Building 400
Powells Point, NC 27966
mstrader@withersravenel.com



PREPARED BY:



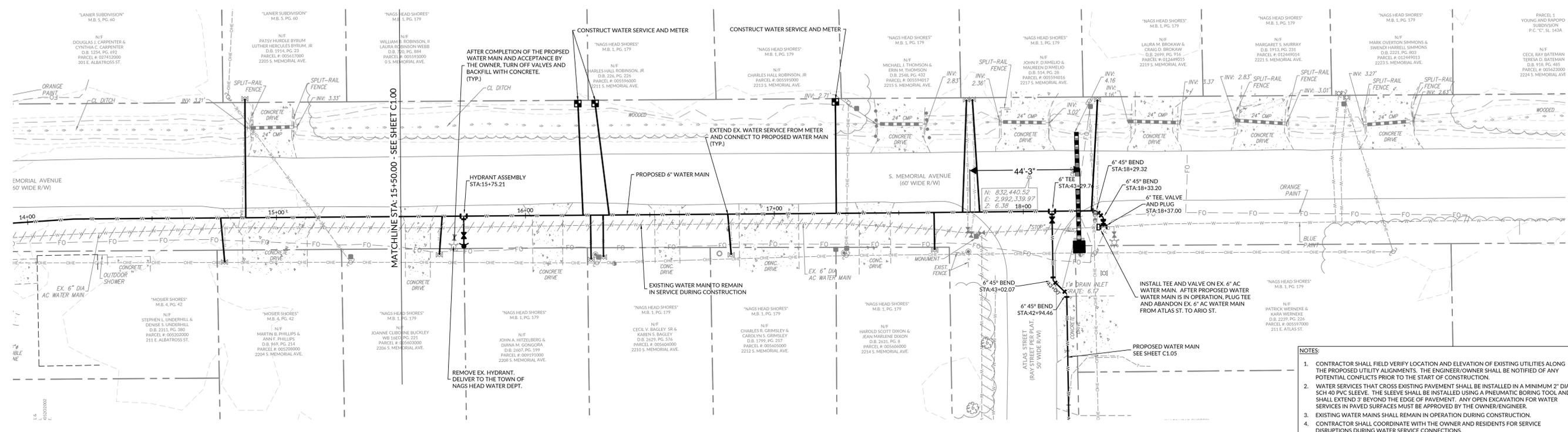
WithersRavenel
8466 Caratoke Highway | Building 400 | Powells Point, NC 27966
License #: F-1479 | t: 252.491.8147 | www.withersravenel.com

OWNER:

TOWN OF NAGS HEAD

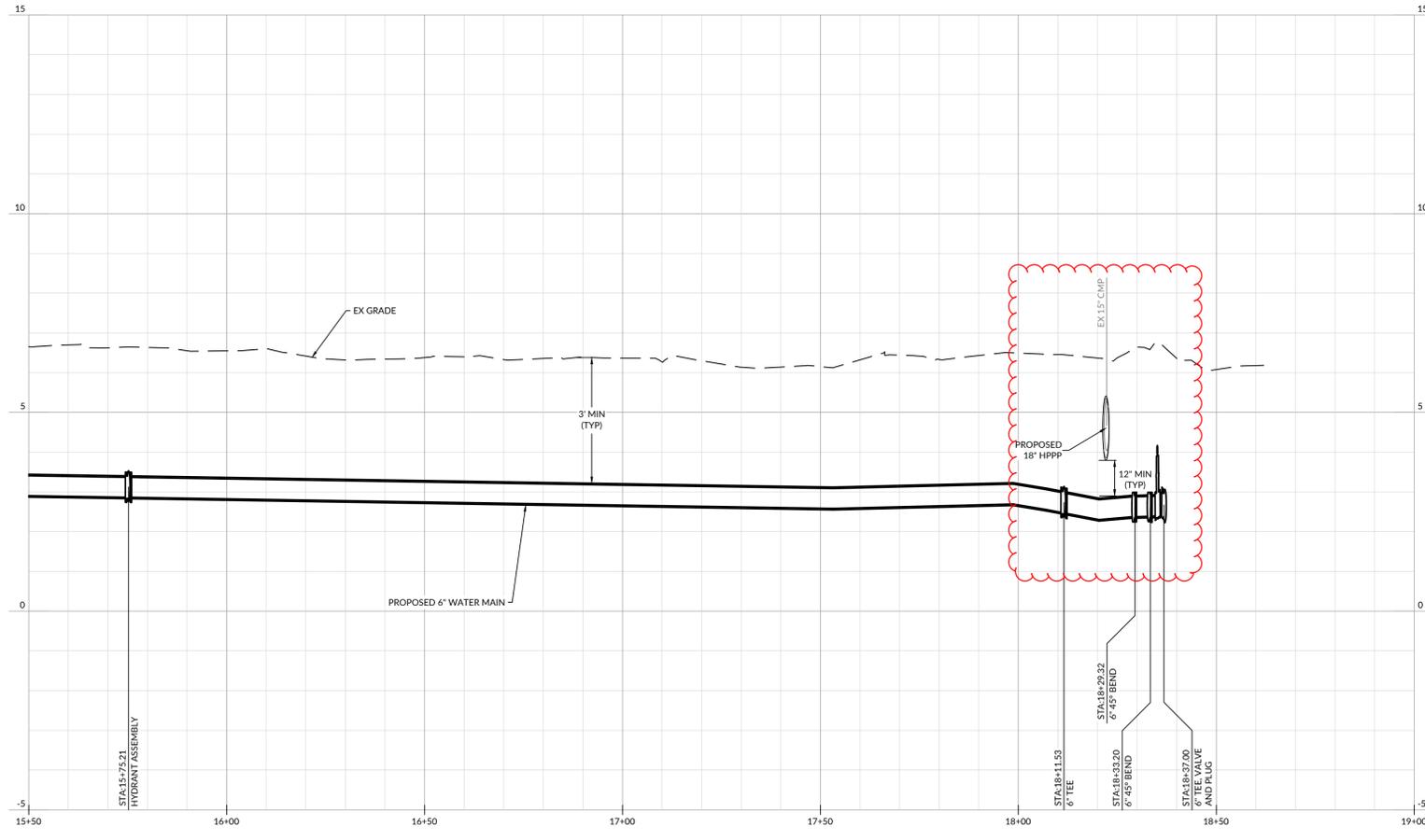
P.O. BOX 99 5401 S. CROATAN HWY
NAGS HEAD, NC 27959
PHONE #: 252-441-5508
ATTENTION: David Ryan, P.E.

CONSTRUCTION PLANS
TOWN OF NAGS HEAD
CAPITAL IMPROVEMENT
PROJECT
WR PROJECT NO.24-1284
TOWN OF NAGS HEAD
04/11/2025
INITIAL PLAN DATE: 04/11/2025



- NOTES:**
1. CONTRACTOR SHALL FIELD VERIFY LOCATION AND ELEVATION OF EXISTING UTILITIES ALONG THE PROPOSED UTILITY ALIGNMENTS. THE ENGINEER/OWNER SHALL BE NOTIFIED OF ANY POTENTIAL CONFLICTS PRIOR TO THE START OF CONSTRUCTION.
 2. WATER SERVICES THAT CROSS EXISTING PAVEMENT SHALL BE INSTALLED IN A MINIMUM 2" DIA SCH 40 PVC SLEEVE. THE SLEEVE SHALL BE INSTALLED USING A PNEUMATIC BORING TOOL AND SHALL EXTEND 3' BEYOND THE EDGE OF PAVEMENT. ANY OPEN EXCAVATION FOR WATER SERVICES IN PAVED SURFACES MUST BE APPROVED BY THE OWNER/ENGINEER.
 3. EXISTING WATER MAINS SHALL REMAIN IN OPERATION DURING CONSTRUCTION.
 4. CONTRACTOR SHALL COORDINATE WITH THE OWNER AND RESIDENTS FOR SERVICE DISRUPTIONS DURING WATER SERVICE CONNECTIONS.
 5. AFTER COMPLETION OF THE PROPOSED WATER MAIN AND ACCEPTANCE BY THE OWNER, VALVES ON THE EXISTING ABANDONED WATER MAIN SHALL BE TURNED OFF AND BACKFILL WITH CONCRETE.
 6. CONTRACTOR SHALL PHASE CONSTRUCTION SO EXISTING WATER MAIN ABANDONMENT IS COMPLETE PRIOR TO STORM SEWER INSTALLATION IN AREAS WHERE POTENTIAL UTILITY CONFLICTS MAY EXIST.
 7. DAMAGE TO EXISTING UTILITIES AS A RESULT OF CONSTRUCTION SHALL BE REPAIRED/REPLACED AT NO COST TO THE OWNER.
 8. THE TOWN OF NAGS HEAD SHALL COORDINATE PERMISSIONS AND/OR EASEMENTS AS NECESSARY TO CONSTRUCT PROPOSED IMPROVEMENTS.

SCALE:
 1" = 20' HORIZ.
 1" = 2' VERT.

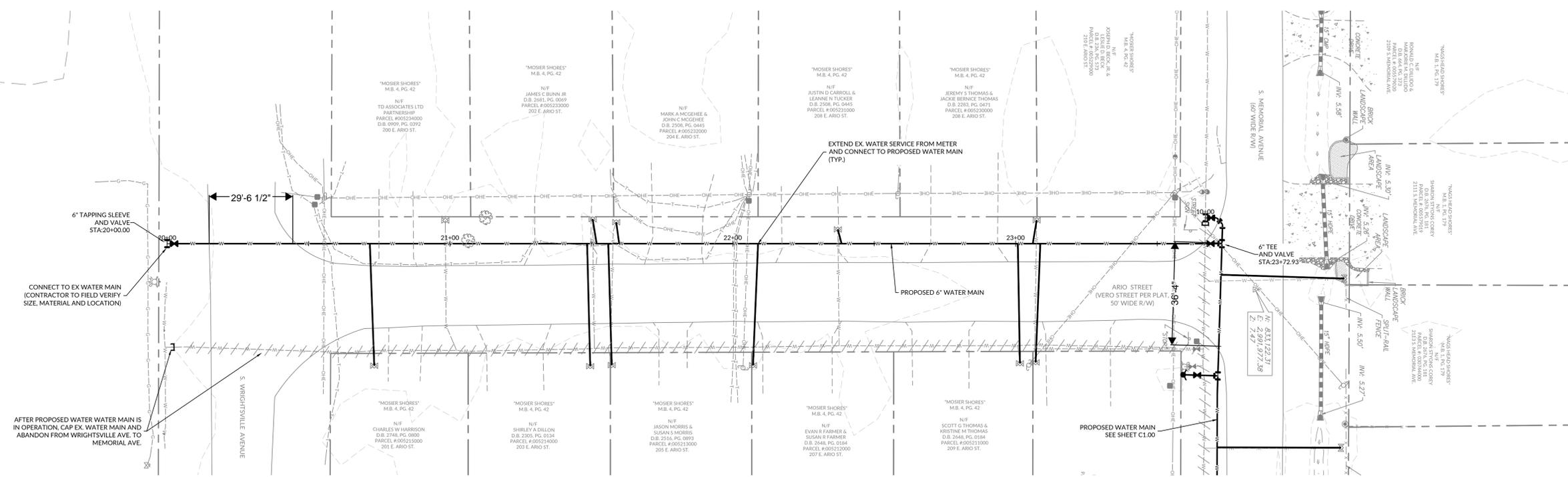


INITIAL PLAN DATE: 04/11/2025
 REVISIONS:
 A - 04/11/2025 BKS
 CONFORMED

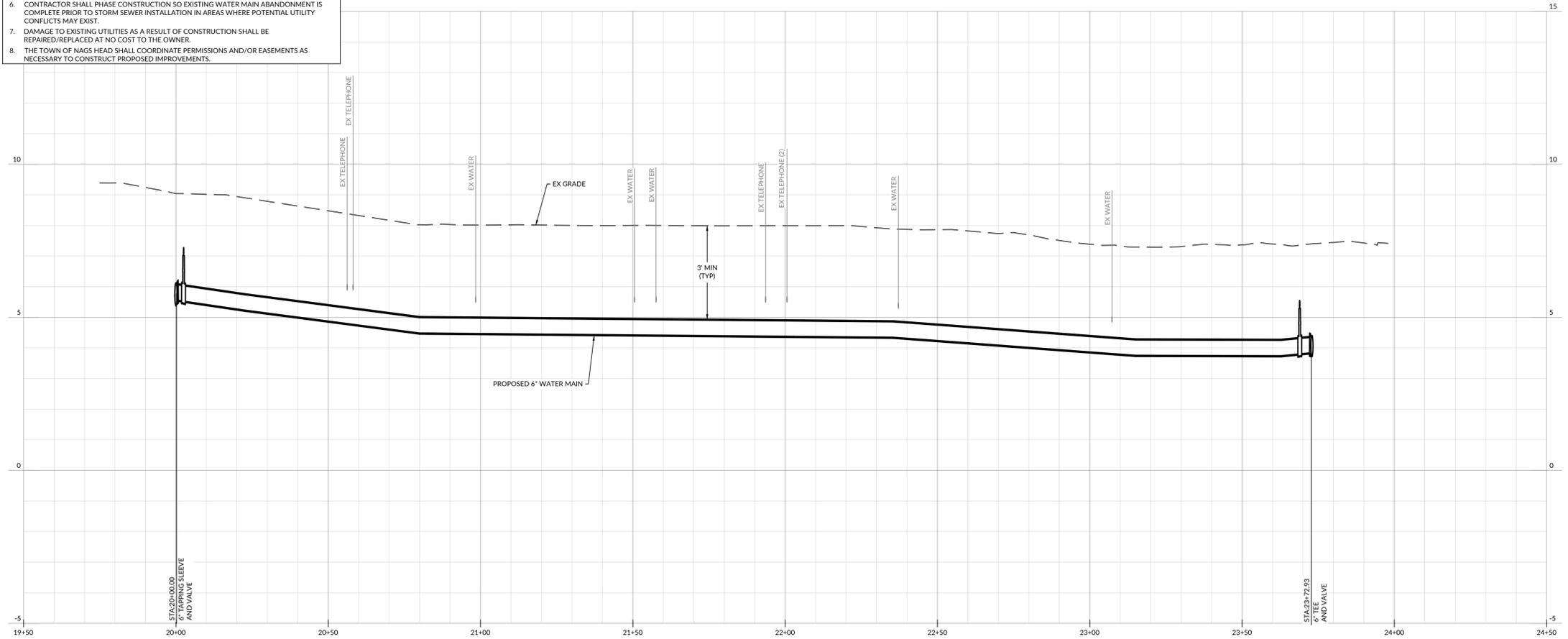
WR JOB NUMBER: 24-1284
 DRN: BKS DGN: MWS CKD: MWS

**WATER MAIN -
 S. MEMORIAL AVE
 15+50 - 18+50**

CONFORMED



- NOTES:**
1. CONTRACTOR SHALL FIELD VERIFY LOCATION AND ELEVATION OF EXISTING UTILITIES ALONG THE PROPOSED UTILITY ALIGNMENTS. THE ENGINEER/OWNER SHALL BE NOTIFIED OF ANY POTENTIAL CONFLICTS PRIOR TO THE START OF CONSTRUCTION.
 2. WATER SERVICES THAT CROSS EXISTING PAVEMENT SHALL BE INSTALLED IN A MINIMUM 2" DIA SCH 40 PVC SLEEVE. THE SLEEVE SHALL BE INSTALLED USING A PNEUMATIC BORING TOOL AND SHALL EXTEND 3' BEYOND THE EDGE OF PAVEMENT. ANY OPEN EXCAVATION FOR WATER SERVICES IN PAVED SURFACES MUST BE APPROVED BY THE OWNER/ENGINEER.
 3. EXISTING WATER MAINS SHALL REMAIN IN OPERATION DURING CONSTRUCTION.
 4. CONTRACTOR SHALL COORDINATE WITH THE OWNER AND RESIDENTS FOR SERVICE DISRUPTIONS DURING WATER SERVICE CONNECTIONS.
 5. AFTER COMPLETION OF THE PROPOSED WATER MAIN AND ACCEPTANCE BY THE OWNER, VALVES ON THE EXISTING ABANDONED WATER MAIN SHALL BE TURNED OFF AND BACKFILL WITH CONCRETE.
 6. CONTRACTOR SHALL PHASE CONSTRUCTION SO EXISTING WATER MAIN ABANDONMENT IS COMPLETE PRIOR TO STORM SEWER INSTALLATION IN AREAS WHERE POTENTIAL UTILITY CONFLICTS MAY EXIST.
 7. DAMAGE TO EXISTING UTILITIES AS A RESULT OF CONSTRUCTION SHALL BE REPAIRED/REPLACED AT NO COST TO THE OWNER.
 8. THE TOWN OF NAGS HEAD SHALL COORDINATE PERMISSIONS AND/OR EASEMENTS AS NECESSARY TO CONSTRUCT PROPOSED IMPROVEMENTS.



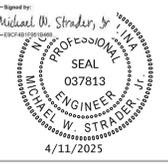
SCALE:
 1" = 20' HORIZ.
 1" = 2' VERT.

CONFORMED

**TOWN OF NAGS HEAD
 CAPITAL IMPROVEMENT
 PROJECT**

TOWN OF NAGS HEAD
 P.O. BOX 99 5401 S. GREATAN HWY
 NAGS HEAD, NC 27959

CONSTRUCTION PLANS
 NAGS HEAD, NC 27959 | DARE COUNTY



INITIAL PLAN DATE: 04/11/2025
 REVISIONS:
 A - 04/11/2025 BKS
 CONFORMED

WR JOB NUMBER 24-1284
 DRN: BKS DGN: MWS CKD: MWS

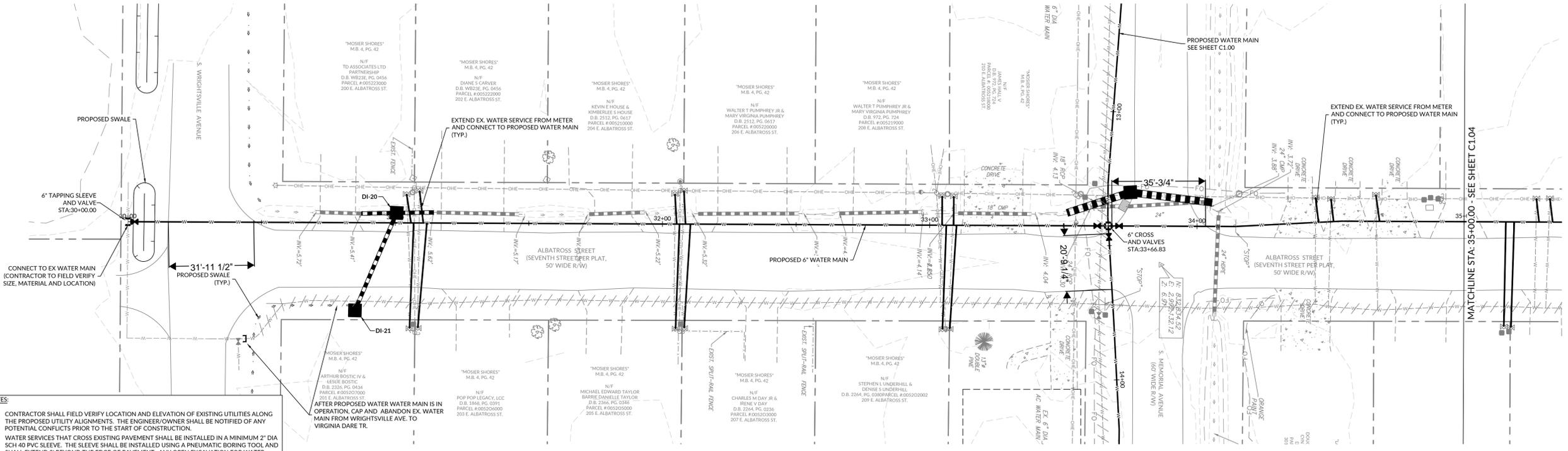
**WATER MAIN -
 S. ARIO ST
 20+00 - 24+00**

C1.02

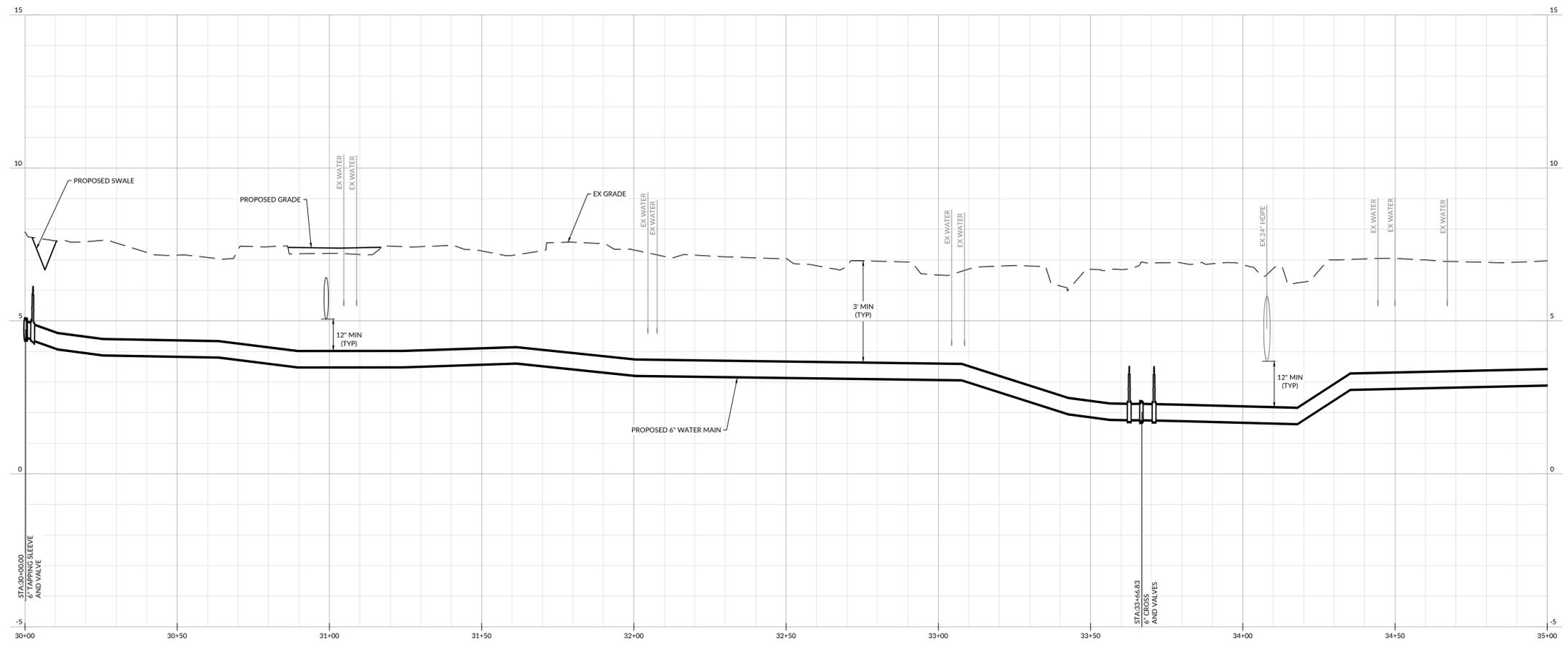


- NOTES:**
- CONTRACTOR SHALL FIELD VERIFY LOCATION AND ELEVATION OF EXISTING UTILITIES ALONG THE PROPOSED UTILITY ALIGNMENTS. THE ENGINEER/OWNER SHALL BE NOTIFIED OF ANY POTENTIAL CONFLICTS PRIOR TO THE START OF CONSTRUCTION.
 - WATER SERVICES THAT CROSS EXISTING PAVEMENT SHALL BE INSTALLED IN A MINIMUM 2" DIA SCH 40 PVC SLEEVE. THE SLEEVE SHALL BE INSTALLED USING A PNEUMATIC BORING TOOL AND SHALL EXTEND 3' BEYOND THE EDGE OF PAVEMENT. ANY OPEN EXCAVATION FOR WATER SERVICES IN PAVED SURFACES MUST BE APPROVED BY THE OWNER/ENGINEER.
 - EXISTING WATER MAINS SHALL REMAIN IN OPERATION DURING CONSTRUCTION.
 - CONTRACTOR SHALL COORDINATE WITH THE OWNER AND RESIDENTS FOR SERVICE DISRUPTIONS DURING WATER SERVICE CONNECTIONS.
 - AFTER COMPLETION OF THE PROPOSED WATER MAIN AND ACCEPTANCE BY THE OWNER, VALVES ON THE EXISTING ABANDONED WATER MAIN SHALL BE TURNED OFF AND BACKFILL WITH CONCRETE.
 - CONTRACTOR SHALL PHASE CONSTRUCTION SO EXISTING WATER MAIN ABANDONMENT IS COMPLETE PRIOR TO STORM SEWER INSTALLATION IN AREAS WHERE POTENTIAL UTILITY CONFLICTS MAY EXIST.
 - DAMAGE TO EXISTING UTILITIES AS A RESULT OF CONSTRUCTION SHALL BE REPAIRED/REPLACED AT NO COST TO THE OWNER.
 - THE TOWN OF NAGS HEAD SHALL COORDINATE PERMISSIONS AND/OR EASEMENTS AS NECESSARY TO CONSTRUCT PROPOSED IMPROVEMENTS.

AFTER PROPOSED WATER MAIN IS IN OPERATION, CAP AND ABANDON EX. WATER MAIN FROM WRIGHTSVILLE AVE. TO VIRGINIA DARE TR.



SCALE:
 1" = 20' HORIZ.
 1" = 2' VERT.

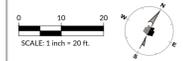


CONFORMED

**TOWN OF NAGS HEAD
 CAPITAL IMPROVEMENT
 PROJECT**

CONSTRUCTION PLANS

NAGS HEAD, NC 27959 | DARE COUNTY



INITIAL PLAN DATE: 04/11/2025
 REVISIONS:
 A - 04/11/2025 BKS
 CONFORMED

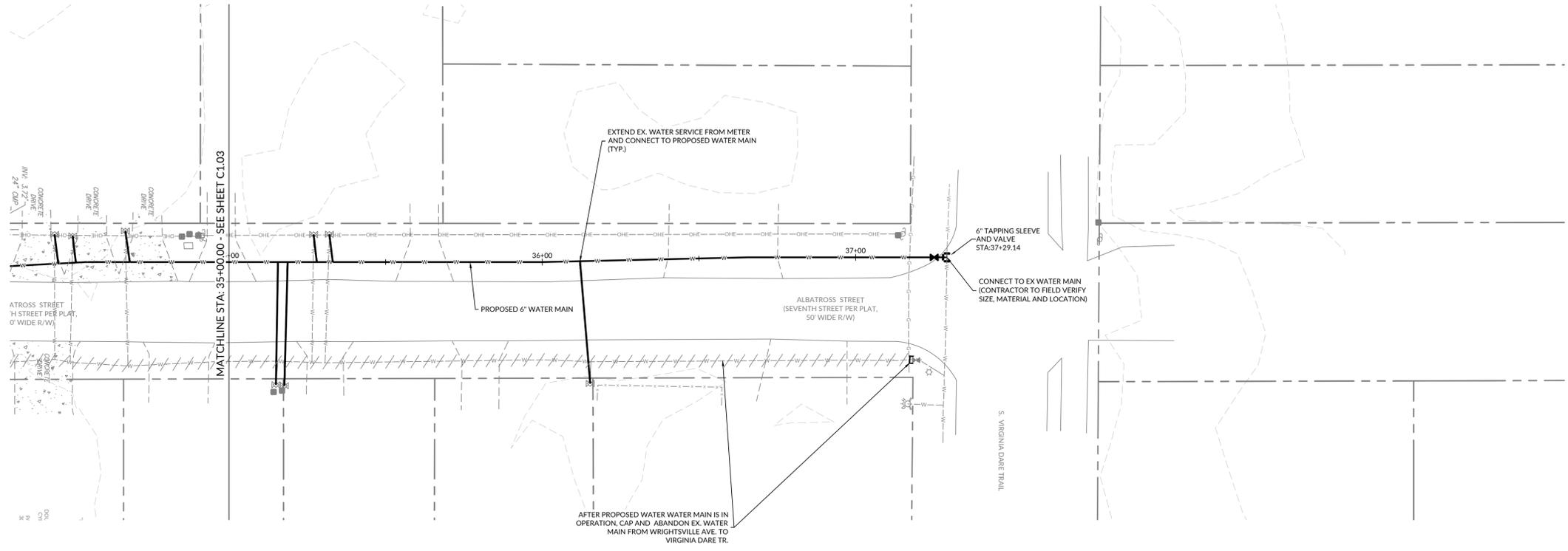
WR JOB NUMBER 24-1284
 DRN: BKS DGN: MWS CKD: MWS

**WATER MAIN -
 S. ALBATROSS ST
 30+00 - 35+00**

C1.03

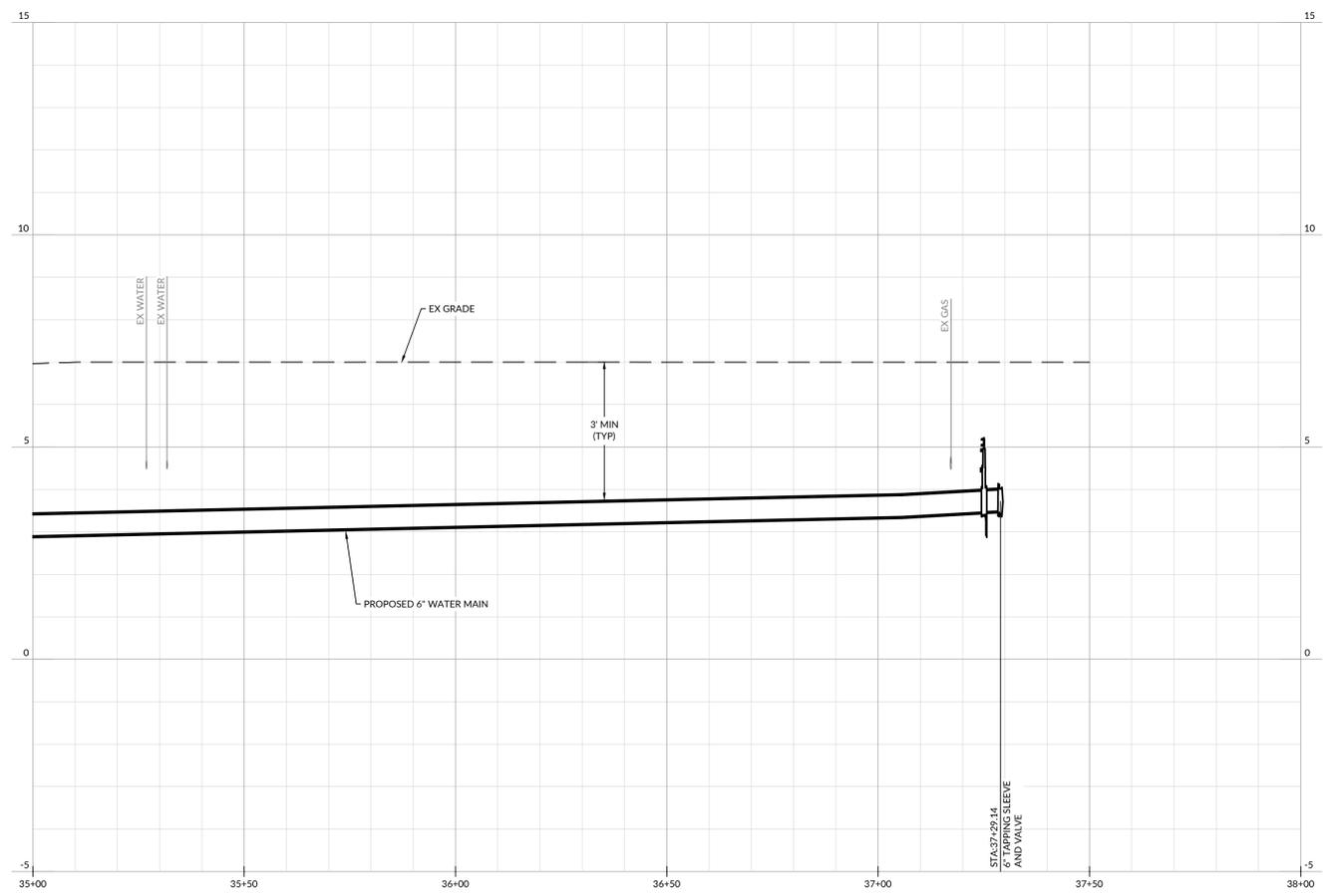


TOWN OF NAGS HEAD
 P.O. BOX 99 5401 S. GREATAN HWY
 NAGS HEAD, NC 27959



- NOTES:**
1. CONTRACTOR SHALL FIELD VERIFY LOCATION AND ELEVATION OF EXISTING UTILITIES ALONG THE PROPOSED UTILITY ALIGNMENTS. THE ENGINEER/OWNER SHALL BE NOTIFIED OF ANY POTENTIAL CONFLICTS PRIOR TO THE START OF CONSTRUCTION.
 2. WATER SERVICES THAT CROSS EXISTING PAVEMENT SHALL BE INSTALLED IN A MINIMUM 2" DIA SCH 40 PVC SLEEVE. THE SLEEVE SHALL BE INSTALLED USING A PNEUMATIC BORING TOOL AND SHALL EXTEND 3' BEYOND THE EDGE OF PAVEMENT. ANY OPEN EXCAVATION FOR WATER SERVICES IN PAVED SURFACES MUST BE APPROVED BY THE OWNER/ENGINEER.
 3. EXISTING WATER MAINS SHALL REMAIN IN OPERATION DURING CONSTRUCTION.
 4. CONTRACTOR SHALL COORDINATE WITH THE OWNER AND RESIDENTS FOR SERVICE DISRUPTIONS DURING WATER SERVICE CONNECTIONS.
 5. AFTER COMPLETION OF THE PROPOSED WATER MAIN AND ACCEPTANCE BY THE OWNER, VALVES ON THE EXISTING ABANDONED WATER MAIN SHALL BE TURNED OFF AND BACKFILL WITH CONCRETE.
 6. CONTRACTOR SHALL PHASE CONSTRUCTION SO EXISTING WATER MAIN ABANDONMENT IS COMPLETE PRIOR TO STORM SEWER INSTALLATION IN AREAS WHERE POTENTIAL UTILITY CONFLICTS MAY EXIST.
 7. DAMAGE TO EXISTING UTILITIES AS A RESULT OF CONSTRUCTION SHALL BE REPAIRED/REPLACED AT NO COST TO THE OWNER.
 8. THE TOWN OF NAGS HEAD SHALL COORDINATE PERMISSIONS AND/OR EASEMENTS AS NECESSARY TO CONSTRUCT PROPOSED IMPROVEMENTS.

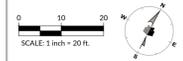
SCALE:
 1" = 20' HORIZ.
 1" = 2' VERT.



TOWN OF NAGS HEAD
 P.O. BOX 99 5401 S. GREATAN HWY
 NAGS HEAD, NC 27959

**TOWN OF NAGS HEAD
 CAPITAL IMPROVEMENT
 PROJECT**

NAGS HEAD, NC 27959 | DARE COUNTY



INITIAL PLAN DATE: 04/11/2025
 REVISIONS:
 A - 04/11/2025 BKS
 CONFORMED

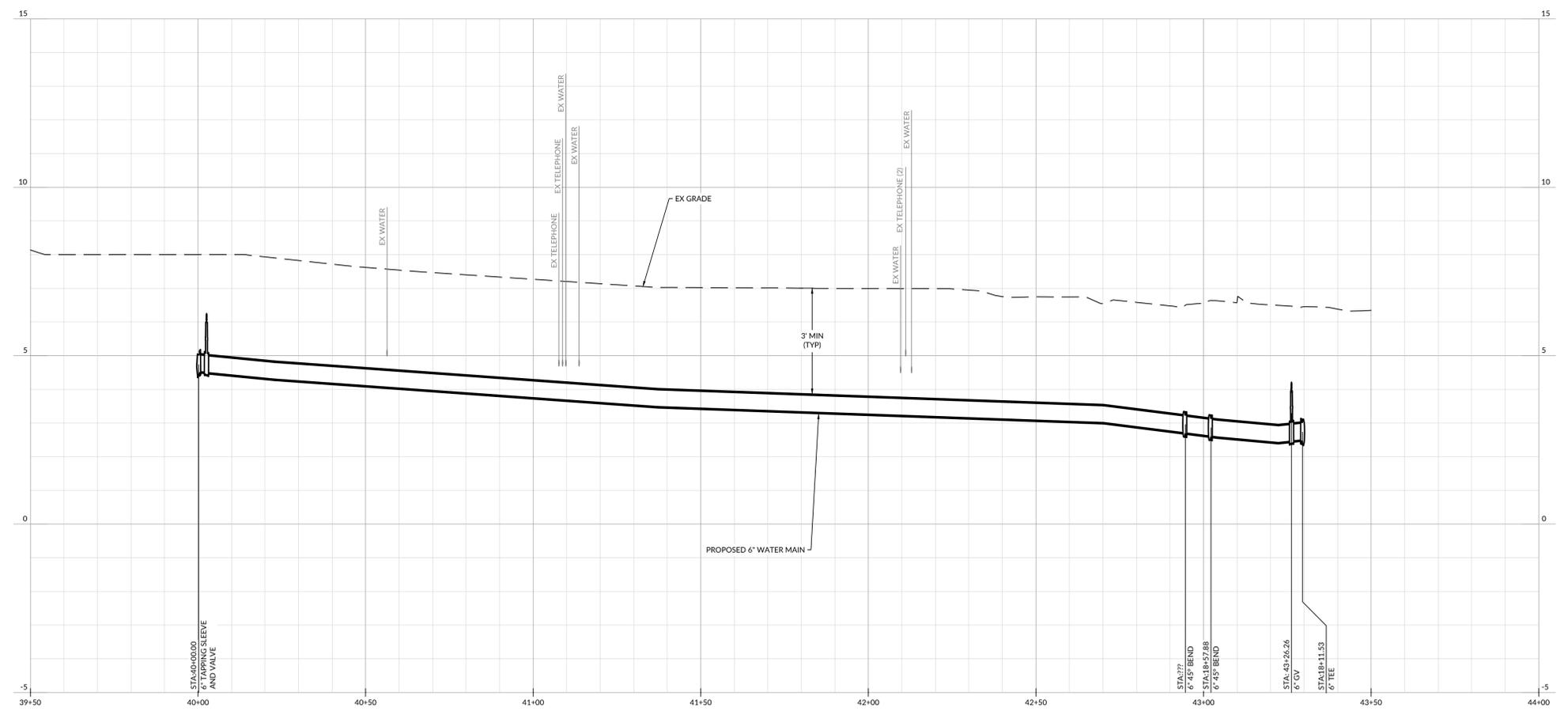
WR JOB NUMBER 24-1284
 DRN: BKS DGN: MWS CKD: MWS

**WATER MAIN -
 S. ALBATROSS ST
 35+00 - 38+00**

C1.04

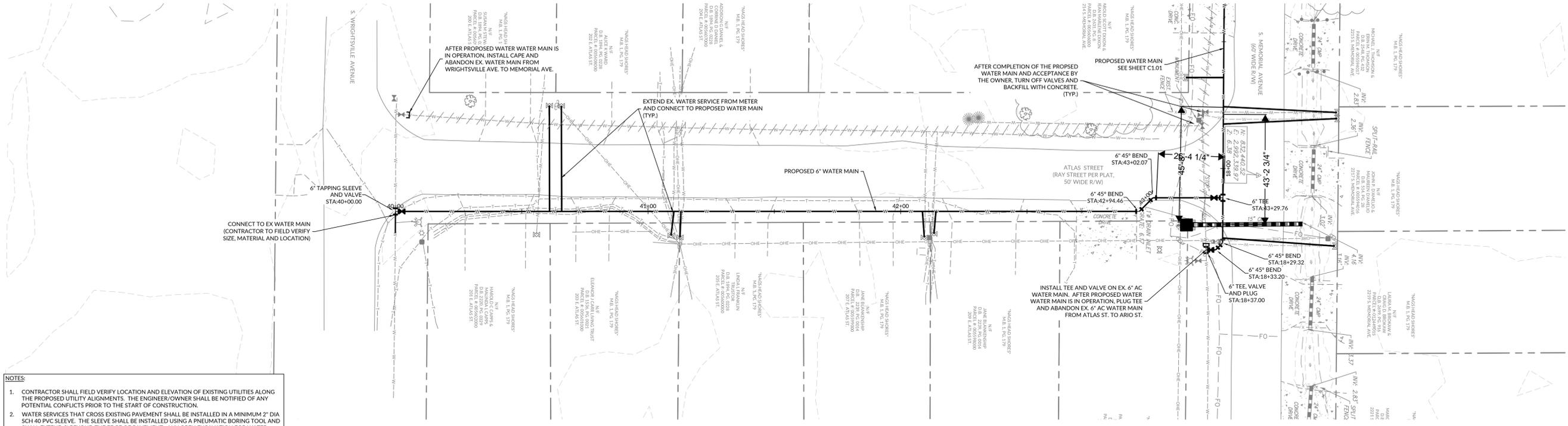
CONFORMED

- NOTES:**
1. CONTRACTOR SHALL FIELD VERIFY LOCATION AND ELEVATION OF EXISTING UTILITIES ALONG THE PROPOSED UTILITY ALIGNMENTS. THE ENGINEER/OWNER SHALL BE NOTIFIED OF ANY POTENTIAL CONFLICTS PRIOR TO THE START OF CONSTRUCTION.
 2. WATER SERVICES THAT CROSS EXISTING PAVEMENT SHALL BE INSTALLED IN A MINIMUM 2" DIA SCH 40 PVC SLEEVE. THE SLEEVE SHALL BE INSTALLED USING A PNEUMATIC BORING TOOL AND SHALL EXTEND 3' BEYOND THE EDGE OF PAVEMENT. ANY OPEN EXCAVATION FOR WATER SERVICES IN PAVED SURFACES MUST BE APPROVED BY THE OWNER/ENGINEER.
 3. EXISTING WATER MAINS SHALL REMAIN IN OPERATION DURING CONSTRUCTION.
 4. CONTRACTOR SHALL COORDINATE WITH THE OWNER AND RESIDENTS FOR SERVICE DISRUPTIONS DURING WATER SERVICE CONNECTIONS.
 5. AFTER COMPLETION OF THE PROPOSED WATER MAIN AND ACCEPTANCE BY THE OWNER, VALVES ON THE EXISTING ABANDONED WATER MAIN SHALL BE TURNED OFF AND BACKFILL WITH CONCRETE.
 6. CONTRACTOR SHALL PHASE CONSTRUCTION SO EXISTING WATER MAIN ABANDONMENT IS COMPLETE PRIOR TO STORM SEWER INSTALLATION IN AREAS WHERE POTENTIAL UTILITY CONFLICTS MAY EXIST.
 7. DAMAGE TO EXISTING UTILITIES AS A RESULT OF CONSTRUCTION SHALL BE REPAIRED/REPLACED AT NO COST TO THE OWNER.
 8. THE TOWN OF NAGS HEAD SHALL COORDINATE PERMISSIONS AND/OR EASEMENTS AS NECESSARY TO CONSTRUCT PROPOSED IMPROVEMENTS.



SCALE:
 1" = 20' HORIZ.
 1" = 2' VERT.

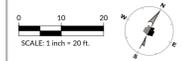
CONFORMED



**TOWN OF NAGS HEAD
 CAPITAL IMPROVEMENT
 PROJECT**

CONSTRUCTION PLANS

NAGS HEAD, NC 27959 | DARE COUNTY



INITIAL PLAN DATE: 04/11/2025
 REVISIONS:
 A - 04/11/2025 BKS
 CONFORMED

WR JOB NUMBER 24-1284
 DRN: BKS DGN: MWS CKD: MWS

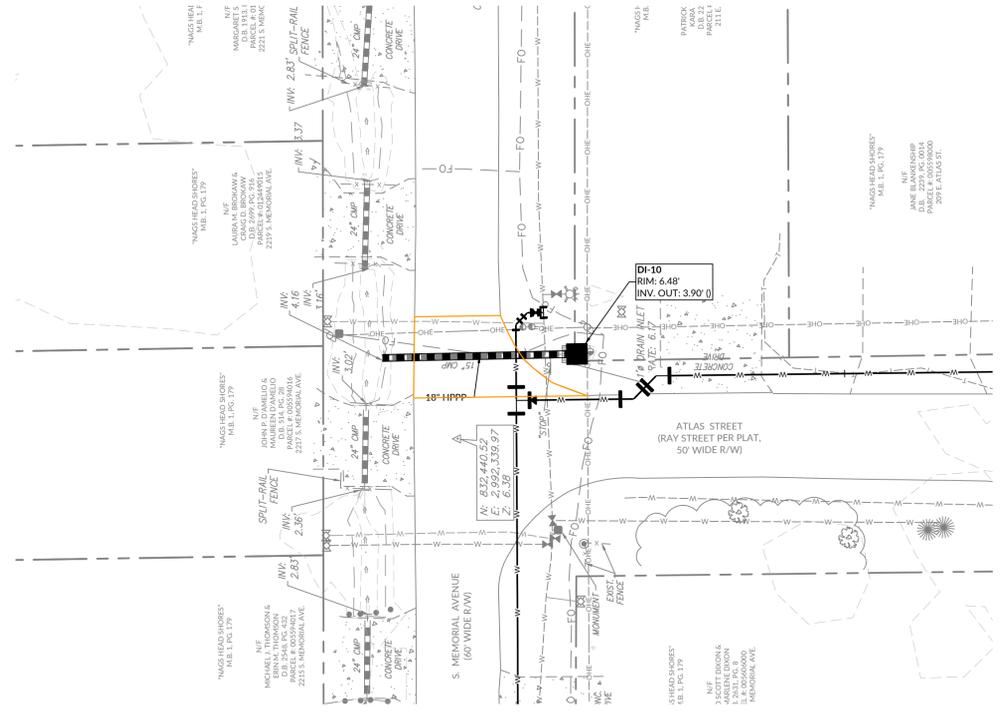
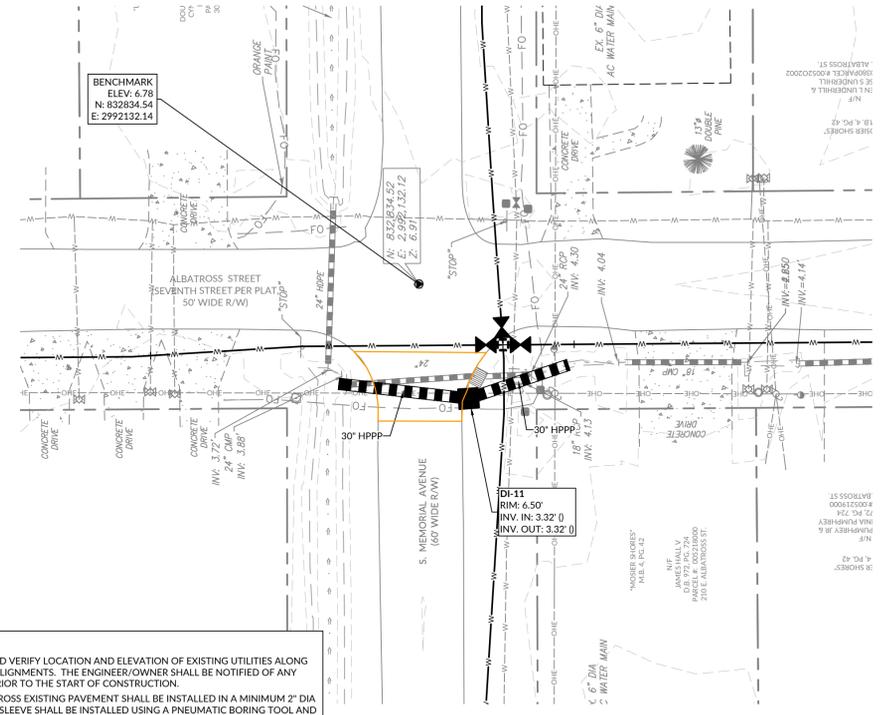
**WATER MAIN -
 S. ATLAS ST
 40+00 - 44+00**

C1.05

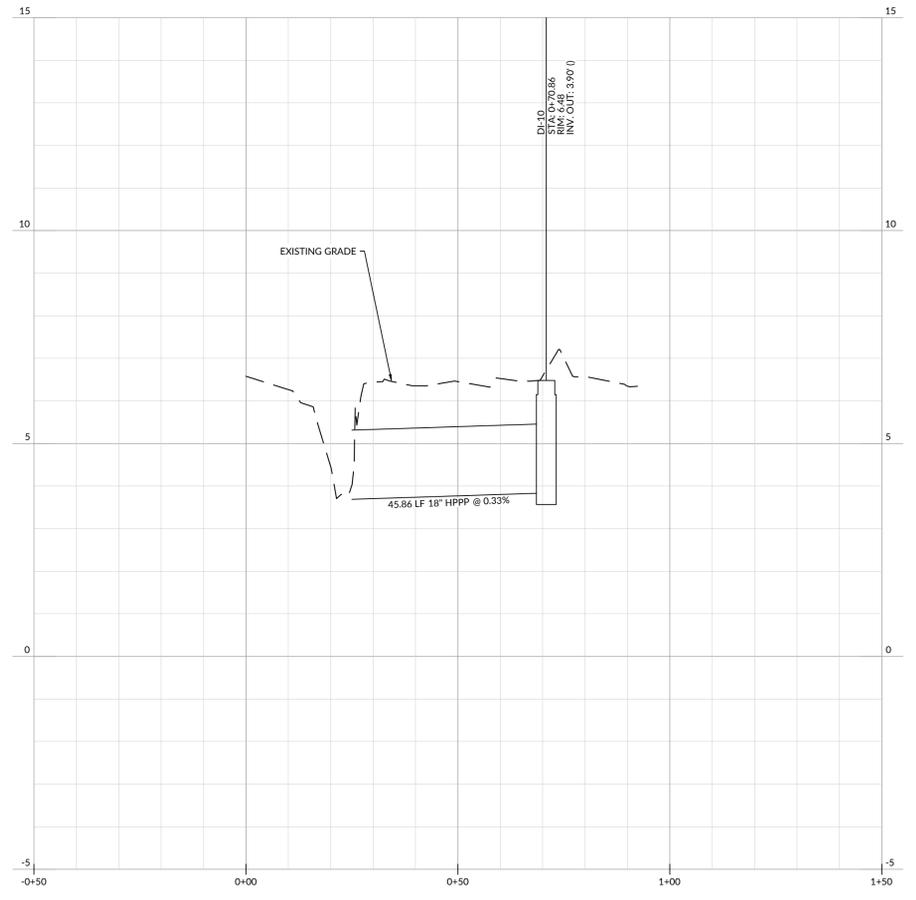
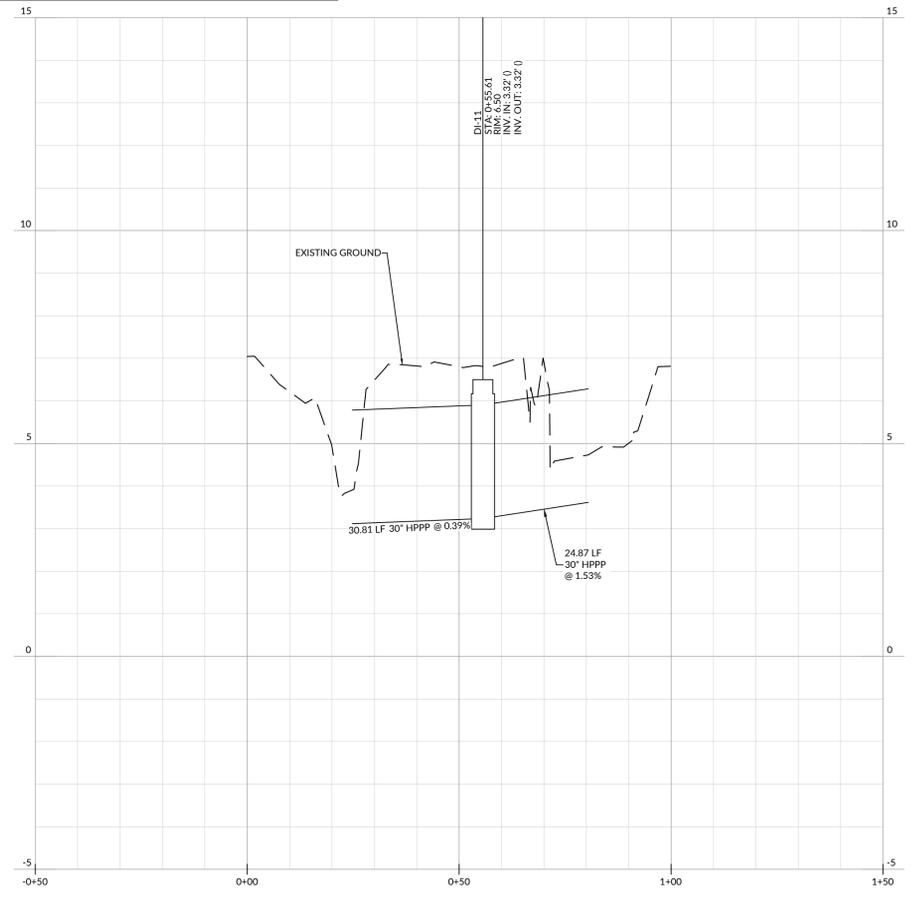
WithersRavenel
 8466 Charlotte Highway | Building 400 | Powells Point, NC 27966
 License #: F-1479 | t: 252.491.8147 | www.withersravenel.com



TOWN OF NAGS HEAD
 P.O. BOX 99 5401 S. GREATAN HWY
 NAGS HEAD, NC 27959



- NOTES:**
- CONTRACTOR SHALL FIELD VERIFY LOCATION AND ELEVATION OF EXISTING UTILITIES ALONG THE PROPOSED UTILITY ALIGNMENTS. THE ENGINEER/OWNER SHALL BE NOTIFIED OF ANY POTENTIAL CONFLICTS PRIOR TO THE START OF CONSTRUCTION.
 - WATER SERVICES THAT CROSS EXISTING PAVEMENT SHALL BE INSTALLED IN A MINIMUM 2" DIA SCH 40 PVC SLEEVE. THE SLEEVE SHALL BE INSTALLED USING A PNEUMATIC BORING TOOL AND SHALL EXTEND 3' BEYOND THE EDGE OF PAVEMENT. ANY OPEN EXCAVATION FOR WATER SERVICES IN PAVED SURFACES MUST BE APPROVED BY THE OWNER/ENGINEER.
 - EXISTING WATER MAINS SHALL REMAIN IN OPERATION DURING CONSTRUCTION.
 - CONTRACTOR SHALL COORDINATE WITH THE OWNER AND RESIDENTS FOR SERVICE DISRUPTIONS DURING WATER SERVICE CONNECTIONS.
 - AFTER COMPLETION OF THE PROPOSED WATER MAIN AND ACCEPTANCE BY THE OWNER, VALVES ON THE EXISTING ABANDONED WATER MAIN SHALL BE TURNED OFF AND BACKFILL WITH CONCRETE.
 - CONTRACTOR SHALL PHASE CONSTRUCTION SO EXISTING WATER MAIN ABANDONMENT IS COMPLETE PRIOR TO STORM SEWER INSTALLATION IN AREAS WHERE POTENTIAL UTILITY CONFLICTS MAY EXIST.
 - DAMAGE TO EXISTING UTILITIES AS A RESULT OF CONSTRUCTION SHALL BE REPAIRED/REPLACED AT NO COST TO THE OWNER.
 - THE TOWN OF NAGS HEAD SHALL COORDINATE PERMISSIONS AND/OR EASEMENTS AS NECESSARY TO CONSTRUCT PROPOSED IMPROVEMENTS.



SCALE:
1" = 20' HORIZ.
1" = 2' VERT.

**TOWN OF NAGS HEAD
CAPITAL IMPROVEMENT
PROJECT**



INITIAL PLAN DATE: 04/11/2025
REVISIONS:
A - 04/11/2025 BKS
CONFORMED

WR JOB NUMBER: 24-1284
DRN: BKS DGN: MWS CKD: MWS

**STORM SEWER
ALBATROSS ST
& ATLAS ST**

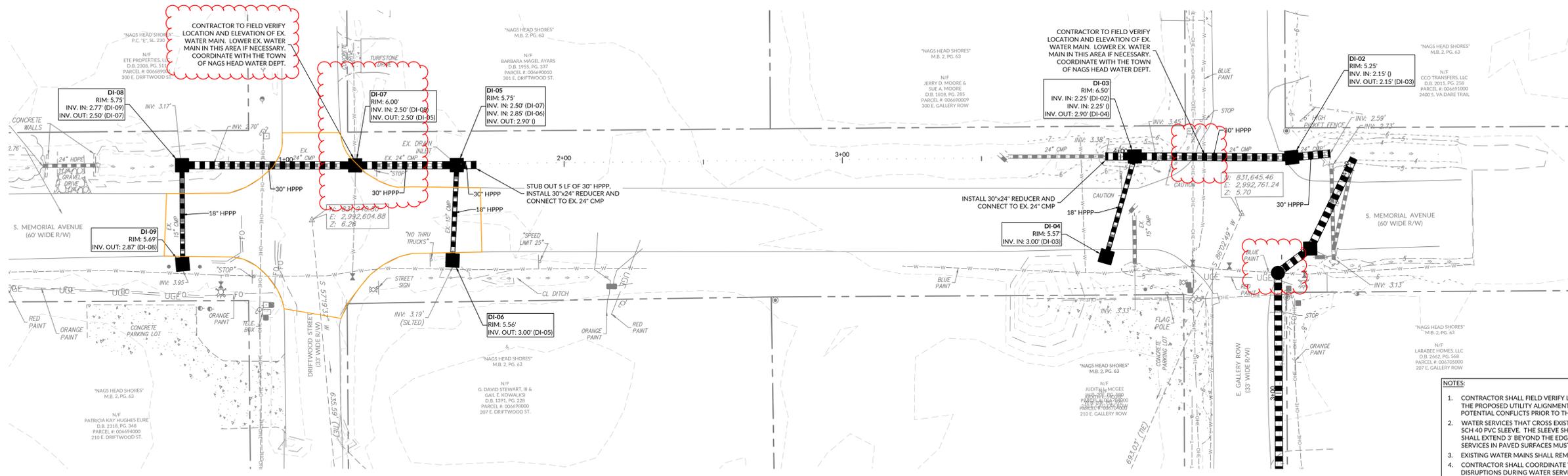
C2.00



TOWN OF NAGS HEAD
P.O. BOX 99 5401 S. GREATAN HWY
NAGS HEAD, NC 27959

NAGS HEAD, NC 27959 | DARE COUNTY

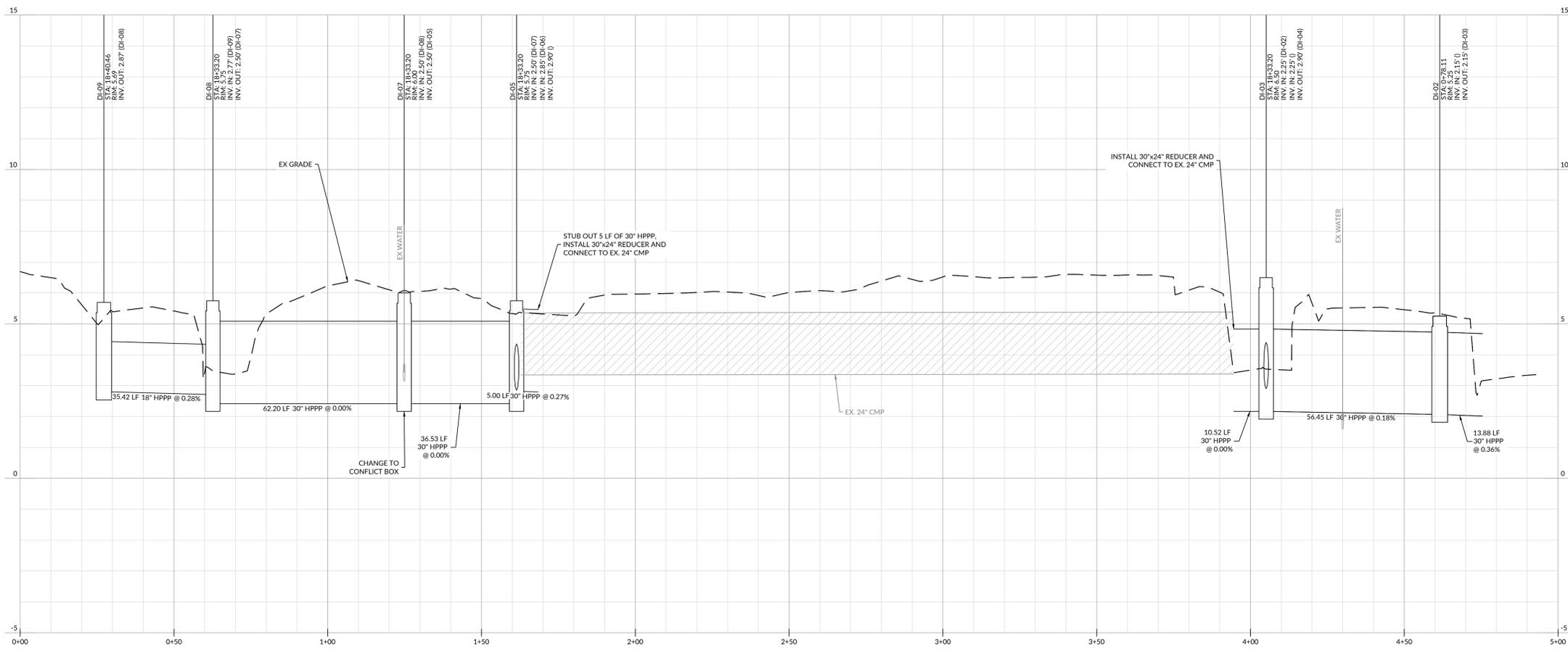
CONFORMED



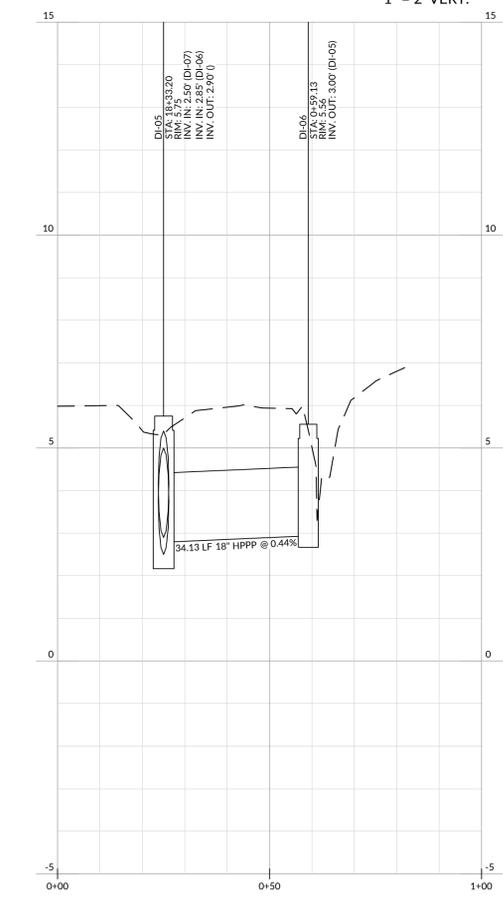
S. MEMORIAL AVENUE DRIFTWOOD ST. TO GALLERY ST. PLAN VIEW

- NOTES:**
- CONTRACTOR SHALL FIELD VERIFY LOCATION AND ELEVATION OF EXISTING UTILITIES ALONG THE PROPOSED UTILITY ALIGNMENTS. THE ENGINEER/OWNER SHALL BE NOTIFIED OF ANY POTENTIAL CONFLICTS PRIOR TO THE START OF CONSTRUCTION.
 - WATER SERVICES THAT CROSS EXISTING PAVEMENT SHALL BE INSTALLED IN A MINIMUM 2" DIA SCH 40 PVC SLEEVE. THE SLEEVE SHALL BE INSTALLED USING A PNEUMATIC BORING TOOL AND SHALL EXTEND 7' BEYOND THE EDGE OF PAVEMENT. ANY OPEN EXCAVATION FOR WATER SERVICES IN PAVED SURFACES MUST BE APPROVED BY THE OWNER/ENGINEER.
 - EXISTING WATER MAINS SHALL REMAIN IN OPERATION DURING CONSTRUCTION.
 - CONTRACTOR SHALL COORDINATE WITH THE OWNER AND RESIDENTS FOR SERVICE DISRUPTIONS DURING WATER SERVICE CONNECTIONS.
 - AFTER COMPLETION OF THE PROPOSED WATER MAIN AND ACCEPTANCE BY THE OWNER, VALVES ON THE EXISTING ABANDONED WATER MAIN SHALL BE TURNED OFF AND BACKFILL WITH CONCRETE.
 - CONTRACTOR SHALL PHASE CONSTRUCTION SO EXISTING WATER MAIN ABANDONMENT IS COMPLETE PRIOR TO STORM SEWER INSTALLATION IN AREAS WHERE POTENTIAL UTILITY CONFLICTS MAY EXIST.
 - DAMAGE TO EXISTING UTILITIES AS A RESULT OF CONSTRUCTION SHALL BE REPAIRED/REPLACED AT NO COST TO THE OWNER.
 - THE TOWN OF NAGS HEAD SHALL COORDINATE PERMISSIONS AND/OR EASEMENTS AS NECESSARY TO CONSTRUCT PROPOSED IMPROVEMENTS.

SCALE:
 1" = 20' HORIZ.
 1" = 2' VERT.



S. MEMORIAL AVENUE DRIFTWOOD ST. TO GALLERY ST. PROFILE VIEW



S. MEMORIAL AVENUE AT DRIFTWOOD STREET PROFILE VIEW

CONFORMED

**TOWN OF NAGS HEAD
 CAPITAL IMPROVEMENT
 PROJECT**

CONSTRUCTION PLANS

NAGS HEAD, NC 27959 | DARE COUNTY



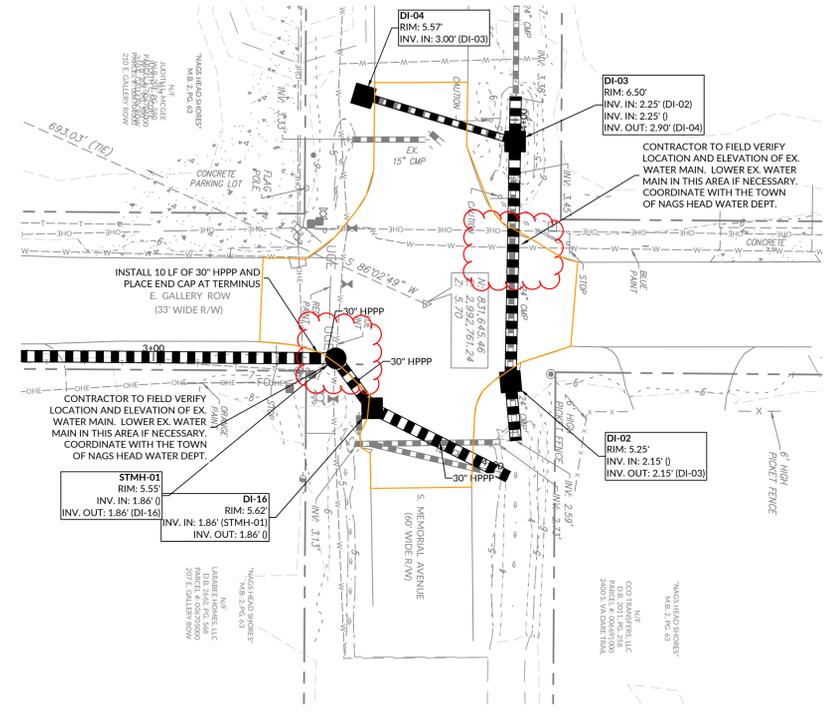
INITIAL PLAN DATE: 04/11/2025
 REVISIONS:
 A - 04/11/2025 BKS
 CONFORMED

WR JOB NUMBER: 24-1284
 DRN: BKS DGN: MWS CKD: MWS

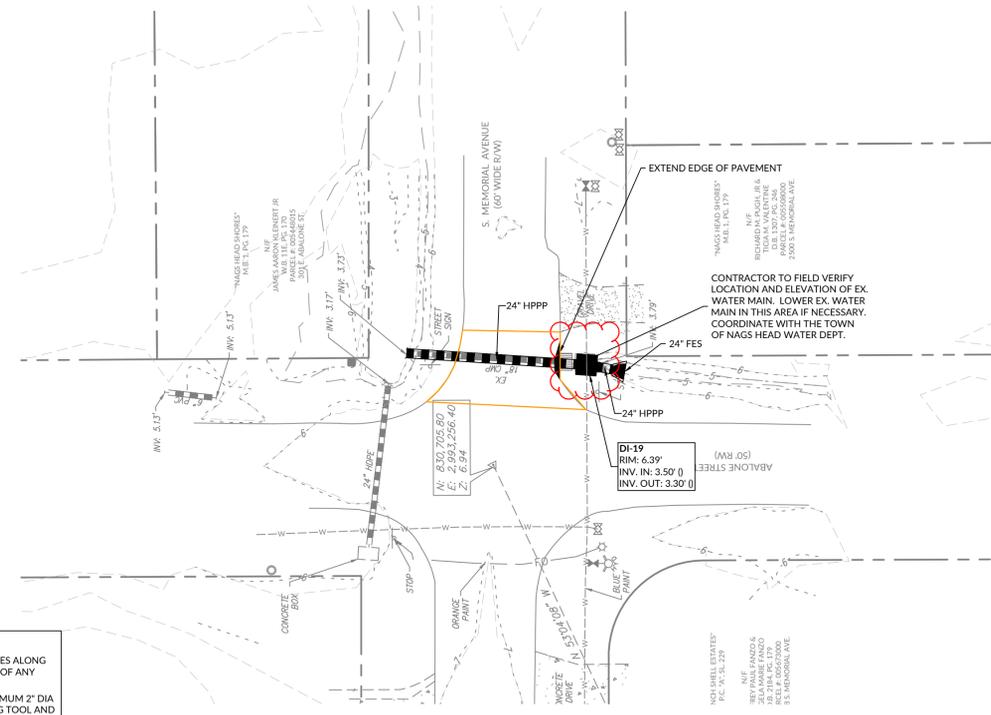
**STORM SEWER
 DRIFTWOOD ST TO
 GALLERY ST**

C2.01





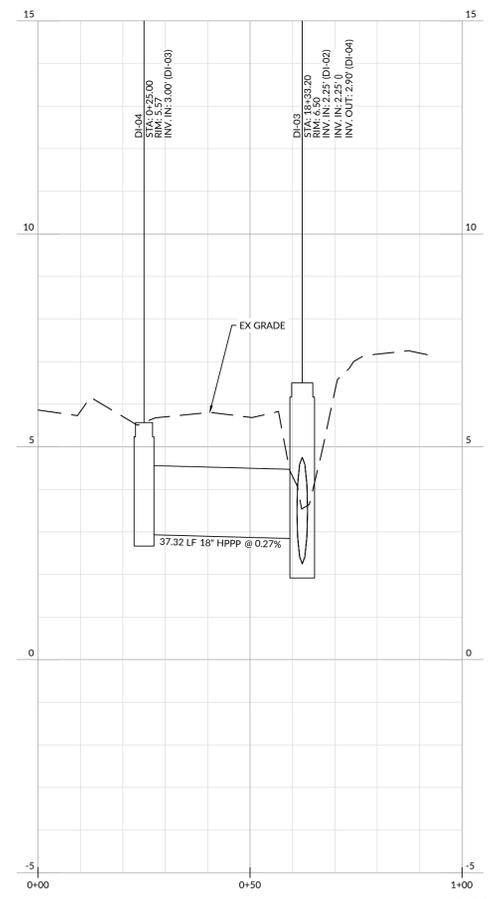
E. GALLERY STREET @ S. MEMORIAL AVENUE
PLAN VIEW



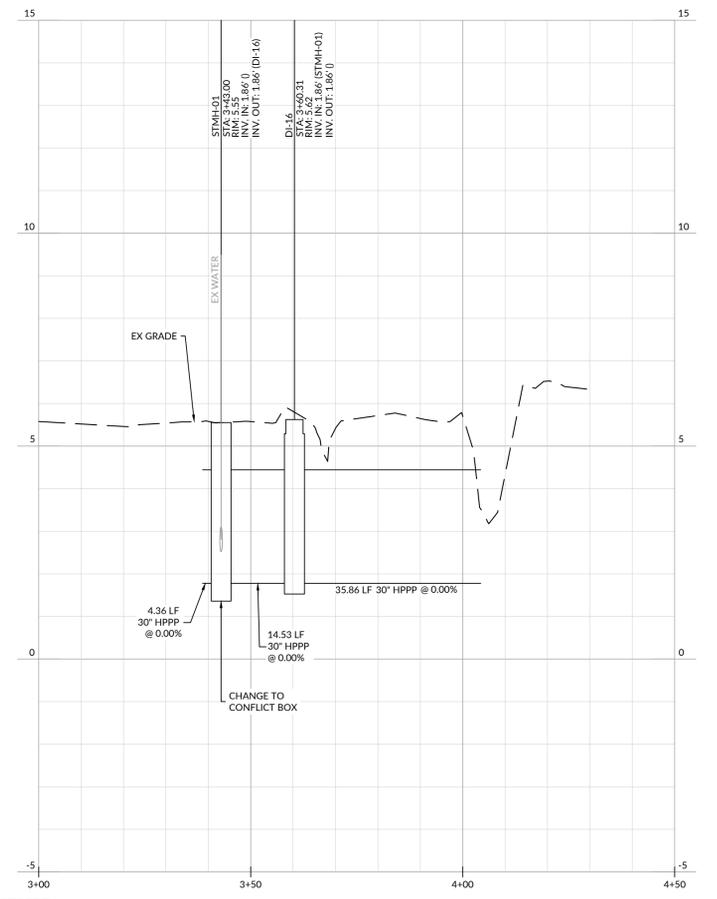
S. MEMORIAL AVENUE AT ABALONE STREET
PLAN VIEW

- NOTES:
- CONTRACTOR SHALL FIELD VERIFY LOCATION AND ELEVATION OF EXISTING UTILITIES ALONG THE PROPOSED UTILITY ALIGNMENTS. THE ENGINEER/OWNER SHALL BE NOTIFIED OF ANY POTENTIAL CONFLICTS PRIOR TO THE START OF CONSTRUCTION.
 - WATER SERVICES THAT CROSS EXISTING PAVEMENT SHALL BE INSTALLED IN A MINIMUM 2" DIA SCH 40 PVC SLEEVE. THE SLEEVE SHALL BE INSTALLED USING A PNEUMATIC BORING TOOL AND SHALL EXTEND 3' BEYOND THE EDGE OF PAVEMENT. ANY OPEN EXCAVATION FOR WATER SERVICES IN PAVED SURFACES MUST BE APPROVED BY THE OWNER/ENGINEER.
 - EXISTING WATER MAINS SHALL REMAIN IN OPERATION DURING CONSTRUCTION.
 - CONTRACTOR SHALL COORDINATE WITH THE OWNER AND RESIDENTS FOR SERVICE DISRUPTIONS DURING WATER SERVICE CONNECTIONS.
 - AFTER COMPLETION OF THE PROPOSED WATER MAIN AND ACCEPTANCE BY THE OWNER, VALVES ON THE EXISTING ABANDONED WATER MAIN SHALL BE TURNED OFF AND BACKFILL WITH CONCRETE.
 - CONTRACTOR SHALL PHASE CONSTRUCTION SO EXISTING WATER MAIN ABANDONMENT IS COMPLETE PRIOR TO STORM SEWER INSTALLATION IN AREAS WHERE POTENTIAL UTILITY CONFLICTS MAY EXIST.
 - DAMAGE TO EXISTING UTILITIES AS A RESULT OF CONSTRUCTION SHALL BE REPAIRED/REPLACED AT NO COST TO THE OWNER.
 - THE TOWN OF NAGS HEAD SHALL COORDINATE PERMISSIONS AND/OR EASEMENTS AS NECESSARY TO CONSTRUCT PROPOSED IMPROVEMENTS.

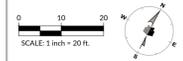
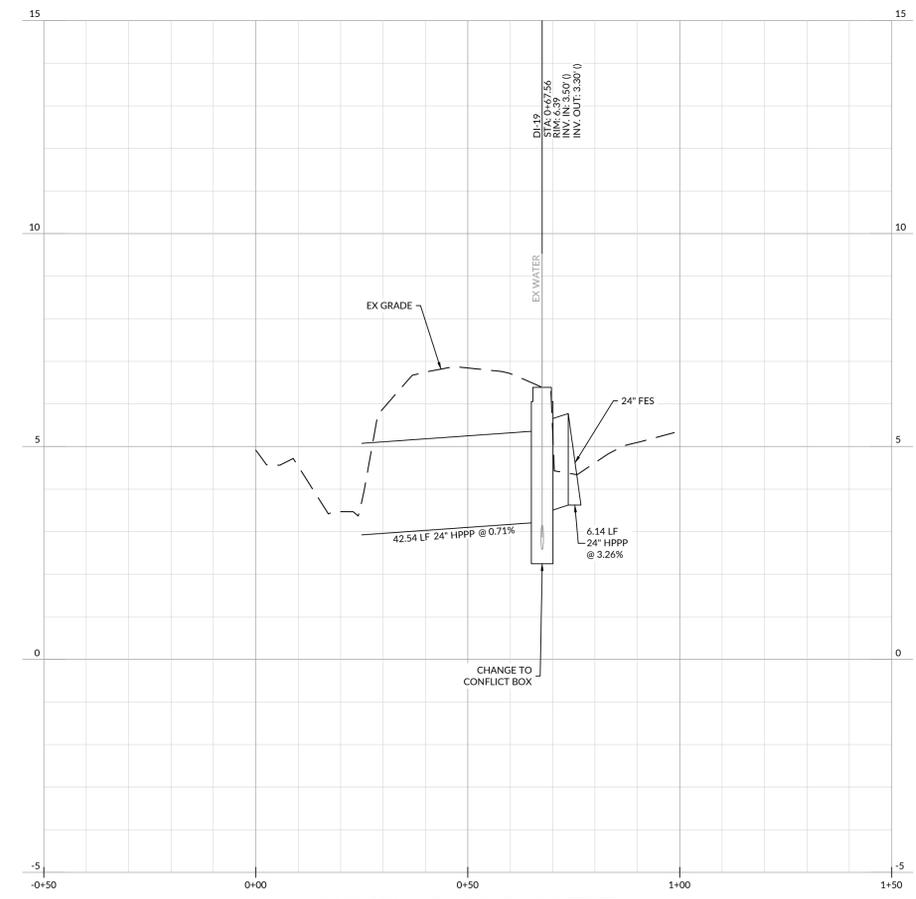
SCALE:
1" = 20' HORIZ.
1" = 2' VERT.



E. GALLERY STREET
PROFILE VIEW



S. MEMORIAL AVENUE AT ABALONE STREET
PROFILE VIEW



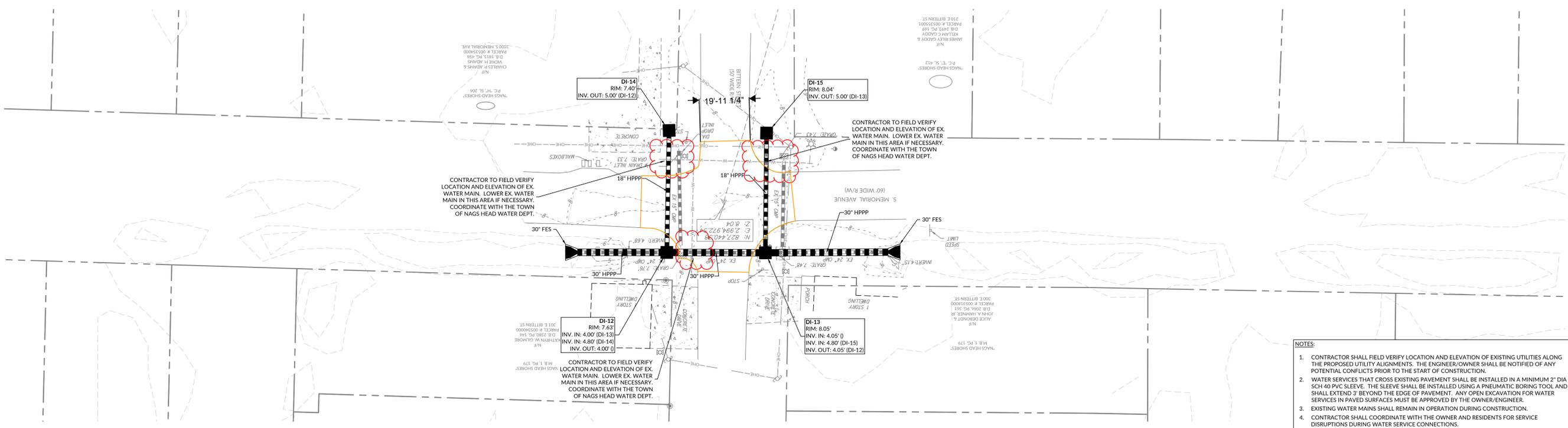
INITIAL PLAN DATE: 04/11/2025
REVISIONS:
A - 04/11/2025 BKS
CONFORMED

WR JOB NUMBER: 24-1284
DRN: BKS DGN: MWS CKD: MWS

**STORM SEWER
GALLERY ST AND
ABALONE ST**

C2.02

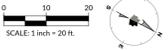
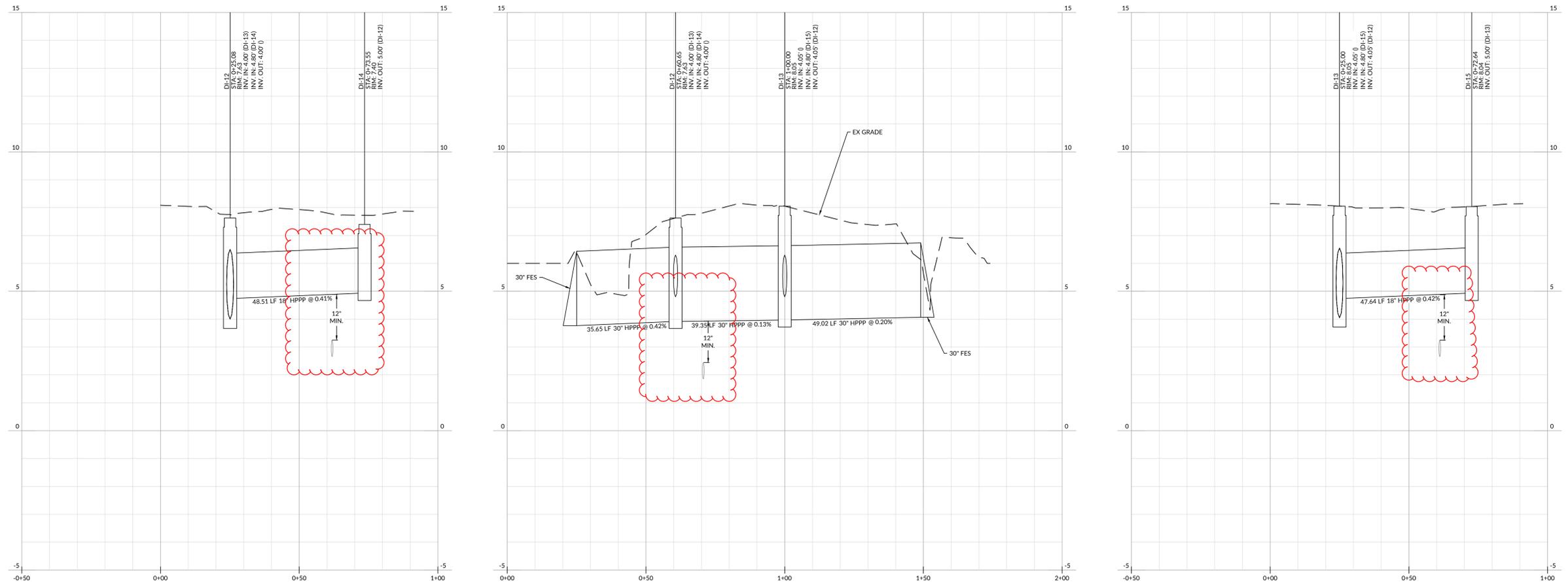
CONFORMED



S. MEMORIAL AVENUE AT BITTERN STREET
PLAN VIEW

- NOTES:**
- CONTRACTOR SHALL FIELD VERIFY LOCATION AND ELEVATION OF EXISTING UTILITIES ALONG THE PROPOSED UTILITY ALIGNMENTS. THE ENGINEER/OWNER SHALL BE NOTIFIED OF ANY POTENTIAL CONFLICTS PRIOR TO THE START OF CONSTRUCTION.
 - WATER SERVICES THAT CROSS EXISTING PAVEMENT SHALL BE INSTALLED IN A MINIMUM 2" DIA SCH 40 PVC SLEEVE. THE SLEEVE SHALL BE INSTALLED USING A PNEUMATIC BORING TOOL AND SHALL EXTEND 3' BEYOND THE EDGE OF PAVEMENT. ANY OPEN EXCAVATION FOR WATER SERVICES IN PAVED SURFACES MUST BE APPROVED BY THE OWNER/ENGINEER.
 - EXISTING WATER MAINS SHALL REMAIN IN OPERATION DURING CONSTRUCTION.
 - CONTRACTOR SHALL COORDINATE WITH THE OWNER AND RESIDENTS FOR SERVICE DISRUPTIONS DURING WATER SERVICE CONNECTIONS.
 - AFTER COMPLETION OF THE PROPOSED WATER MAIN AND ACCEPTANCE BY THE OWNER, VALVES ON THE EXISTING ABANDONED WATER MAIN SHALL BE TURNED OFF AND BACKFILL WITH CONCRETE.
 - CONTRACTOR SHALL PHASE CONSTRUCTION SO EXISTING WATER MAIN ABANDONMENT IS COMPLETE PRIOR TO STORM SEWER INSTALLATION IN AREAS WHERE POTENTIAL UTILITY CONFLICTS MAY EXIST.
 - DAMAGE TO EXISTING UTILITIES AS A RESULT OF CONSTRUCTION SHALL BE REPAIRED/REPLACED AT NO COST TO THE OWNER.
 - THE TOWN OF NAGS HEAD SHALL COORDINATE PERMISSIONS AND/OR EASEMENTS AS NECESSARY TO CONSTRUCT PROPOSED IMPROVEMENTS.

SCALE:
1" = 20' HORIZ.
1" = 2' VERT.



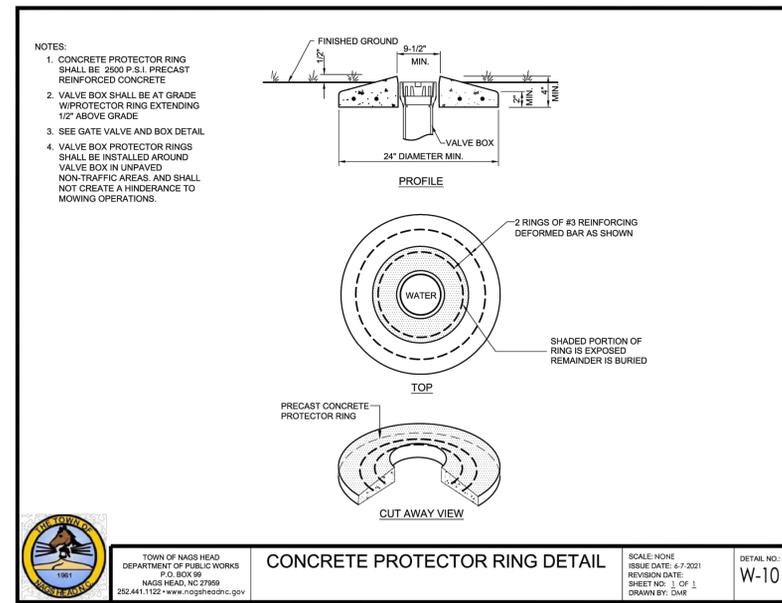
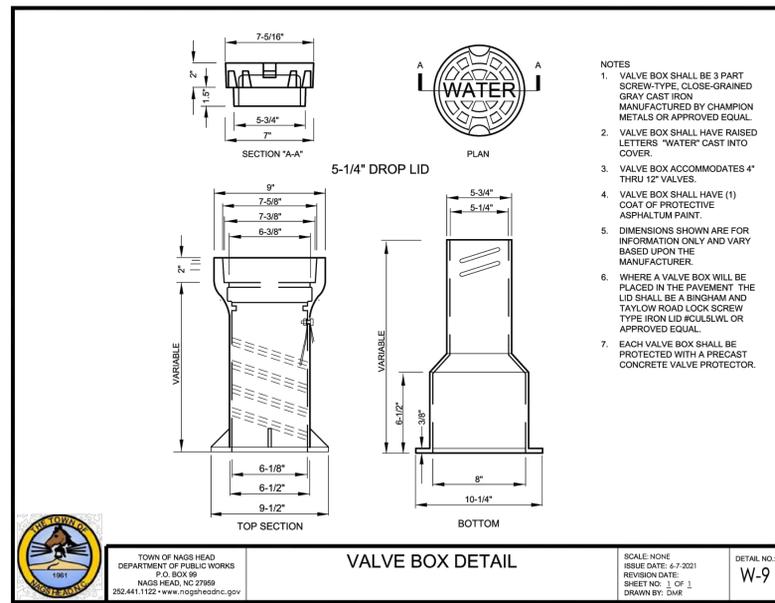
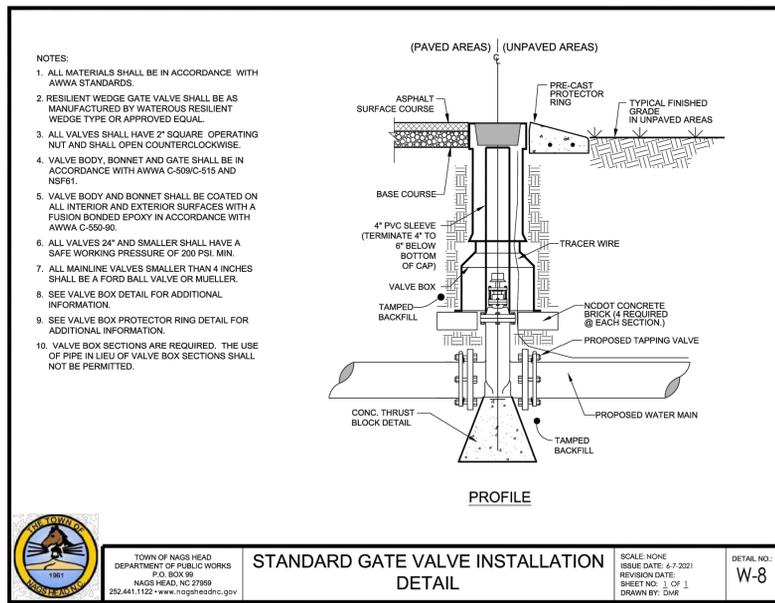
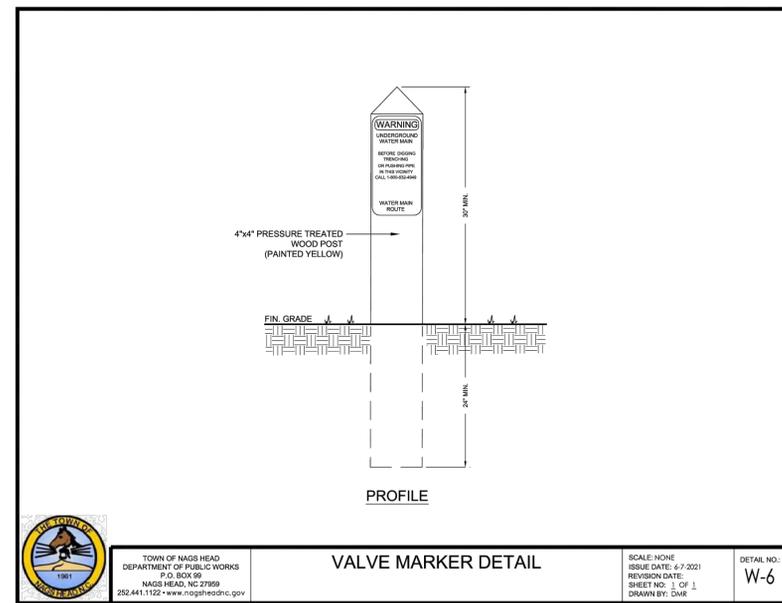
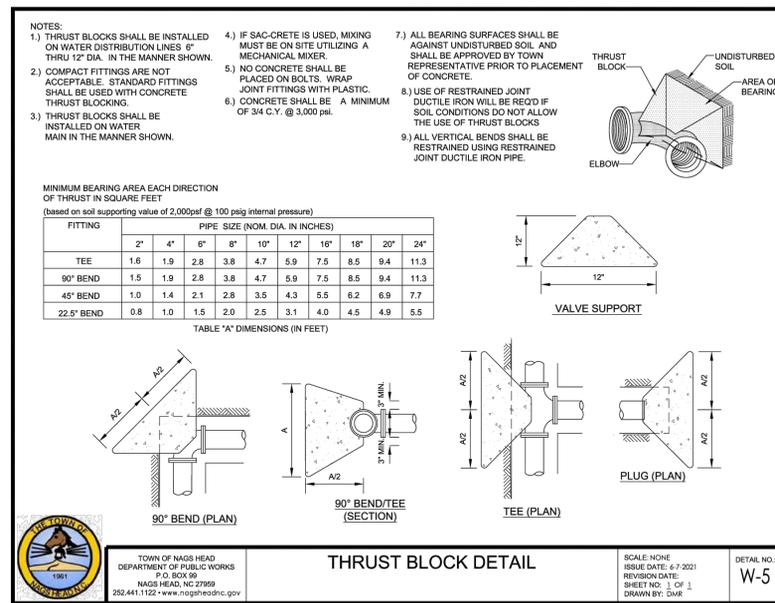
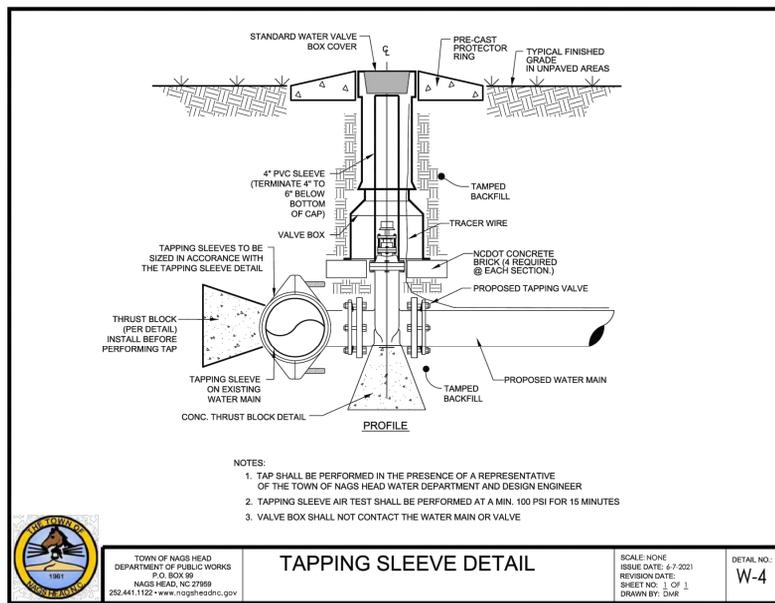
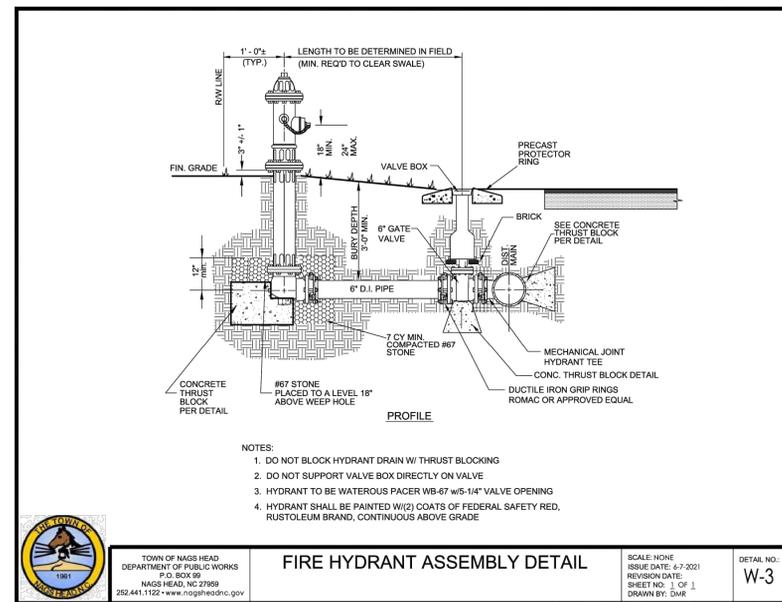
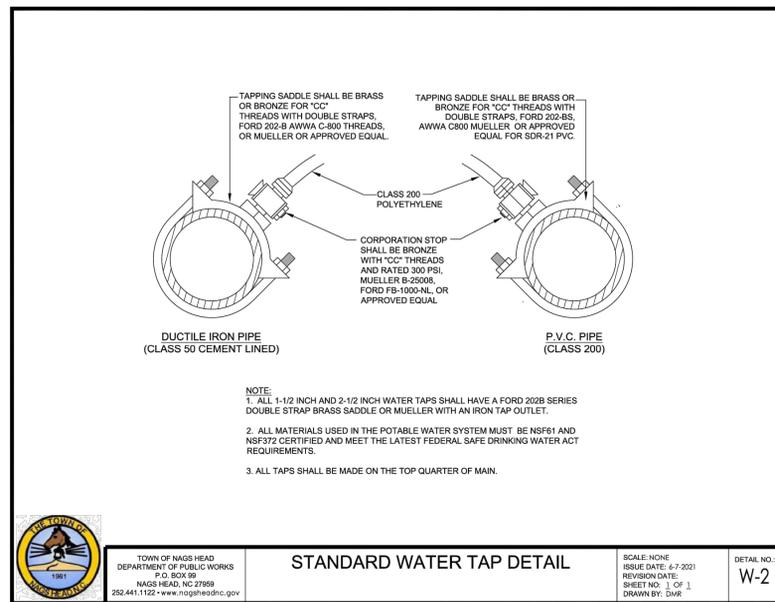
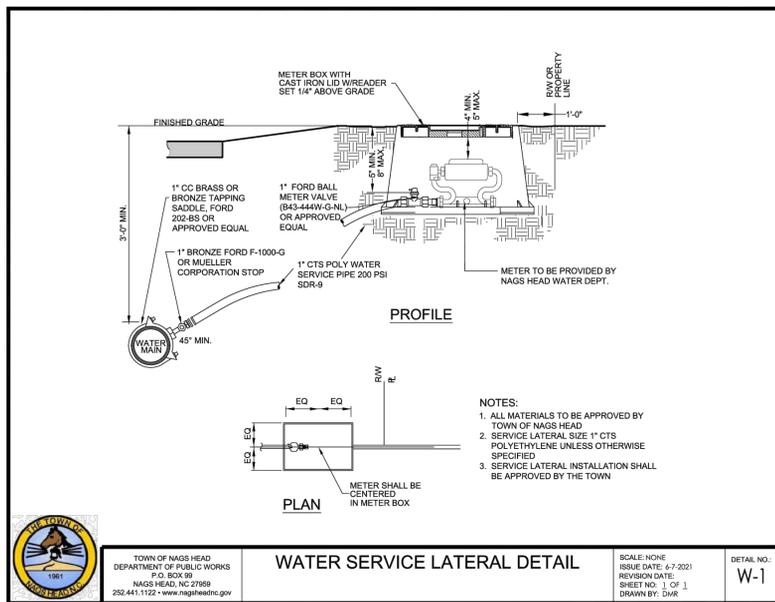
INITIAL PLAN DATE: 04/11/2025
REVISIONS:
A - 04/11/2025 BKS
CONFORMED

WR JOB NUMBER: 24-1284
DRN: BKS DGN: MWS CKD: MWS

**STORM SEWER
BITTERN ST AT
MEMORIAL AVE**

C2.05

CONFORMED



WithersRavenel
8466 Crantock Highway | Building 400 | Powells Point, NC 27966
License #: F-1479 | t: 252.491.8147 | www.withersravenel.com

TOWN OF NAGS HEAD
P.O. BOX 99 5401 S. GREATAN HWY
NAGS HEAD, NC 27959

**TOWN OF NAGS HEAD
CAPITAL IMPROVEMENT
PROJECT**

CONSTRUCTION PLANS

NAGS HEAD, NC 27959 | DARE COUNTY

Prepared by: **Michael W. Strader, Jr.**
Professional Engineer
SEAL 037813
MICHAEL W. STRADER, JR.
4/11/2025

INITIAL PLAN DATE: 04/11/2025
REVISIONS:
A - 04/11/2025 BKS
CONFORMED

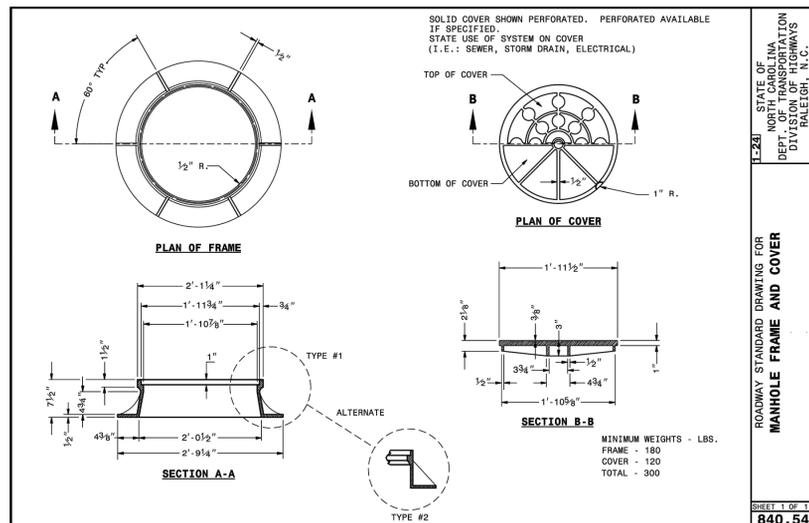
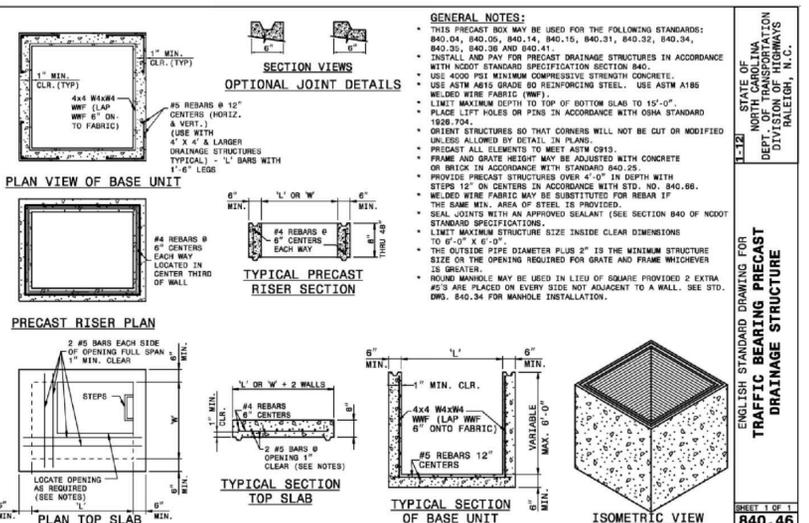
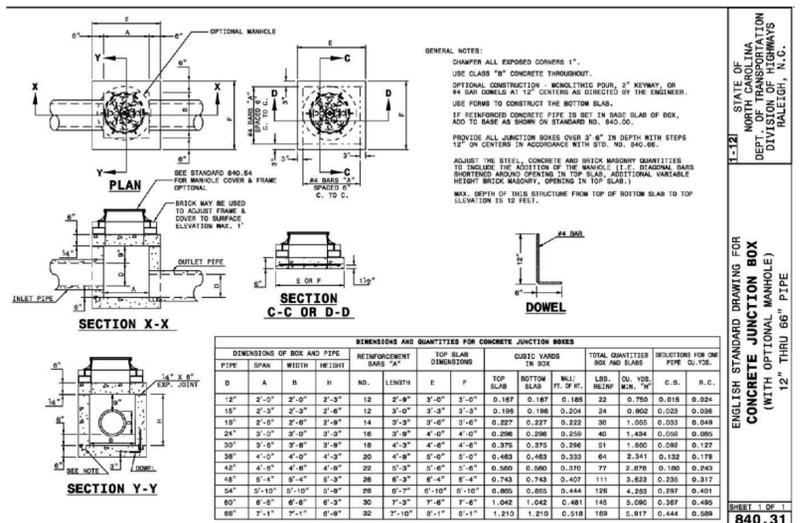
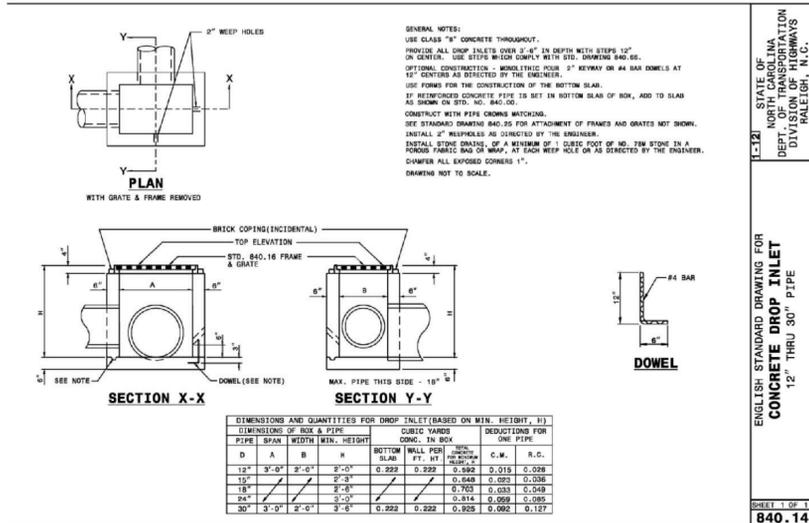
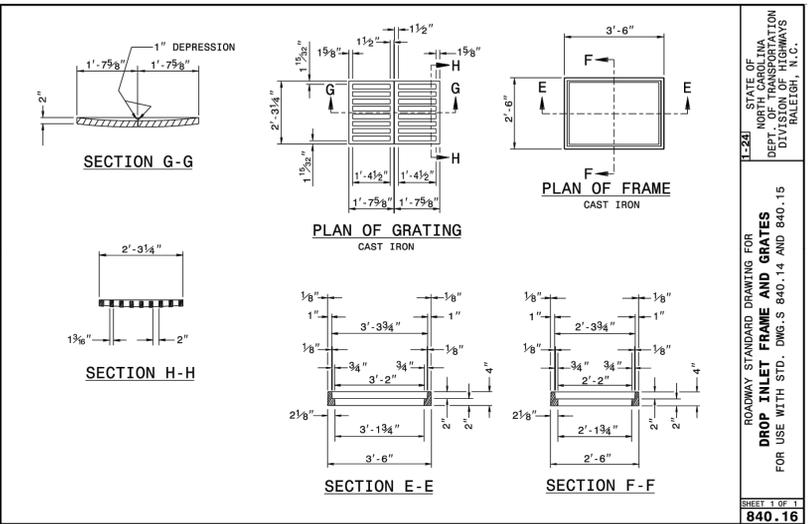
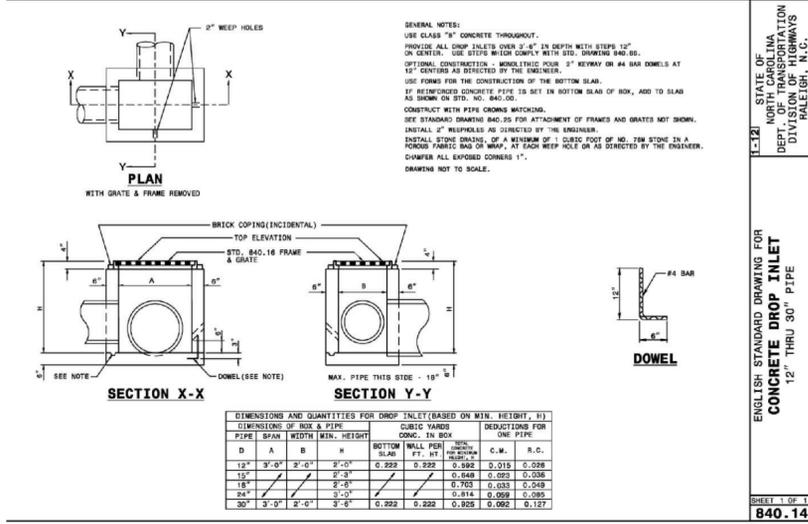
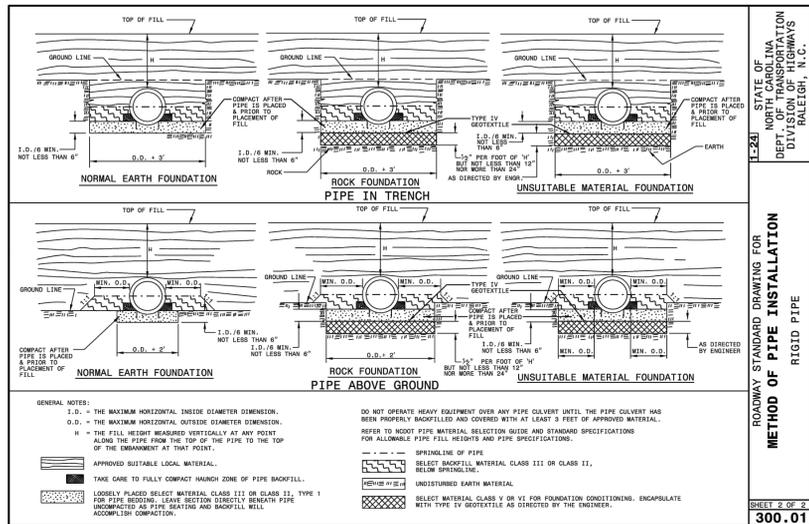
WR JOB NUMBER 24-1284
DRN: BKS DGN: MWS CKD: MWS

UTILITY DETAILS

CONFORMED

C3.01

our people • your success



NOTES:
1. SPECIFICATIONS ATTACHED HEREON REFLECT THOSE AS OUTLINE IN NCOTD STANDARD 840, BRICK OR CONCRETE CONSTRUCTION. AN ALTERNATE PRECAST DRAINAGE STRUCTURE MAY BE UTILIZED BASED UPON PRIOR APPROVAL BY THE ENGINEER.
2. ANY DEVIATIONS FROM THE APPROVED PLAN & SPECIFICATIONS SHALL BE APPROVED BY THE ENGINEER PRIOR TO CONSTRUCTION.
3. FOR JUNCTION BOX CONSTRUCTION, NCOTD STD 840.16 DROP INLET FRAME & GRATE SHALL BE UTILIZED IN LIEU OF THE STANDARD MANHOLE RIM AND COVER.
4. ALL EXCAVATIONS SHALL COMPLY WITH THE TERMS AND CONDITIONS OF THE CONSTRUCTION STANDARDS FOR EXCAVATIONS IN OSHA SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION CHAPTER XVIII OF TITLE 29 CFR, PART 1926. THE CONTRACTOR SHALL HAVE A COMPETENT PERSON ON THE JOB AT ALL TIMES AND SHALL EMPLOY A PROFESSIONAL ENGINEER TO ACT UPON ALL PERTINENT MATTERS OF THE WORK.

Date: _____ Page: _____

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

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

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

GROUND STABILIZATION SPECIFICATION

Stabilize the ground sufficiently so that rain will not dislodge the soil. Use one of the techniques in the table below:

Temporary Stabilization	Permanent Stabilization
<ul style="list-style-type: none"> Temporary grass seed covered with straw or other mulches and tackifiers. Hydroseeding Rolled erosion control products with or without temporary grass seed Appropriately applied straw or other mulch Plastic sheeting 	<ul style="list-style-type: none"> Permanent grass seed covered with straw or other mulches and tackifiers. Geotextile fabrics such as permanent soil reinforcement matting Hydroseeding Shrubs or other permanent plantings covered with mulch Uniform and evenly distributed ground cover sufficient to restrain erosion Structural methods such as concrete, asphalt or retaining walls Rolled erosion control products with grass seed

POLYACRYLAMIDES (PAMS) AND FLOCCULANTS

- Select flocculants that are appropriate for the soils being exposed during construction, selecting from the NC DWR List of Approved PAMS/Flocculants as soon as practicable but in no case longer than 90 calendar days after the last land disturbing activity.
- 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.

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.

ONSITE CONCRETE WASHOUT STRUCTURE WITH LINER

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.
- Do not use concrete washouts for dewatering or storing defective curb or sidewalk sections. Stormwater accumulated within the washout may not be pumped into or discharged to the storm drain system or receiving surface waters. Liquid waste must be pumped out and removed from project.
- 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.

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.



NCG-01 GROUND COVER & MATERIALS HANDLING

Date: _____ Page: _____

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:

- 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.
- The non-surface withdrawal has been reported as an anticipated bypass in accordance with Part III, Section C, Item (2)(c) and (d) of this permit.
- Dewatering discharges are treated with controls to minimize discharges of pollutants from stormwater that is removed from the sediment basin. Examples of appropriate controls include properly sited, designed and maintained dewatering tanks, weir tanks, and filtration systems
- 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.
- Velocity dissipation devices such as check dams, sediment traps, and riprap are provided at the discharge points of all dewatering devices, and
- Sediment removed from the dewatering treatment devices described in item (c) above is disposed of in a manner that does not cause deposition of sediment into waters of the United States.

PART III SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION A: SELF-INSPECTION

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

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

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

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.

Item to Document	Document Requirements
(a) Each E&SC measure has been installed and does not significantly deviate from the locations, dimensions and relative elevations shown on the approved E&SC plan.	Initial and date each E&SC measure on a copy of the approved E&SC plan or complete, date and sign an inspection report that lists each E&SC measure shown on the approved E&SC plan. This documentation is required upon the initial installation of the E&SC measures are modified after initial installation.
(b) A phase of grading has been completed.	Initial and date a copy of the approved E&SC plan or complete, date and sign an inspection report to indicate completion of the construction phase.
(c) Ground cover is located and installed in accordance with the approved E&SC plan.	Initial and date a copy of the approved E&SC plan or complete, date and sign an inspection report to indicate compliance with approved ground cover specifications.
(d) The maintenance and repair requirements for all E&SC measures have been performed.	Complete, date and sign an inspection report.
(e) Corrective actions have been taken to E&SC measures.	Initial and date a copy of the approved E&SC plan or complete, date and sign an inspection report to indicate the completion of the corrective action.

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:

- This General Permit as well as the Certificate of Coverage, after it is received.
- 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-NCI 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]

SECTION C: REPORTING

1. Occurrences that Must be Reported

Permittees shall report the following occurrences:

- Visible sediment deposition in a stream or wetland.
 - 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).
- 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. 143-215.05.
- Anticipated bypasses and unanticipated bypasses.
- Noncompliance with the conditions of this permit that may endanger health or the environment.

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.

Occurrence	Reporting Timeframe (After Discovery) and Other Requirements
(a) Visible sediment deposition in a stream or wetland	<ul style="list-style-type: none"> Within 24 hours, an oral or electronic notification. Within 7 calendar days, a report that contains a description of the sediment and actions taken to address the cause of the deposition. Division staff may waive the requirement for a written report on a case-by-case basis. If the stream is named on the NC 303(d) list as impaired for sediment-related caused, the permittee may be required to perform additional monitoring, inspections or apply more stringent practices if staff determine that additional requirements are needed to assure compliance with the federal or state impaired-waters conditions.
(b) Oil spills and release of hazardous substances per item 1(b)-(c) above	<ul style="list-style-type: none"> Within 24 Hours, an oral or electronic notification. The notification shall include information about the date, time, nature, volume and location of the spill or release.
(c) Anticipated bypasses [40 CFR 122.41(m)(3)]	<ul style="list-style-type: none"> A report at least ten days before the date of the bypass, if possible. The report shall include an evaluation of the anticipated quality and effect of the bypass.
(d) Unanticipated bypasses [40 CFR 122.41(m)(3)]	<ul style="list-style-type: none"> Within 7 calendar days, a report that includes an evaluation of the quality and effect of the bypass.
(e) Noncompliance with the conditions of the permit that may endanger health or the environment [40 CFR 122.41(i)(7)]	<ul style="list-style-type: none"> Within 24 Hours, an oral or electronic notification Within 7 calendar days, a report that contains a description of the noncompliance, and its causes, the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time noncompliance is expected to continue, and steps taken or planned to reduce, eliminate and prevent recurrence of the noncompliance. [40 CFR 122.41(i)(6)]. Division staff may waive the requirement for a written report on a case-by-case basis.



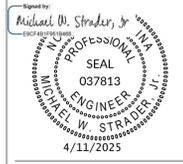
NCG-01 SELF INSPECTION

CONFORMED

NCG-01

C3.04

CONSTRUCTION PLANS
TOWN OF NAGS HEAD
CAPITAL IMPROVEMENT
PROJECT



INITIAL PLAN DATE: 04/11/2025
REVISIONS:
A - 04/11/2025 BKS
CONFORMED

WR JOB NUMBER 24-1284
DRN: BKS DGN: MWS CKD: MWS

WithersRavenel
8466 Charlotte Highway | Building 400 | Powells Point, NC 27966
License #: F-1479 | t: 252.491.8147 | www.withersravenel.com

TOWN OF NAGS HEAD
P.O. BOX 99 5401 S. GREATAN HWY
NAGS HEAD, NC 27959

NAGS HEAD, NC 27959 | DARE COUNTY

our people • your success

DATE: _____ PAGE: _____

Notes:

- Construct the sediment barrier of standard strength or extra strength synthetic filter fabrics.
- Ensure that the height of the sediment fence does not exceed 24 inches above the ground. (Higher fences may impound volumes of water sufficient to cause failure of the structure)
- Construct the filter fabric from a continuous roll out to the length of the barrier to avoid joints. When joints are necessary, securely fasten the filter cloth only at a support post with 4 feet minimum overlap to the next post.
- Support standard strength filter fabric by wire mesh fastened securely to the upslope side of the posts. Extend the wire mesh support to the bottom of the trench. Fasten the wire reinforcement, then fabric on the upslope side of the fence post. Wire or plastic zip ties should have a minimum 50 pound tensile strength.
- When a wire mesh support fence is used, space posts a maximum of 8 feet apart. Supports should be driven securely into the ground a minimum of 24 inches. Wire mesh should be a minimum 14-gauge with 6 inch mesh spacing.
- Extra strength filter fabric with 6 foot post spacing does not require a wire mesh support fence. Securely fasten the filter fabric directly to posts. Wire or plastic zip ties should have a minimum of 50 pound tensile strength.
- Excavate the trench approximately 4 inches wide and 8 inches deep along the proposed line of the posts and upslope from the barrier.
- Place 12 inches of fabric along the bottom and side of the trench.
- Backfill the trench with soil placed over the filter fabric and compact. Thorough compaction of the backfill is critical to silt fence performance.
- Do not attach filter fabric to existing trees.
- Do not place across ditches, streams, or any other areas of concentrated flow.

Slope	Slope Length (ft)	Max. Area (ft ²)
<2%	100	10,000
2 to 5%	75	7,500
5 to 10%	50	5,000
10 to 20%	25	2,500
>20%	15	1,500

Maintenance:

- Inspect all measures at least weekly and after each rainfall of 1.0 inch or greater. Make any required repairs immediately.
- Should the fabric of a sediment fence collapse, tear, decompose, or become ineffective, replace it promptly.
- Remove sediment deposits as necessary to provide adequate storage volume for the next rain and reduce pressure on the fence. Take care to avoid undermining the fence during cleanouts.
- Remove all fencing materials and unstable sediment deposits and bring the area to grade and stabilize it after the contributing drainage area has been properly stabilized.

Effective Date: 9/1/2023
In accordance with the 2013 Design Manual Updates

DATE: _____ PAGE: _____

Notes:

- Clear the area of all debris that might hinder excavation and disposal of spoil.
- Grade shallow depression uniformly towards the inlet with side slopes no greater than 2:1. Grade a 1-foot wide level area set 4 inches below the area adjacent to the inlet.
- Install the Class B or Class 1 riprap in a circle around the inlet. The minimum crest width of the riprap should be 18 inches, with a minimum bottom width of 7.5 feet. The minimum height of the stone is 2 feet.
- The outside face of the riprap is then lined with 12 inches of NC DOT #5 or #57 washed stone.

Maintenance:

- Inspect all measures at least weekly and after each rainfall of 1.0 inch or greater, make any repairs immediately.
- Remove sediment from the sediment pool area when the volume is decreased by half. Stabilize excavated material appropriately.
- Do not damage or undercut the structure during sediment removal. Remove debris and replace stone as needed. If inlet is covered with wire mesh, clean wire mesh free of debris.

Effective Date: 9/1/2023
In accordance with the 2013 Design Manual Updates

DATE: _____ PAGE: _____

Channel Slope (%)	8-inch Diameter Sock	12-inch Diameter Sock
1	67	100
2	33	50
3	22	33
4	17	25
5	13	20

Notes:

- Other materials providing equivalent protection against erosive velocities may be substituted for compost use in silt socks or wattles.
- Fill silt sock/wattle netting uniformly to the desired length such that logs do not deform.
- Use 24 inch long wooden stakes with a 2 inch x 2 inch nominal cross section.
- Install silt sock/wattle(s) to a height on slope so flow will not wash around silt sock/wattle and scour slopes, or as directed.
- Install a minimum of two up-slope stakes and four down-slope stakes at an angle to wedge silt sock/wattle to ground at bottom ditch. Use staples to secure silt sock/wattle to the ground to prevent undermining.
- The use of flocculants such as Polyacrylamide (PAM) is recommended. Apply flocculants on top of sock/wattle and to matting on either side of sock/wattle according to manufacturer recommended rates. Reapply after each 1.0 inch rainfall.

Maintenance:

- Inspect all measures weekly and after each rainfall of 1.0 inch or greater. Remove accumulated sediment and any debris.
- Silt sock/wattle(s) must be replaced if clogged or torn.
- If ponding becomes excessive, the silt sock/wattle may need to be replaced with a larger diameter or a different measure.
- Reinstall if damaged or dislodged.
- Silt socks/Wattles shall be inspected until land disturbance is complete and the area above the measure is permanently stabilized.

Effective Date: 9/1/2023
In accordance with the 2013 Design Manual Updates

DATE: _____ PAGE: _____

Notes:

- 'La' = length of apron. Distance 'La' shall be sufficient length to dissipate velocity.
- Filter material shall be a woven geotextile filter fabric underlayment or 6\"/>

Effective Date: 9/1/2023
In accordance with the 2013 Design Manual Updates

DATE: _____ PAGE: _____

Notes:

- Place stone on a filter fabric foundation.
- The center stone section must be at least 9 inches below natural ground level where the dam abuts the channel banks.
- Extend stone at least 1.5 feet beyond the ditch bank to keep water from cutting around the ends of the check dam.
- Set spacing between dams to assure that the elevation at the top of the lower dam is the same as the toe elevation of the upper dam.
- Protect the channel after the lowest check dam from heavy flow that could cause erosion.
- Make sure the channel reach above the most upstream dam is 800ft.
- Ensure that other areas of the channel, such as culvert entrances below the check dams, are not subject to damage or blockage from displaced stones.
- Riprap and filter fabric should be keyed in to prevent undercutting.
- Ends of check dams may need to be turned uphill to prevent bypass and better conform to site conditions.
- Do not place check dams in intermittent or perennial streams.

Maintenance:

- Inspect check dams and channels at least weekly and after each rainfall of 1.0 inch or greater. Clean out sediment, straw, limbs or other debris that could clog the channel when needed.
- Anticipate submergence and deposition above the check dam and erosion from high flows around the edges of the dam. Correct all damage immediately. If significant erosion occurs between dams, additional measures can be taken such as installing a protective riprap liner in that portion of the channel.
- Remove sediment accumulated behind the dams as needed to prevent damage to channel vegetation, allow the channel to drain through the stone check dam, and prevent large flows from carrying sediment over the dam. Add stones to the dams as needed to maintain design height and cross section.

Effective Date: 9/1/2023
In accordance with the 2013 Design Manual Updates

DATE: _____ PAGE: _____

Effective Date: 9/1/2023
In accordance with the 2013 Design Manual Updates

DATE: _____ PAGE: _____

Notes:

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

Maintenance Notes:

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

Effective Date: 9/1/2023
In accordance with the 2013 Design Manual Updates

DATE: _____ PAGE: _____

Notes:

- CONTRACTOR SHALL EXERCISE CAUTION NOT TO BURST OR DAMAGE THE TEMPORARY SEDIMENT FILTER BAG WHEN PUMPING.
- THE LENGTH AND WIDTH OF THE TEMPORARY SEDIMENT BAG SHOWN ON THIS DRAWING MAY VARY PER VENDOR SPECIFICATIONS.
- TEMPORARY SEDIMENT FILTER BAGS SHALL BE EQUIPPED WITH A SEWN-IN SLEEVE OF SUFFICIENT SIZE TO ACCEPT A MINIMUM 4 INCH DIAMETER PUMP DISCHARGE HOSE. THE DISCHARGE HOSE SHOULD BE EXTENDED INTO THIS SLEEVE A MINIMUM OF SIX INCHES AND BE TIGHTLY SECURED WITH A HOSE CLAMP OR OTHER SUITABLE MEANS TO PREVENT LEAKAGE. HOSE CONNECTION THROUGH A SLIT IN THE BAG WILL NOT BE ACCEPTABLE.
- THE PUMP DISCHARGE HOSE CONNECTION SLEEVE SHALL BE SECURELY TIED OFF DURING DISPOSAL OF THE TEMPORARY SEDIMENT FILTER BAG IN ORDER TO PREVENT LEAKAGE OF COLLECTED SEDIMENTS.
- TEMPORARY SEDIMENT FILTER BAG SHALL BE REPLACED WHEN 6 INCHES OF SEDIMENT HAS ACCUMULATED OR IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
- CONTRACTOR SHALL SIZE THE BAG DEPENDING ON USE AND FLOW REQUIREMENTS.

Effective Date: 9/1/2023
In accordance with the 2013 Design Manual Updates

DATE: _____ PAGE: _____

Notes:

- CONTRACTOR SHALL EXERCISE CAUTION NOT TO BURST OR DAMAGE THE TEMPORARY SEDIMENT FILTER BAG WHEN PUMPING.
- THE LENGTH AND WIDTH OF THE TEMPORARY SEDIMENT BAG SHOWN ON THIS DRAWING MAY VARY PER VENDOR SPECIFICATIONS.
- TEMPORARY SEDIMENT FILTER BAGS SHALL BE EQUIPPED WITH A SEWN-IN SLEEVE OF SUFFICIENT SIZE TO ACCEPT A MINIMUM 4 INCH DIAMETER PUMP DISCHARGE HOSE. THE DISCHARGE HOSE SHOULD BE EXTENDED INTO THIS SLEEVE A MINIMUM OF SIX INCHES AND BE TIGHTLY SECURED WITH A HOSE CLAMP OR OTHER SUITABLE MEANS TO PREVENT LEAKAGE. HOSE CONNECTION THROUGH A SLIT IN THE BAG WILL NOT BE ACCEPTABLE.
- THE PUMP DISCHARGE HOSE CONNECTION SLEEVE SHALL BE SECURELY TIED OFF DURING DISPOSAL OF THE TEMPORARY SEDIMENT FILTER BAG IN ORDER TO PREVENT LEAKAGE OF COLLECTED SEDIMENTS.
- TEMPORARY SEDIMENT FILTER BAG SHALL BE REPLACED WHEN 6 INCHES OF SEDIMENT HAS ACCUMULATED OR IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
- CONTRACTOR SHALL SIZE THE BAG DEPENDING ON USE AND FLOW REQUIREMENTS.

Effective Date: 9/1/2023
In accordance with the 2013 Design Manual Updates

S:\111584-17-24-25\mwf\mwf.dwg - sheet manufacturing project\CAD\drawing\mwf\mwf.dwg - Plot on April 11, 2025 10:50:24 AM - BDRBKG

WithersRavenel
8466 Charlotte Highway | Building 400 | Powells Point, NC 27966
License #: F-1479 | T: 252.491.8147 | www.withersravenel.com

TOWN OF NAGS HEAD
P.O. BOX 99 5401 S. GREATAN HWY
NAGS HEAD, NC 27959

**TOWN OF NAGS HEAD
CAPITAL IMPROVEMENT
PROJECT**

CONSTRUCTION PLANS

NAGS HEAD, NC 27959 | DARE COUNTY

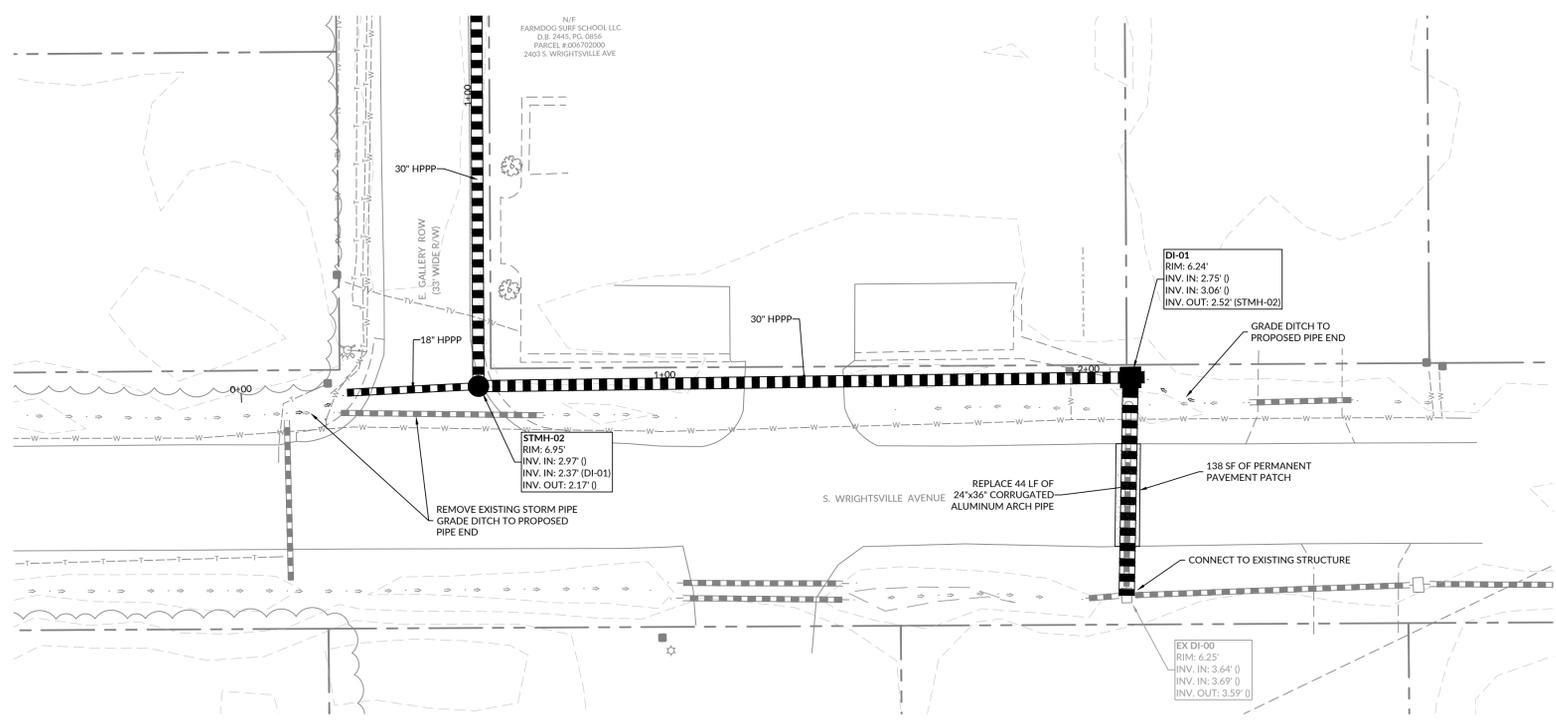
our people • your success

WR JOB NUMBER 24-1284
DRN: BKS DGN: MWS CKD: MWS

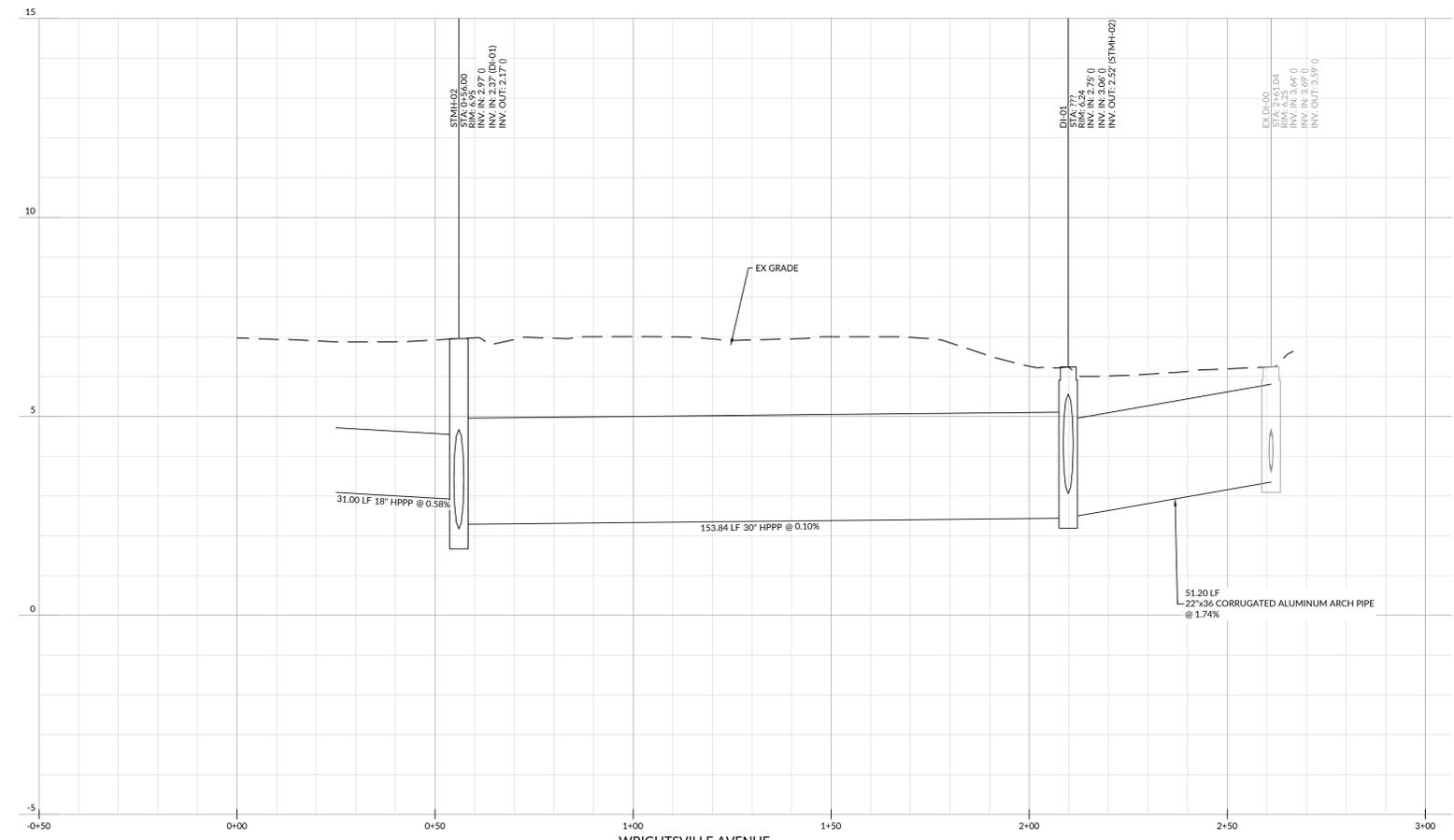
**EROSION CONTROL
DETAILS**

CONFIRMED

C3.05



WRIGHTSVILLE AVENUE
PLAN VIEW

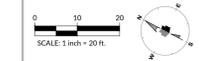


WRIGHTSVILLE AVENUE
PROFILE VIEW

SCALE:
1" = 20' HORIZ.
1" = 2' VERT.

CONSTRUCTION PLANS
**TOWN OF NAGS HEAD
 CAPITAL IMPROVEMENT
 PROJECT**

NAGS HEAD, NC 27959 | DARE COUNTY



INITIAL PLAN DATE: 04/11/2025
 REVISIONS:
 A - 04/11/2025 BKS
 CONFORMED

WR JOB NUMBER: 24-1284
 DRN: BKS DGN: MWS CKD: MWS

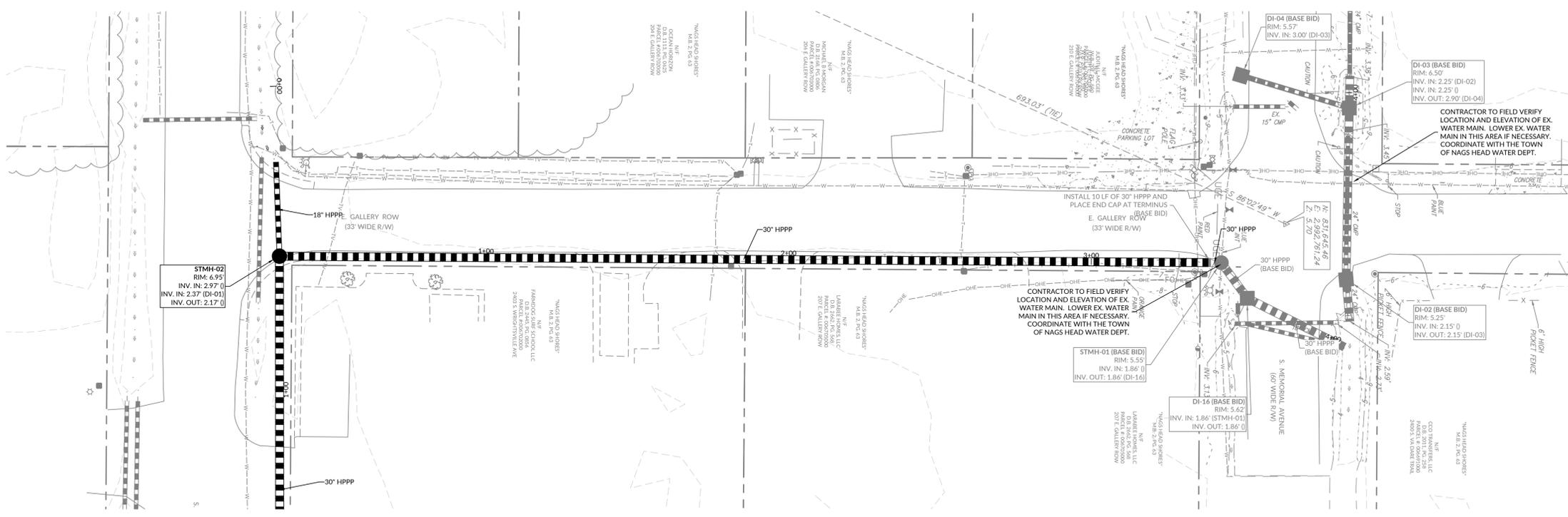
ADD ALT-1
 WRIGHTSVILLE AVE

ALT 1.1

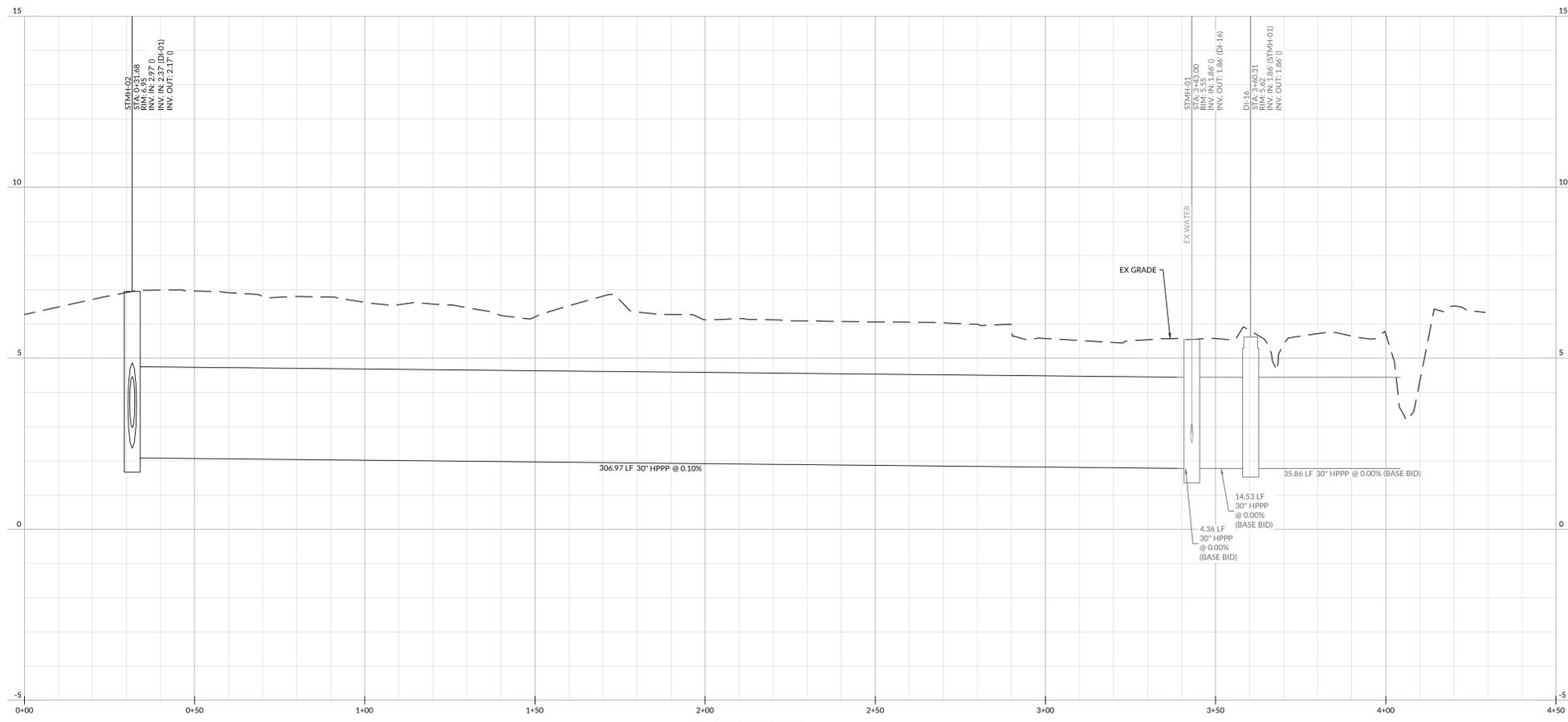


TOWN OF NAGS HEAD
 P.O. BOX 99 5401 S. CROATAN HWY
 NAGS HEAD, NC 27959

CONFORMED



E. GALLERY STREET
PLAN VIEW



E. GALLERY STREET
PROFILE VIEW

SCALE:
1" = 20' HORIZ.
1" = 2' VERT.

CONSTRUCTION PLANS
**TOWN OF NAGS HEAD
CAPITAL IMPROVEMENT
PROJECT**

NAGS HEAD, NC 27959 | DARE COUNTY



INITIAL PLAN DATE: 04/11/2025
REVISIONS:
A - 04/11/2025 BKS
CONFORMED

WR JOB NUMBER 24-1284
DRN: BKS DGN: MWS CKD: MWS

ADD ALT-1
GALLERY ROW

ALT 1.2



TOWN OF NAGS HEAD
P.O. BOX 99 5401 S. CROATAN HWY
NAGS HEAD, NC 27959