

# Kelly Dr & Live Oak Dr Sidewalk & Roadway Improvements

for

## The City of Hinesville

Liberty County, Georgia

June 1, 2022

### SHEET INDEX:

| DESCRIPTION                                                   | SHEET |
|---------------------------------------------------------------|-------|
| 1. Demolition Plan                                            | C 1.0 |
| 2. Overall Roadway Plan                                       | C 2.0 |
| 3. Kelly Dr Roadway Plan & Profile                            | C 2.1 |
| 4. Live Oak Roadway Plan & Profile                            | C 2.2 |
| 5. Kelly Dr Drainage Plan & Profiles                          | C 2.3 |
| 6. Live Oak Dr Drainage Plan & Profiles                       | C 2.4 |
| 7. Erosion, Sedimentation, and Pollution Control Notes        | C 3.0 |
| 8. Erosion, Sedimentation, and Pollution Control - Phase I    | C 3.1 |
| 9. Erosion, Sedimentation, and Pollution Control - Phase II   | C 3.2 |
| 10. Erosion, Sedimentation, and Pollution Control - Phase III | C 3.3 |
| 11. Details                                                   | C 5.0 |
| 11. Details                                                   | C 5.1 |
| 11. Details                                                   | C 5.2 |

### GENERAL NOTES

- ALL EXISTING UTILITIES SHOWN ARE LOCATED FROM BEST AVAILABLE INFORMATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ACTUAL FIELD LOCATION AND PROTECTION OF EXISTING UTILITIES. OVERHEAD LINES ARE NOT SHOWN FOR CLARITY.
- ALL DISTURBED AREAS TO BE RE-VEGETATED IMMEDIATELY AFTER CONSTRUCTION, IN ACCORDANCE WITH THE MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA.
- ALL EROSION AND SEDIMENTATION CONTROL STRUCTURES SHALL BE INSTALLED PRIOR TO THE START OF CONSTRUCTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPLACEMENT OF ANY PROPERTY CORNERS, RIGHT OF WAY MONUMENTS, SIGNS OR OTHER STRUCTURES DISTURBED DURING CONSTRUCTION.
- ALL TRAFFIC AND SIGNAGE CONTROL SHALL BE IN ACCORDANCE WITH THE TRAFFIC CONTROL MANUAL GUCC, CURRENT EDITION.
- ALL STREET AND INFRASTRUCTURE INSTALLATION TO BE IN ACCORDANCE WITH CITY OF HINESVILLE DEVELOPMENT STANDARDS.

### 24 HOUR CONTACT

CITY OF HINESVILLE  
CONTACT: KENNETH HOWARD  
(CITY MANAGER)  
115 EAST M.L. KING, JR. DRIVE  
HINESVILLE, GA 31313  
TEL: (912) 876-3564  
khoward@cityofhinesville.org

### PRIMARY PERMITTEE

CITY OF HINESVILLE  
CONTACT: KENNETH HOWARD  
(CITY MANAGER)  
115 EAST M.L. KING, JR. DRIVE  
HINESVILLE, GA 31313  
TEL: (912) 876-3564  
khoward@cityofhinesville.org

### OWNER/AGENT

CITY OF HINESVILLE  
CONTACT: KENNETH HOWARD  
(CITY MANAGER)  
115 EAST M.L. KING, JR. DRIVE  
HINESVILLE, GA 31313  
TEL: (912) 876-3564  
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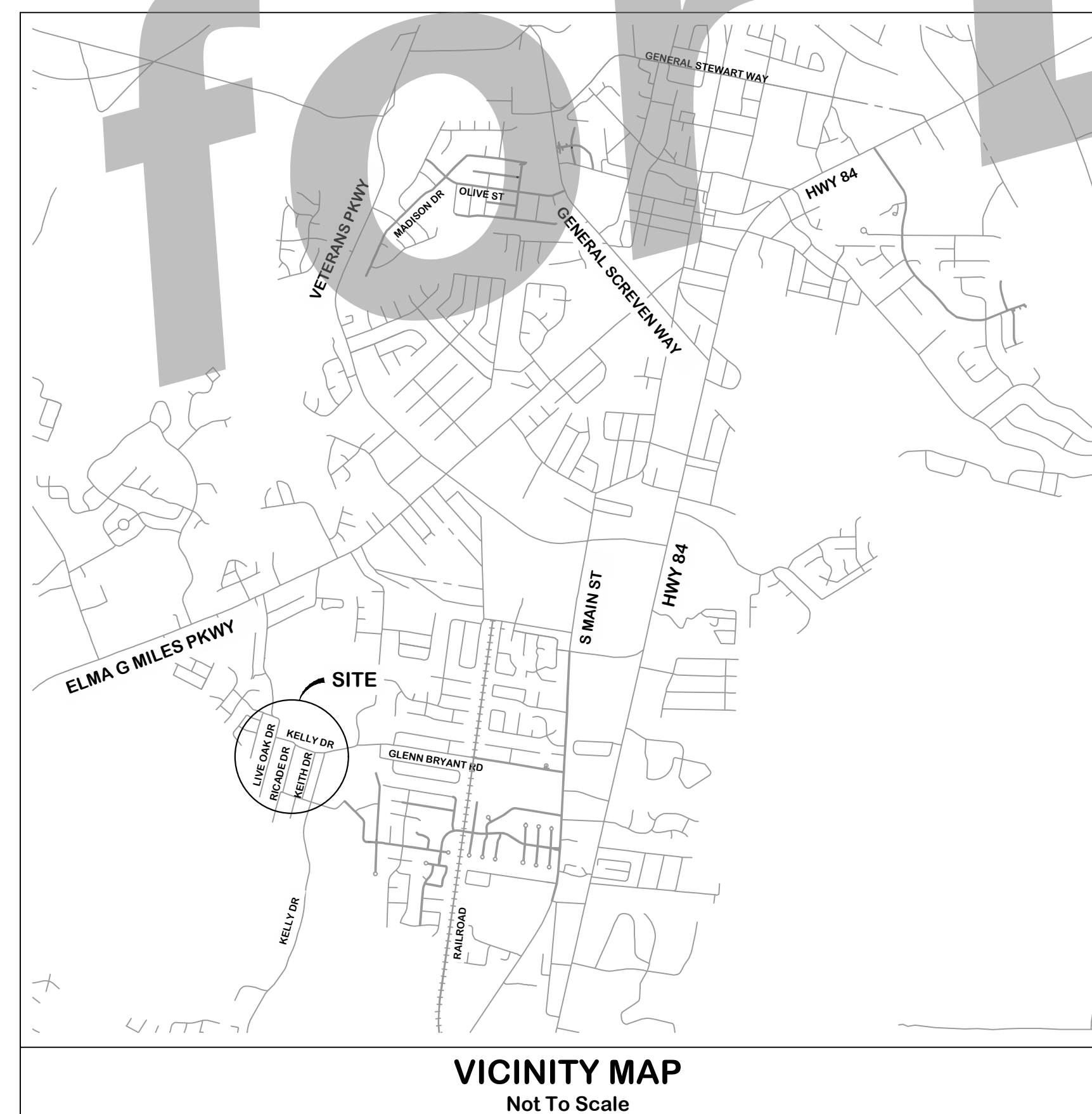
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1050 PARKSIDE COMMONS SUITE 101  
GREENSBORO, GA 30642 • TEL: (706) 454-0870  
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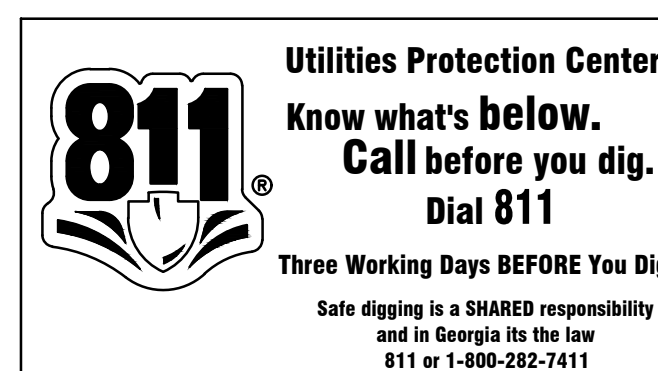
Level II Certification No. 935  
Expiration Date: 10-01-23

JOB NO. 2021-89PRJ

| REVISION NO. | DATE | DESCRIPTION |
|--------------|------|-------------|
|              |      |             |
|              |      |             |
|              |      |             |
|              |      |             |



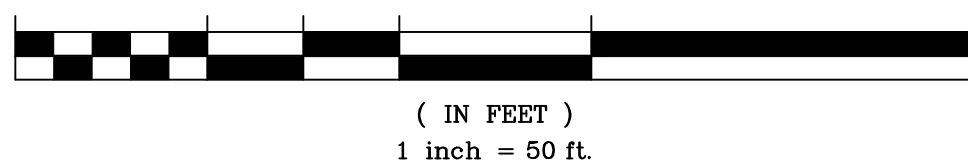
START PROJECT: 31.8143, -81.6229  
END PROJECT: 31.8168, -81.6274



| DRAWING LEGEND                  |                     |                           |
|---------------------------------|---------------------|---------------------------|
| DESCRIPTION                     | PROPOSED            | EXISTING                  |
| SANITARY SEWER                  | SS                  | SS                        |
| UNDERGROUND WATER LINE          | W                   | W                         |
| FORCE MAIN                      | FM                  | FM                        |
| STORM DRAINAGE PIPE             | SD                  | SD                        |
| UNDERGROUND TELEPHONE LINE      | T                   | T                         |
| UNDERGROUND TELEPHONE CONDUIT   | TC                  | TC                        |
| UNDERGROUND GAS LINE            | 12"G                | 12"G                      |
| DITCH CENTERLINE                | DC                  | DC                        |
| TOP OF CURB & GUTTER ELEVATIONS | TC=90.00<br>G=89.50 | EX TC=90.00<br>EX G=89.50 |
| SPOT ELEVATION                  | X=90.00             | X=90.00                   |
| FIRE HYDRANT                    | ⊗                   | ⊗                         |
| SEWER MANHOLE                   | ⊗                   | ⊗                         |
| WATER VALVE                     | ⊗                   | ⊗                         |
| TELEPHONE MANHOLE               | ⊗                   | ⊗                         |
| LIGHT POLE                      | ⊗                   | ⊗                         |
| SIGN                            | ⊗                   | ⊗                         |
| WATER METER                     | ⊗                   | ⊗                         |
| BENCHMARK                       | ⊗                   | ⊗                         |
| CONCRETE MONUMENT FOUND         | ⊗                   | ⊗                         |
| GUY POLE                        | ⊗                   | ⊗                         |
| IRON PIN FOUND                  | ⊗                   | ⊗                         |
| IRON PIN SET                    | ⊗                   | ⊗                         |
| TELEPHONE PEDESTAL              | ⊗                   | ⊗                         |
| POWER POLE                      | ⊗                   | ⊗                         |
| HANDICAP SPACE                  | ⊗                   | ⊗                         |
| SEDIMENT BASIN MARKER WINOTCH   | ⊗                   | ⊗                         |



GRAPHIC SCALE



Not for Bid

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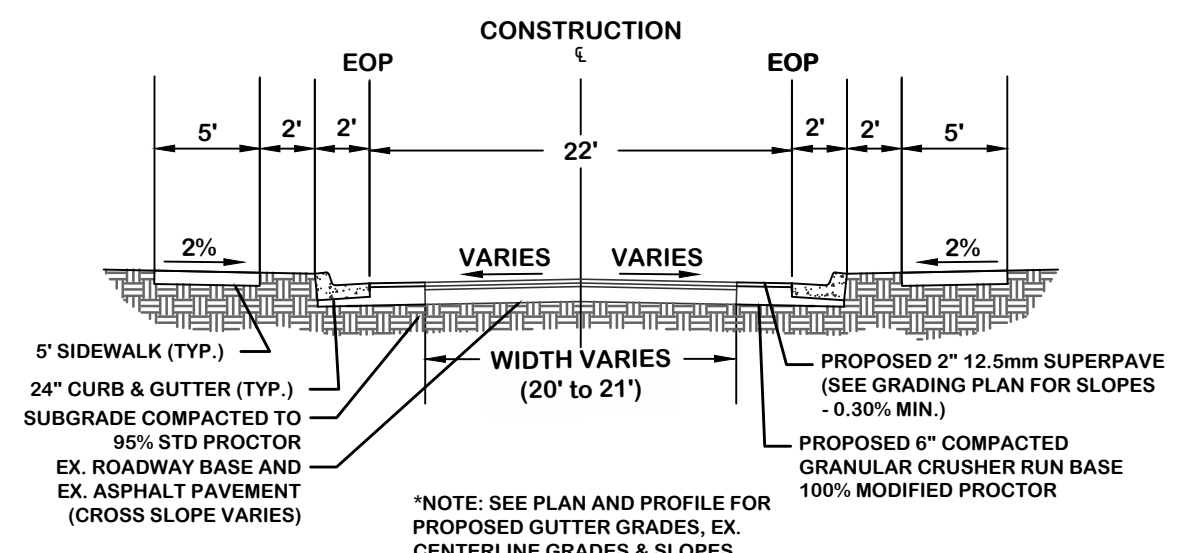
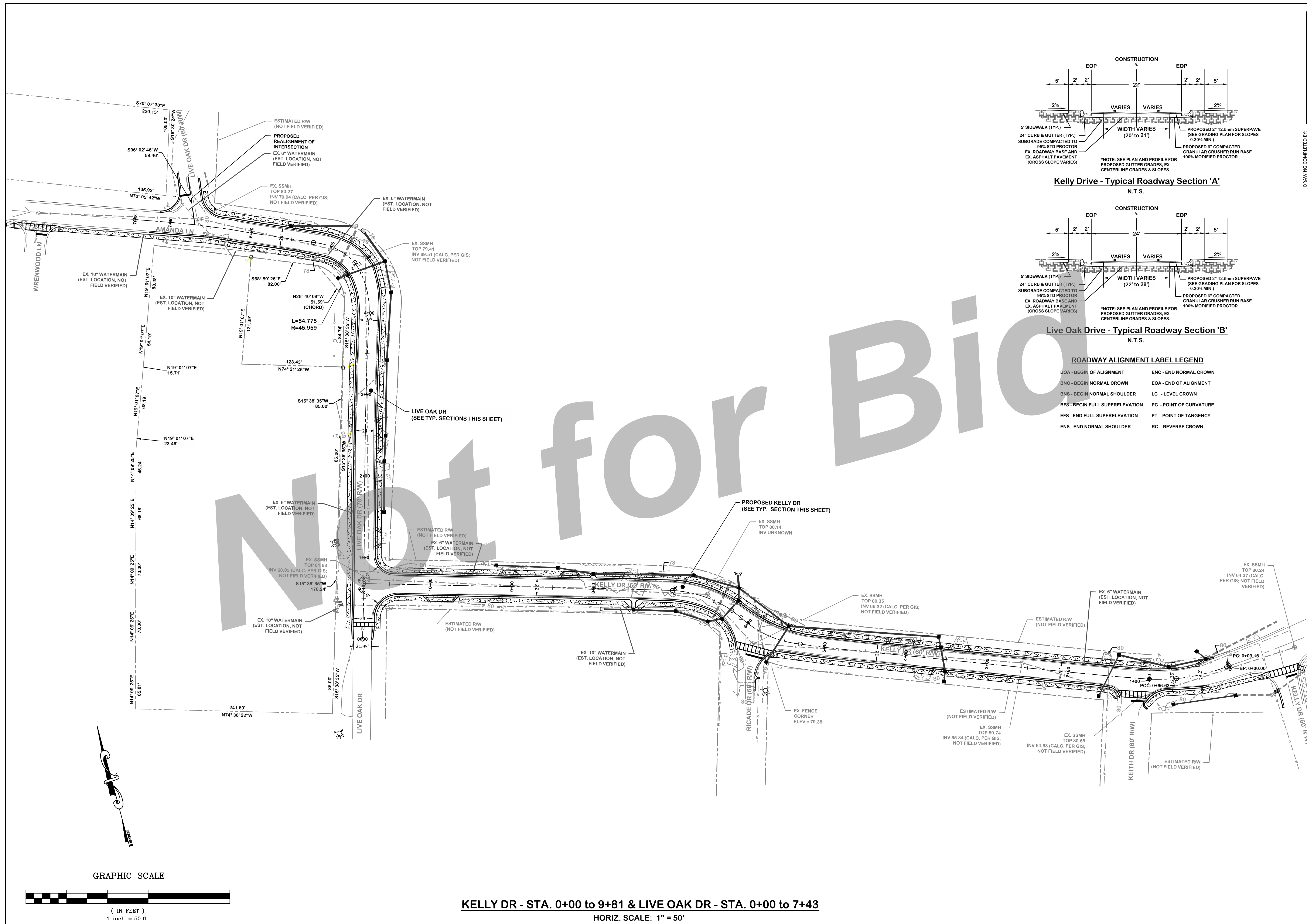


**Kelly Drive Sidewalk &  
Roadway Improvements**  
for  
**City of Hinesville**  
Liberty County, Georgia

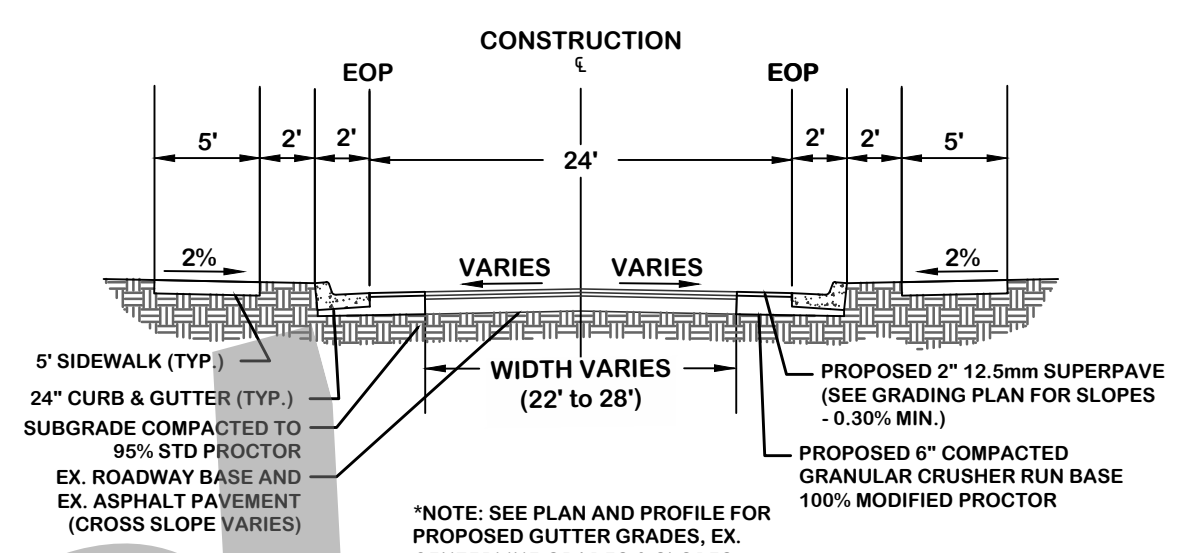
**Ex. Roadway &  
Demolition Plan**

DATE: June 1, 2022  
FILE NO: 2021-89PJ  
SHEET: C.1.0

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**Kelly Drive - Typical Roadway Section 'A'**  
N.T.S.



**Live Oak Drive - Typical Roadway Section 'B'**  
N.T.S.

**ROADWAY ALIGNMENT LABEL LEGEND**

|                                 |                         |
|---------------------------------|-------------------------|
| BOA - BEGIN OF ALIGNMENT        | ENC - END NORMAL CROWN  |
| BNC - BEGIN NORMAL CROWN        | EOA - END OF ALIGNMENT  |
| BNS - BEGIN NORMAL SHOULDER     | LC - LEVEL CROWN        |
| BFS - BEGIN FULL SUPERELEVATION | PC - POINT OF CURVATURE |
| EFS - END FULL SUPERELEVATION   | PT - POINT OF TANGENCY  |
| ENS - END NORMAL SHOULDER       | RC - REVERSE CROWN      |

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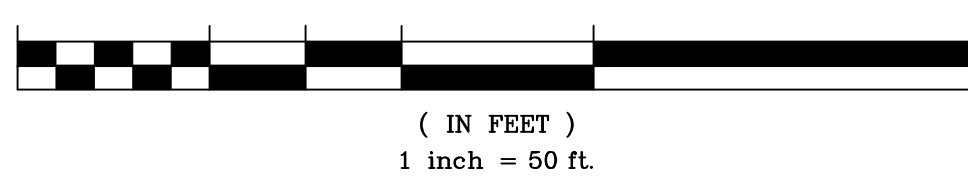
**Kelly Drive Sidewalk & Roadway Improvements**  
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Liberty County, Georgia

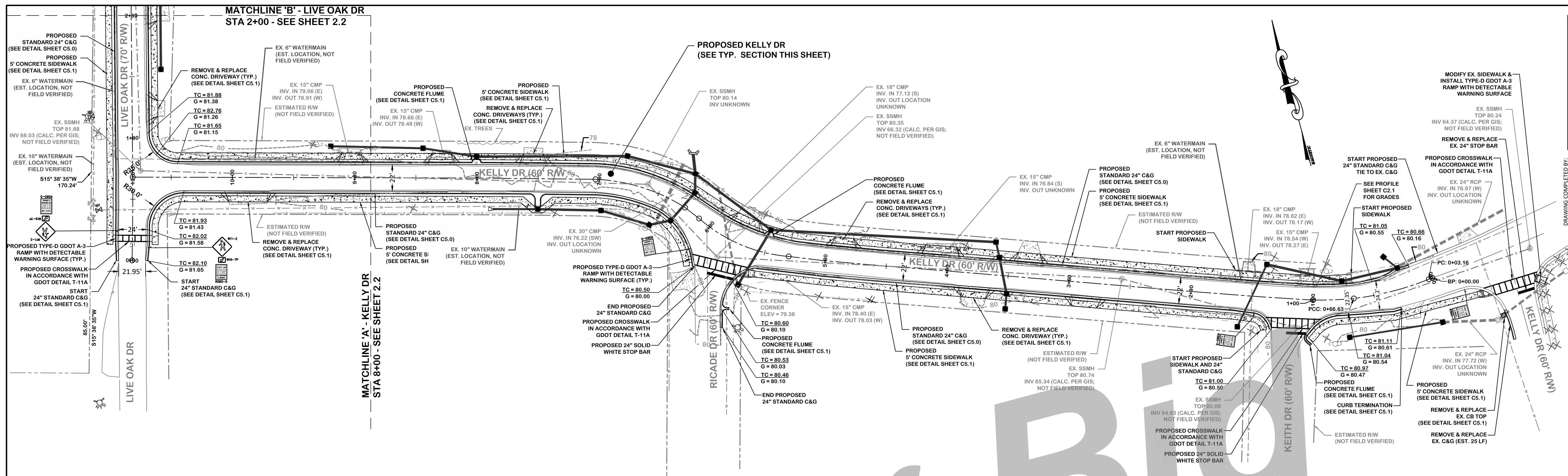
**Overall Roadway Plan**

DATE: June 1, 2022  
FILE NO: 2021-89PRJ  
SHEET: C 2.0

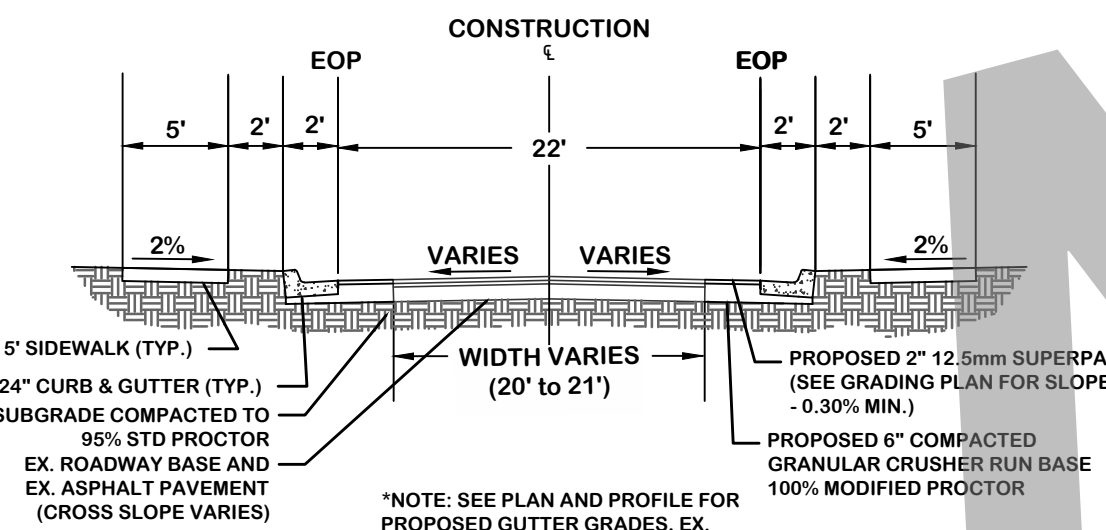
**KELLY DR - STA. 0+00 to 9+81 & LIVE OAK DR - STA. 0+00 to 7+43**  
HORIZ. SCALE: 1" = 50'

GRAPHIC SCALE

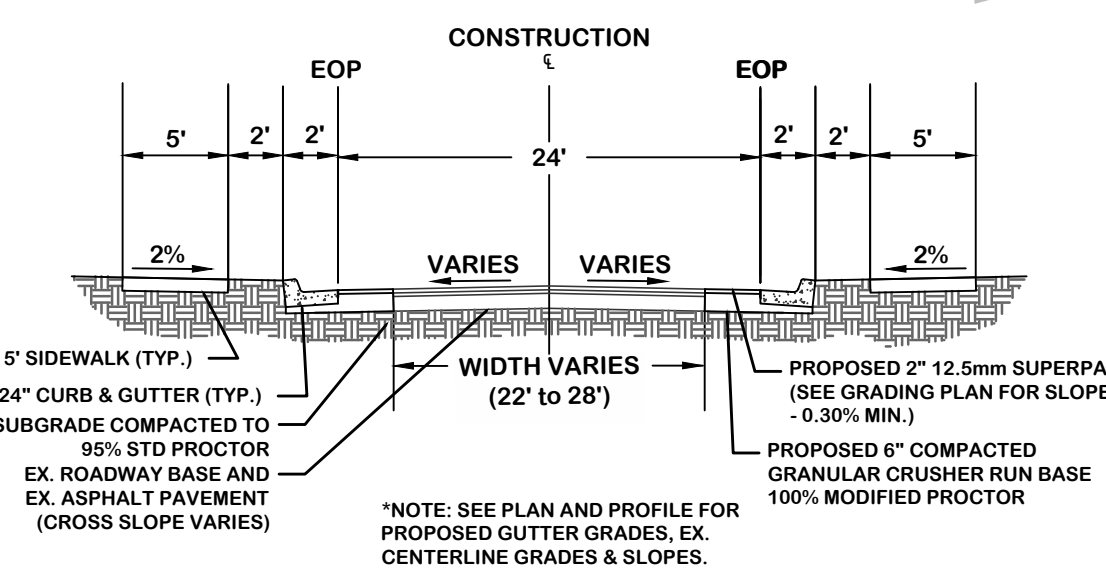




**KELLY DR - STA. 0+00 to 9+81**  
 HORIZ. SCALE: 1" = 40'



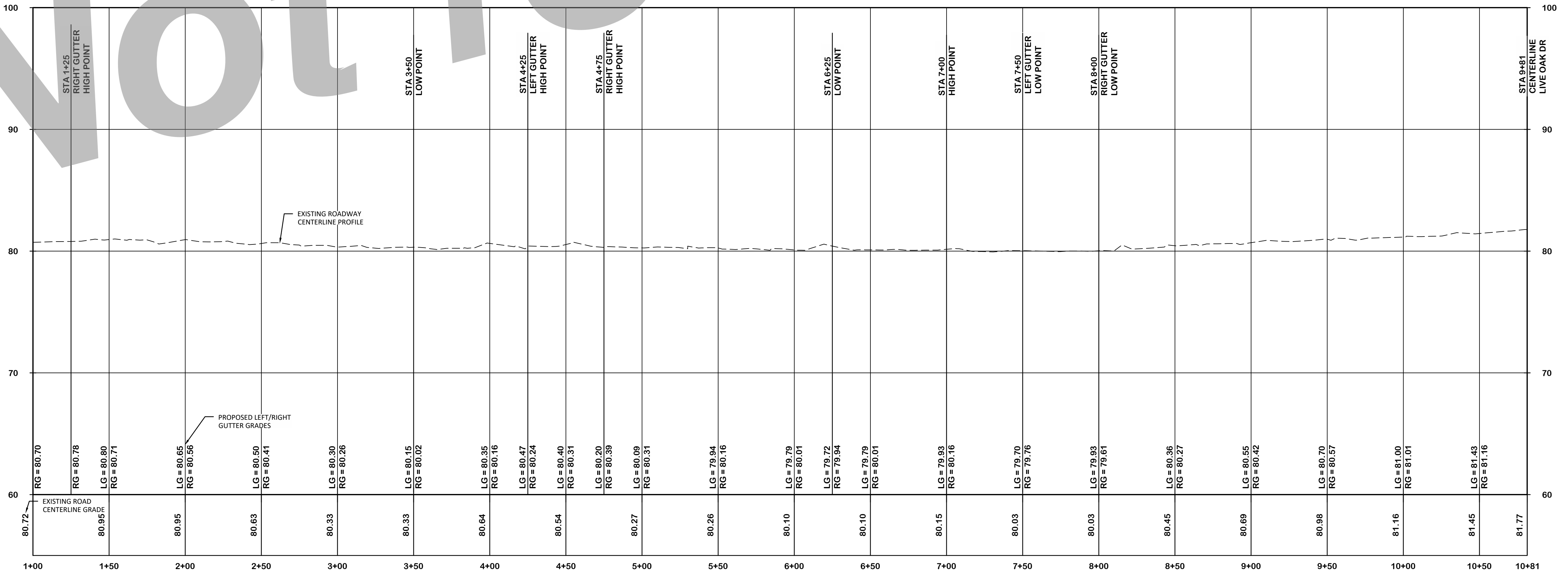
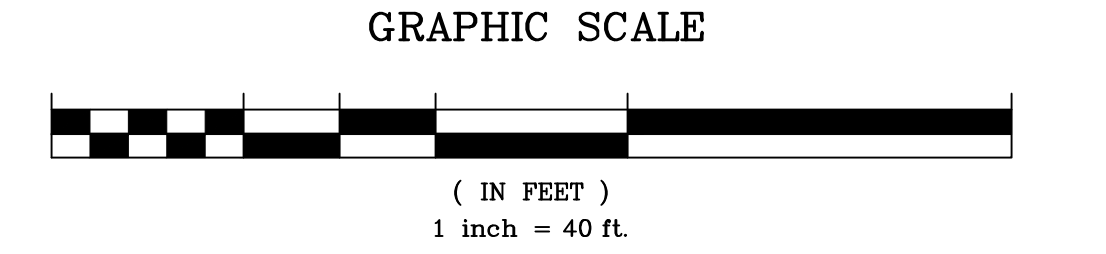
**Kelly Drive - Typical Roadway Section 'A'**  
 N.T.S.



**Live Oak Drive - Typical Roadway Section 'B'**  
 N.T.S.

**ROADWAY ALIGNMENT LABEL LEGEND**

|                                 |                         |
|---------------------------------|-------------------------|
| BOA - BEGIN OF ALIGNMENT        | ENC - END NORMAL CROWN  |
| BNC - BEGIN NORMAL CROWN        | EOA - END OF ALIGNMENT  |
| BNS - BEGIN NORMAL SHOULDER     | LC - LEVEL CROWN        |
| BFS - BEGIN FULL SUPERELEVATION | PC - POINT OF CURVATURE |
| EFS - END FULL SUPERELEVATION   | PT - POINT OF TANGENCY  |
| ENS - END NORMAL SHOULDER       | RC - REVERSE CROWN      |

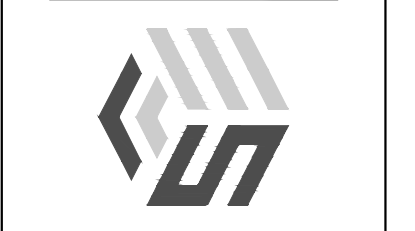


**Kelly Dr - STA. 1+00 to 10+81 Profile**  
 V. Scale: 1"=5'  
 H. Scale: 1"=40'

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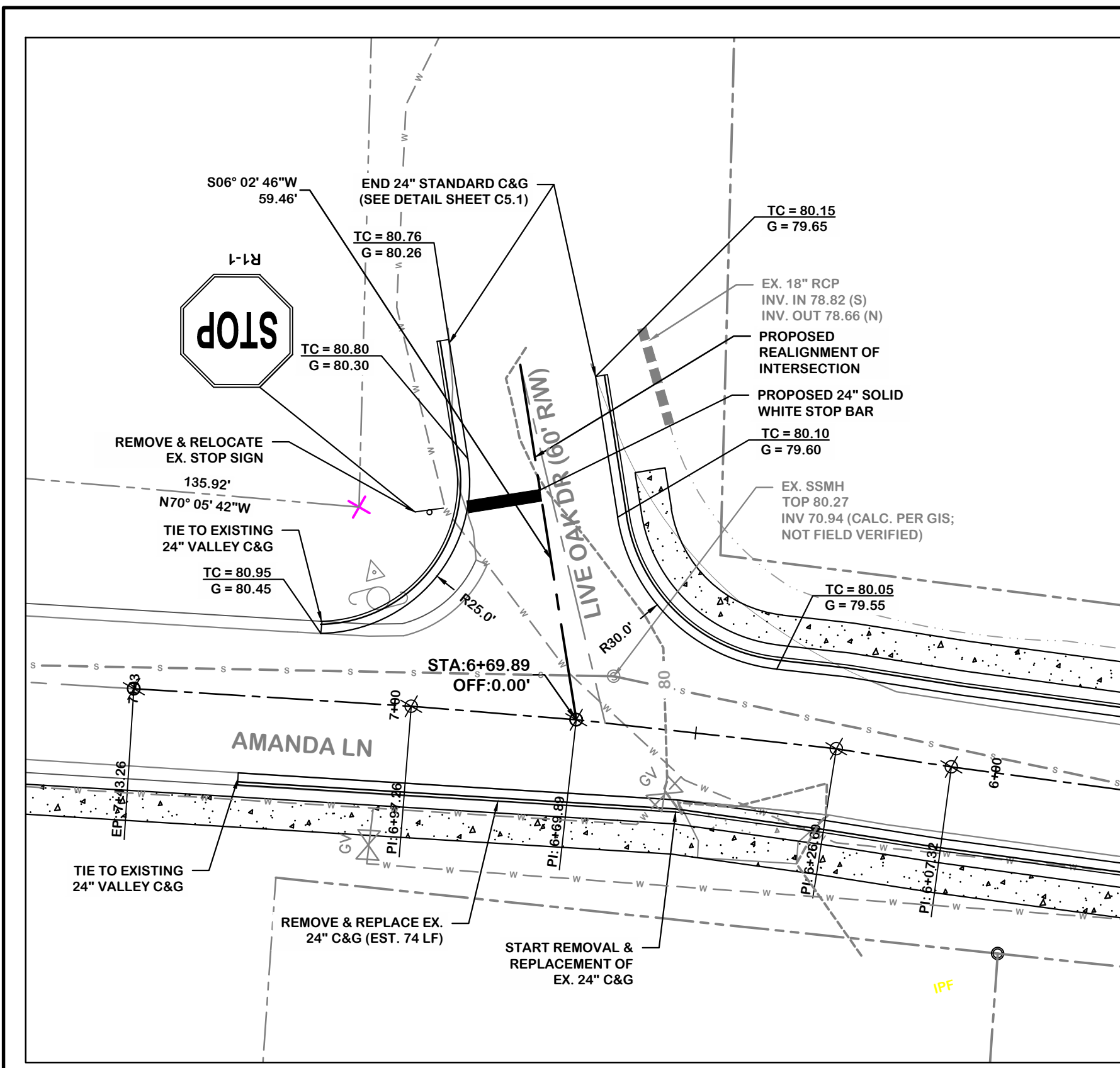


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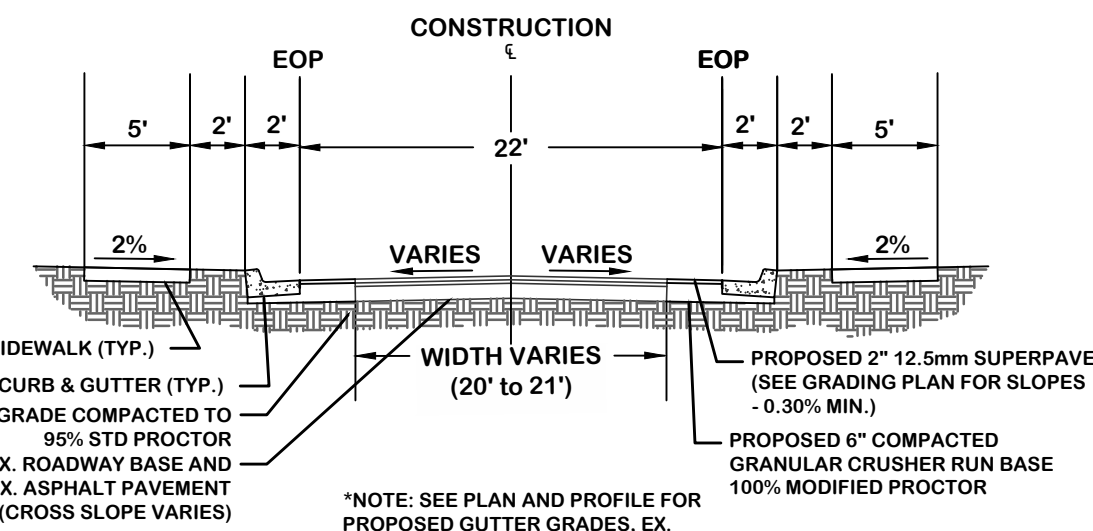


**Kelly Drive Sidewalk & Roadway Improvements**  
 for  
**City of Hinesville**  
 Liberty County, Georgia

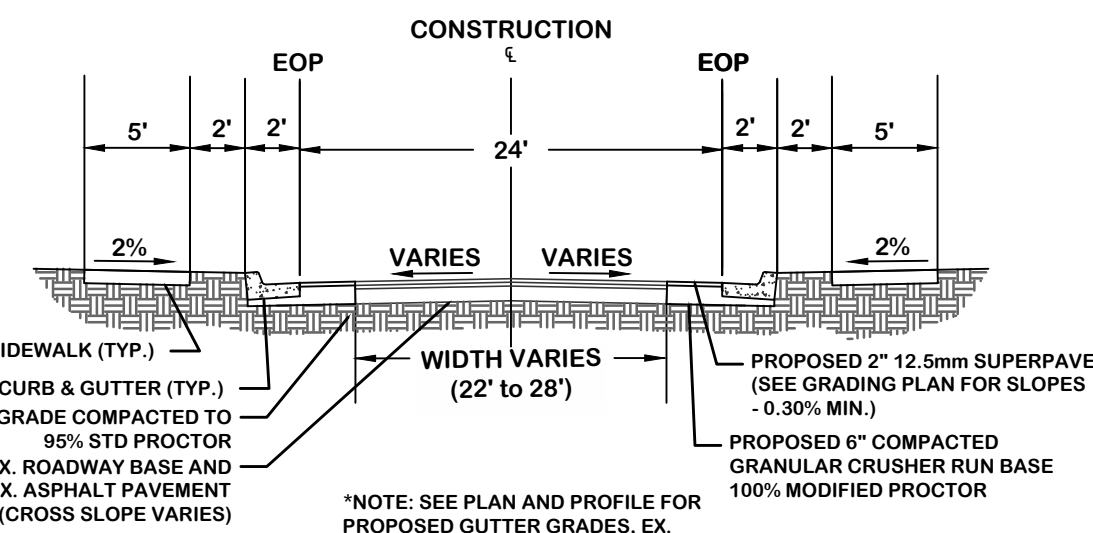
**Kelly Dr Roadway Plan & Profile**  
 DATE: June 1, 2022  
 FILE NO: 2021-8919J  
 SHEET: C.2.1



**LIVE OAK DR INTERSECTION**  
HORIZ. SCALE: 1" = 20'



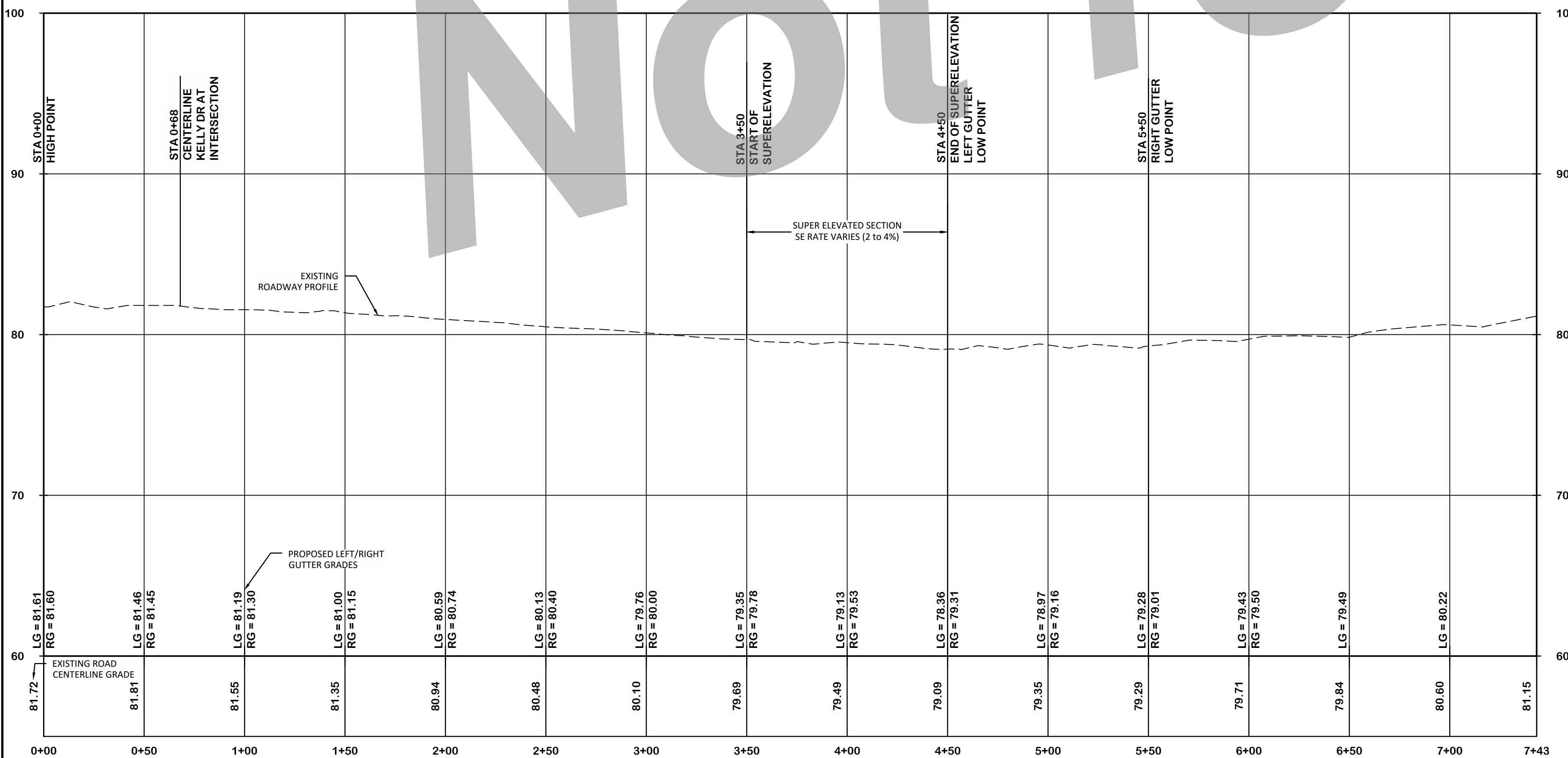
**Kelly Drive - Typical Roadway Section 'A'**  
N.T.S.



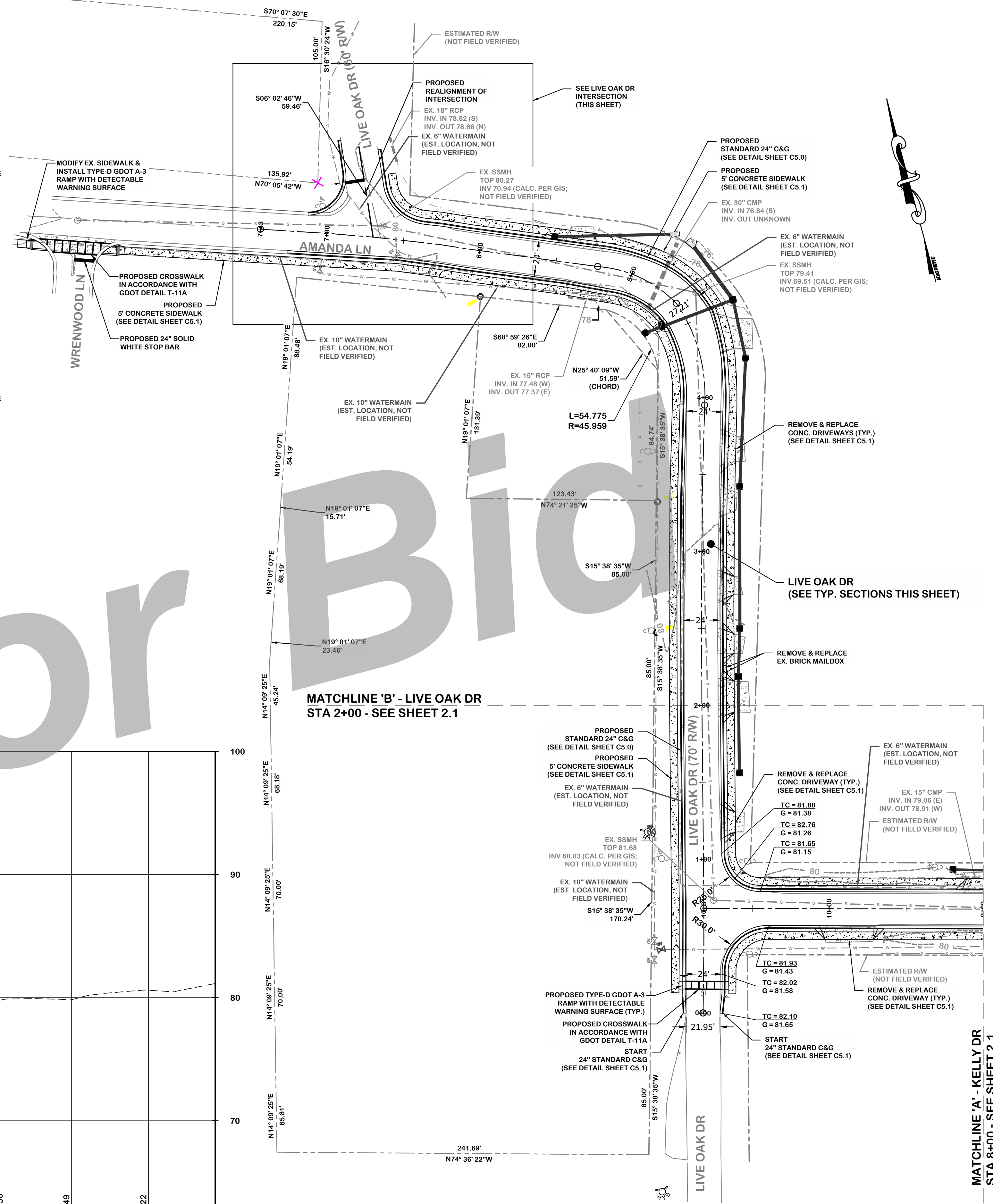
**Live Oak Drive - Typical Roadway Section 'B'**  
N.T.S.

**ROADWAY ALIGNMENT LABEL LEGEND**

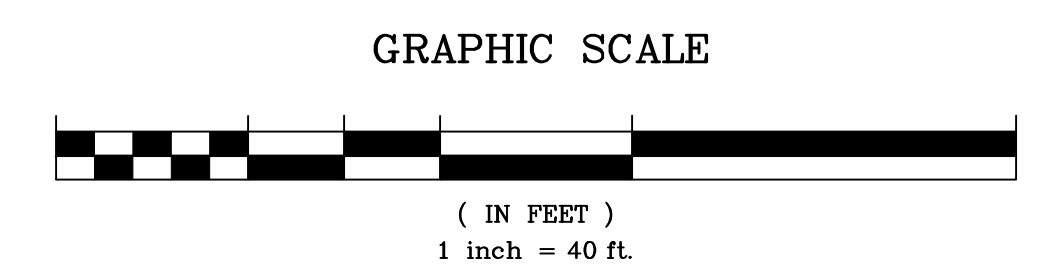
- |                                 |                         |
|---------------------------------|-------------------------|
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| BNC - BEGIN NORMAL CROWN        | EOA - END OF ALIGNMENT  |
| BNS - BEGIN NORMAL SHOULDER     | LC - LEVEL CROWN        |
| BFS - BEGIN FULL SUPERELEVATION | PC - POINT OF CURVATURE |
| EFS - END FULL SUPERELEVATION   | PT - POINT OF TANGENCY  |
| ENS - END NORMAL SHOULDER       | RC - REVERSE CROWN      |



**Live Oak Dr - STA. 0+00 to 7+43 Profile**  
V. Scale: 1"=5'  
H. Scale: 1"=40'



**LIVE OAK DR - STA. 0+00 to 7+43**  
HORIZ. SCALE: 1" = 40'



Not for Bid

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REGISTERED PROFESSIONAL ENGINEER  
**PAUL C. SIMONTON**  
No. 11015  
Expires 12/31/27

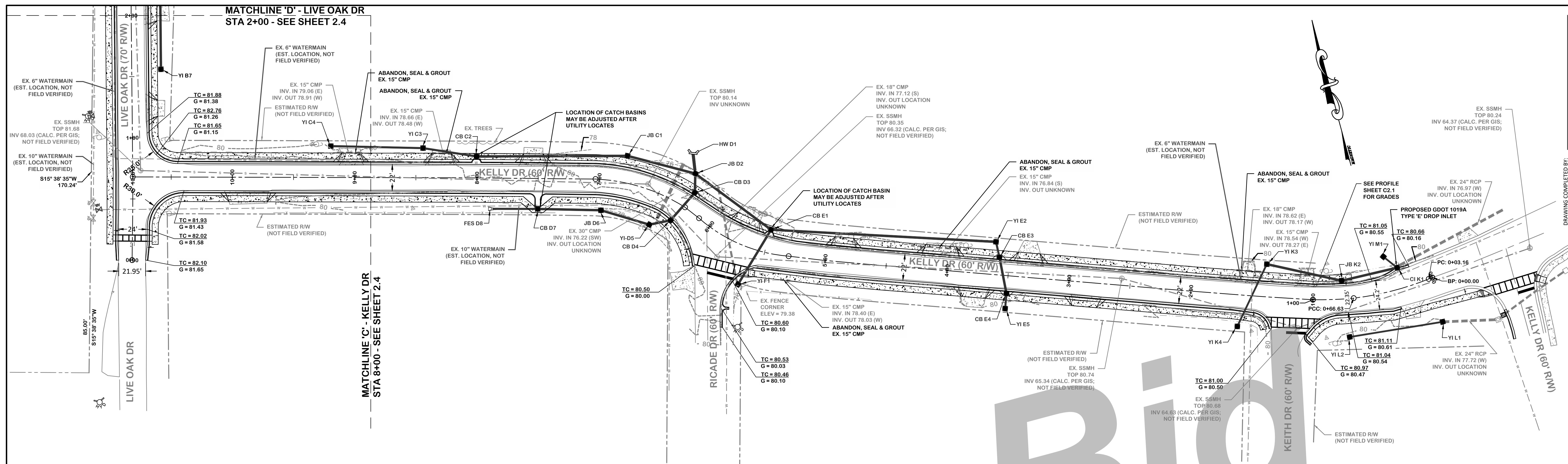
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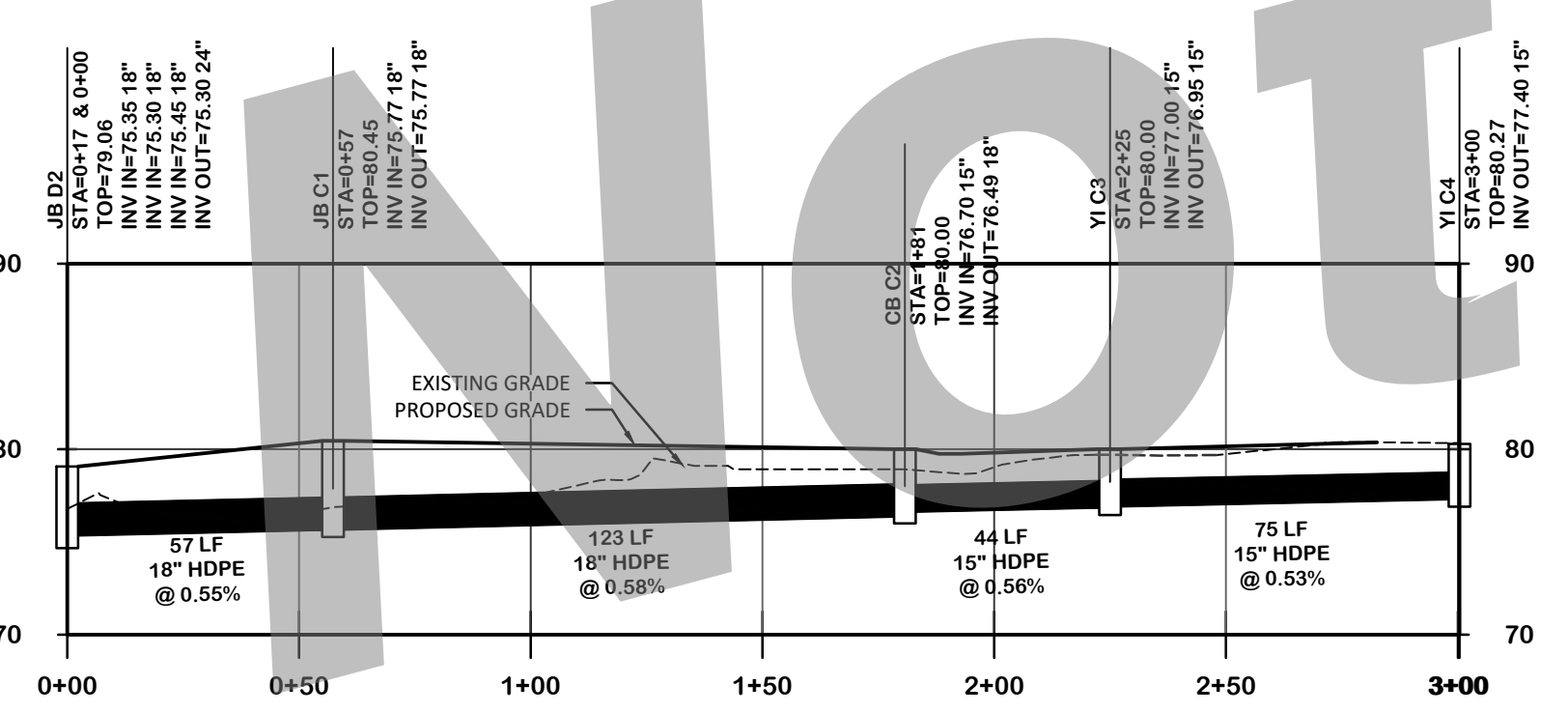
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**Kelly Drive Sidewalk & Roadway Improvements**  
for  
**City of Hinesville**  
Liberty County, Georgia

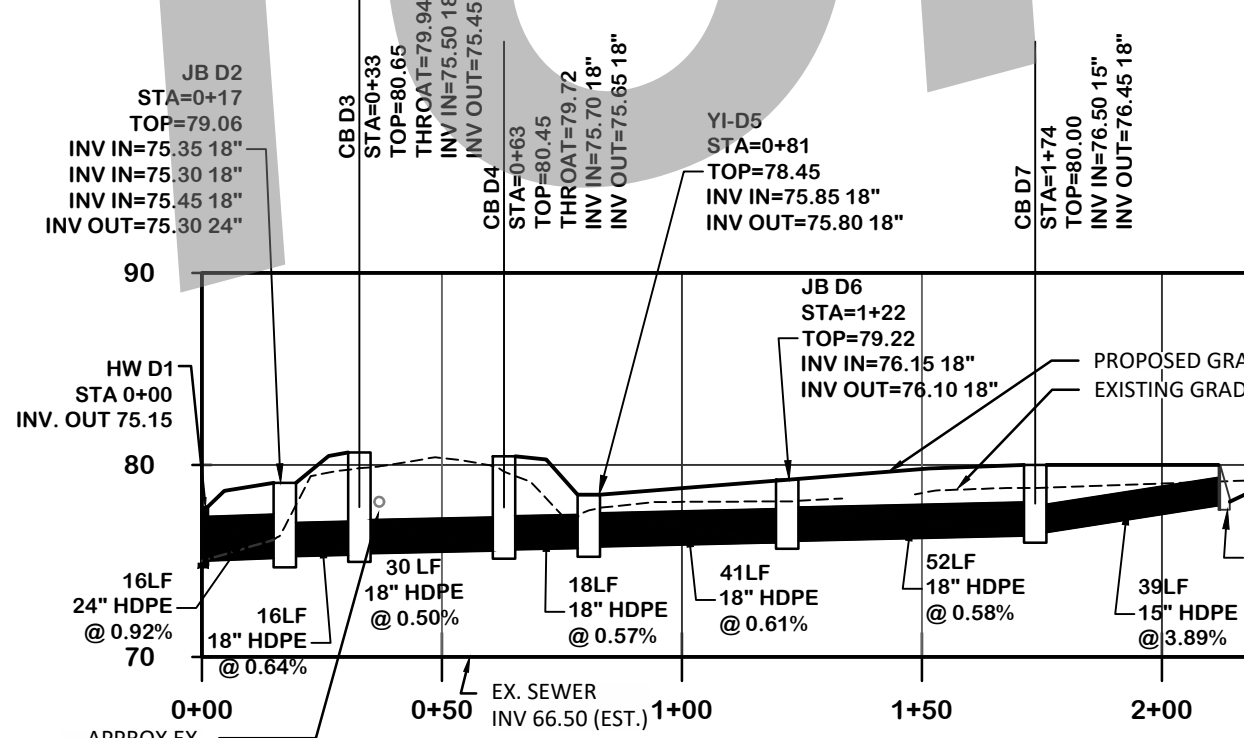
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| Live Oak Dr Roadway Plan & Profile | DATE: June 1, 2022  |
|                                    | FILE NO: 2021-891P1 |
|                                    | SHEET: C 2.2        |



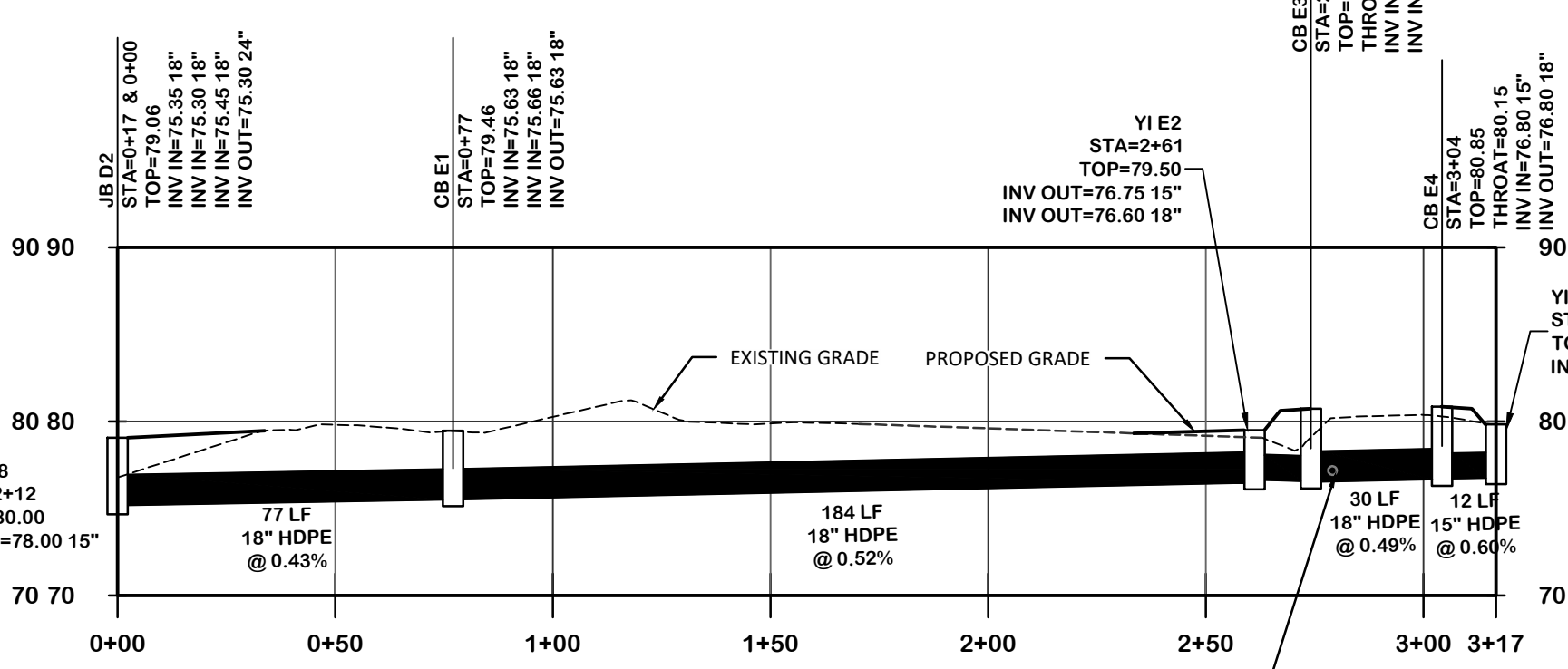
**KELLY DR - STA. 0+00 to 9+81**  
 HORIZ. SCALE: 1" = 40'



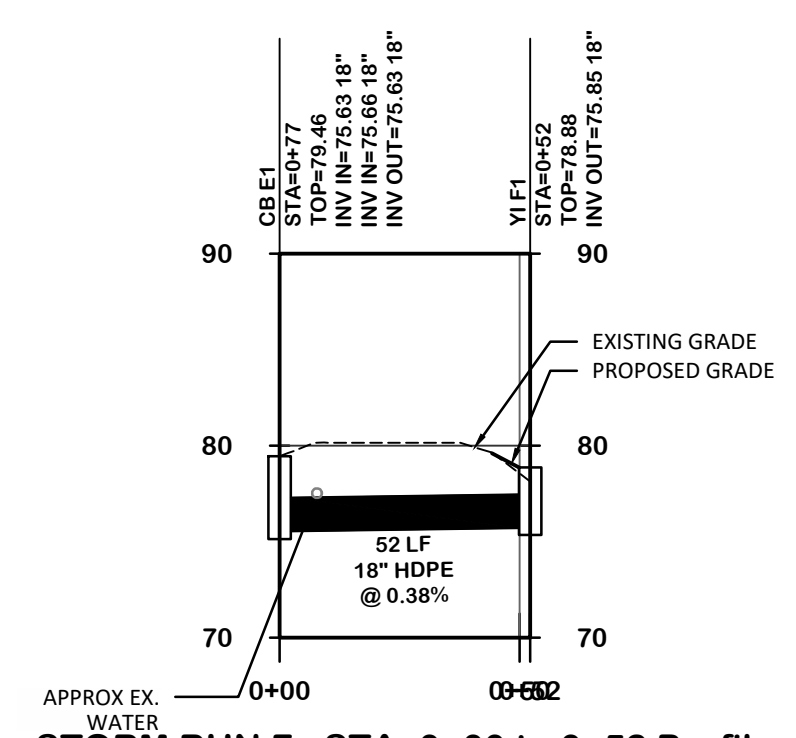
**STORM RUN C - STA. 0+00 to 3+00 Profile**  
 V. Scale: 1"=10'  
 H. Scale: 1"=40'



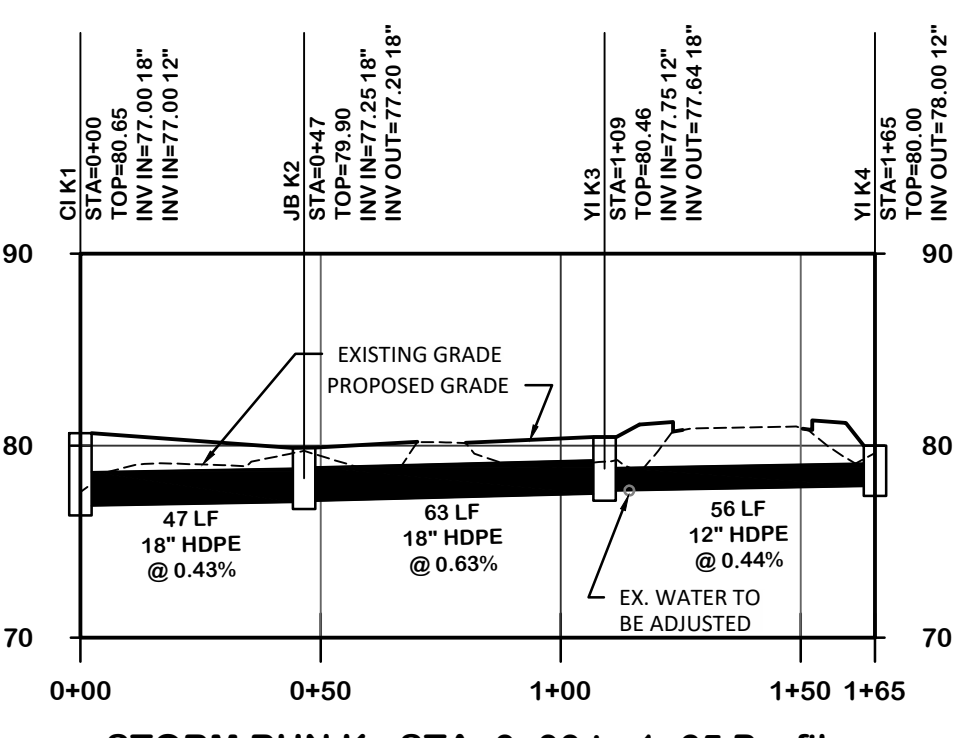
**STORM RUN D - STA. 0+00 to 2+24 Profile**  
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 H. Scale: 1"=40'



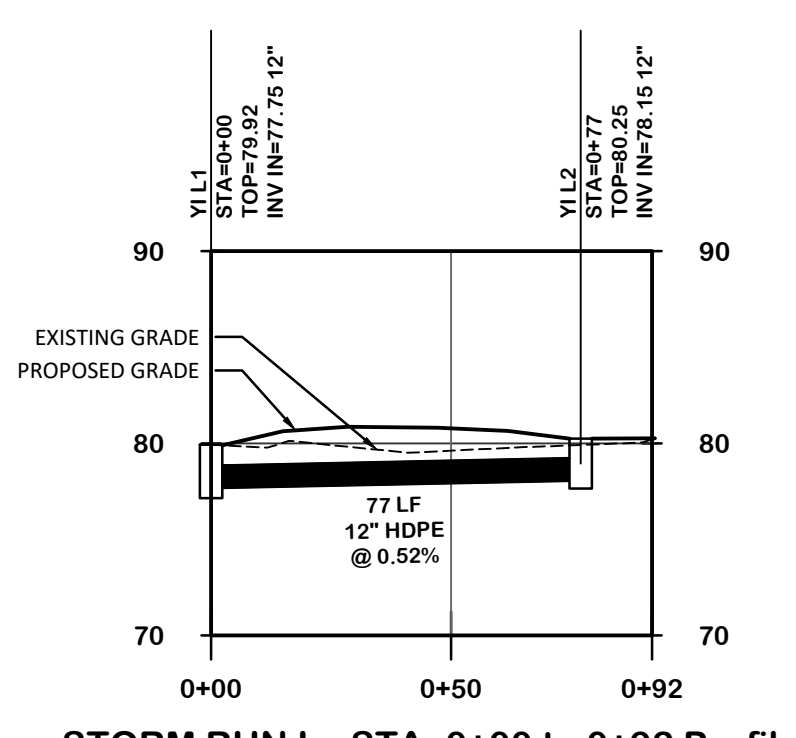
**STORM RUN E - STA. 0+00 to 3+17 Profile**  
 V. Scale: 1"=10'  
 H. Scale: 1"=40'



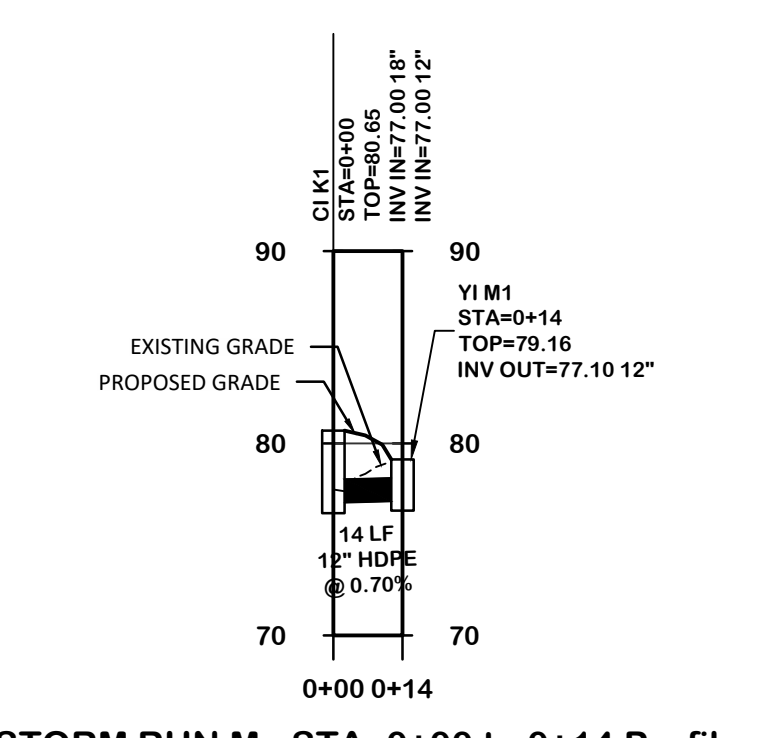
**STORM RUN F - STA. 0+00 to 0+52 Profile**  
 V. Scale: 1"=10'  
 H. Scale: 1"=40'



**STORM RUN K - STA. 0+00 to 1+65 Profile**  
 V. Scale: 1"=10'  
 H. Scale: 1"=40'

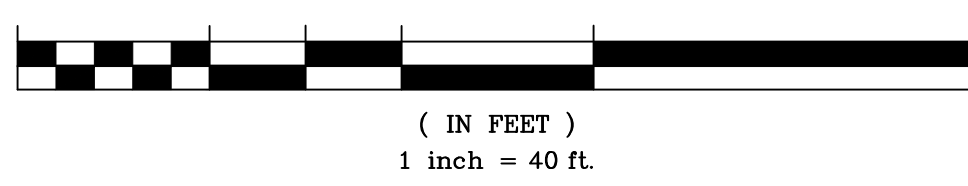


**STORM RUN L - STA. 0+00 to 0+92 Profile**  
 V. Scale: 1"=10'  
 H. Scale: 1"=40'



**STORM RUN M - STA. 0+00 to 0+14 Profile**  
 V. Scale: 1"=10'  
 H. Scale: 1"=40'

GRAPHIC SCALE



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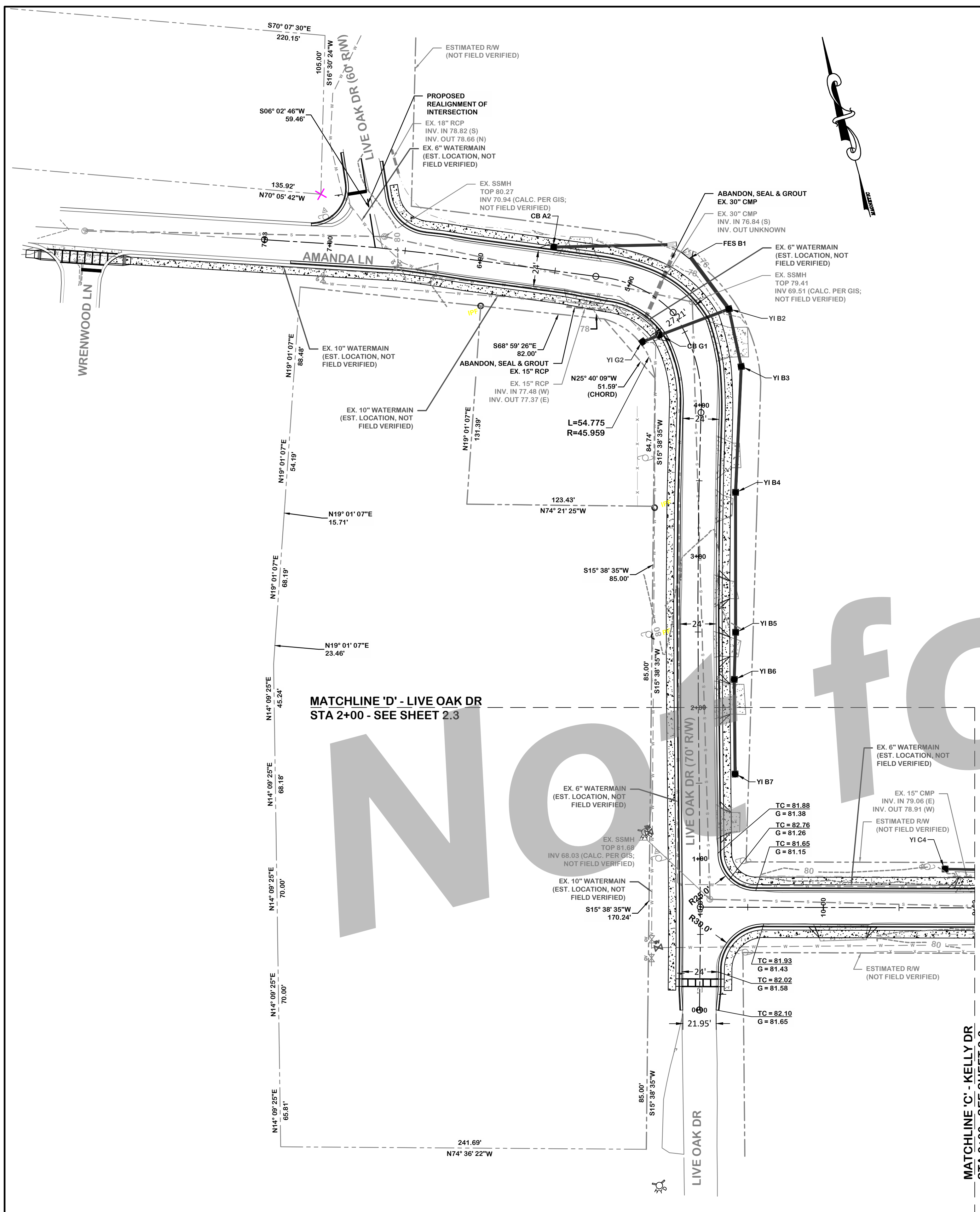


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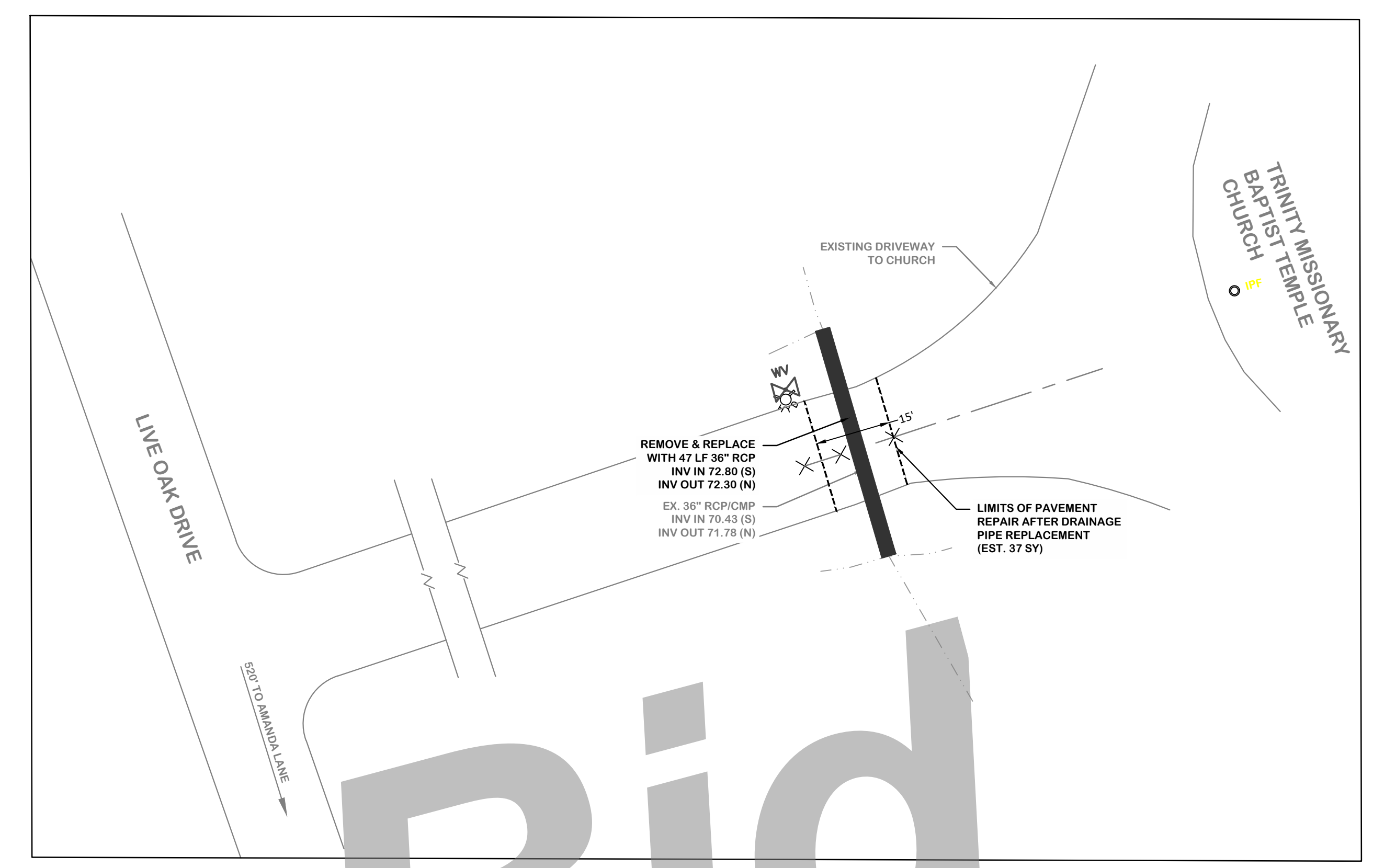
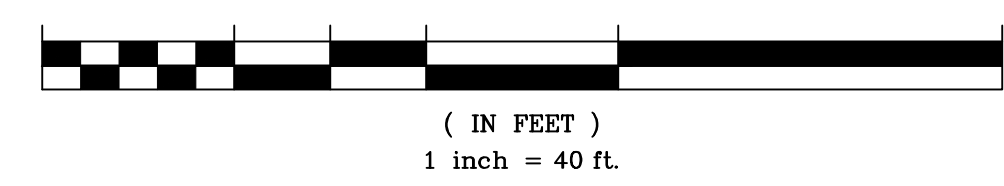
**Kelly Drive Sidewalk & Roadway Improvements**  
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**City of Hinesville**  
 Liberty County, Georgia

**Kelly Dr Drainage Plan & Profiles**  
 DATE: June 1, 2022  
 FILE NO: 2021-89PU  
 SHEET: C 2.3

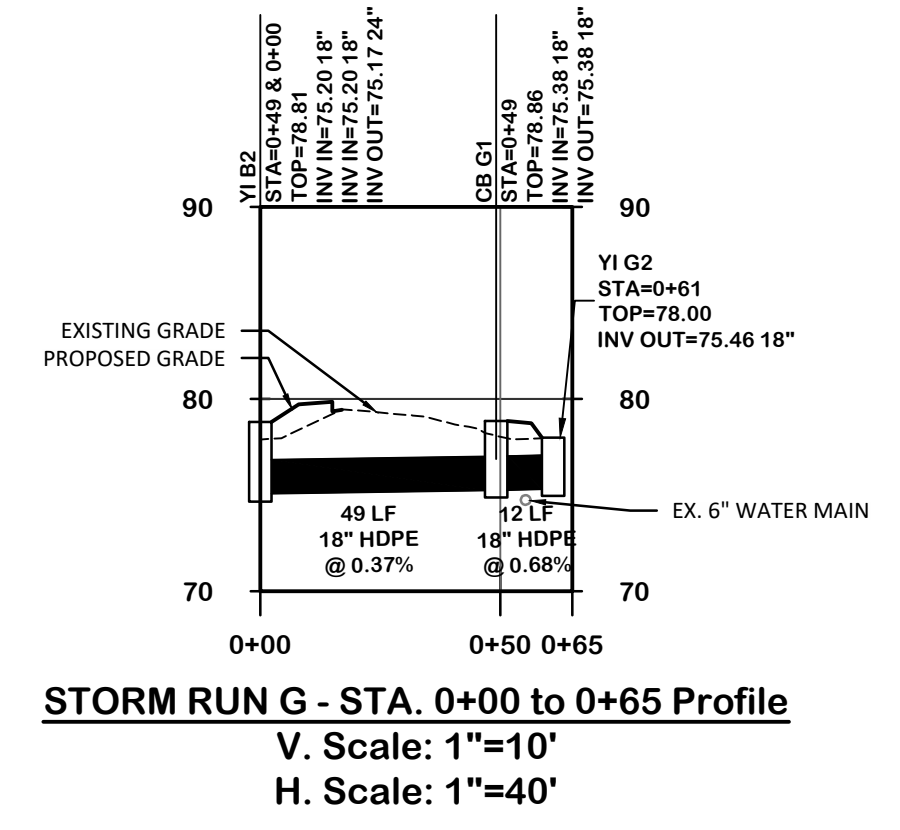
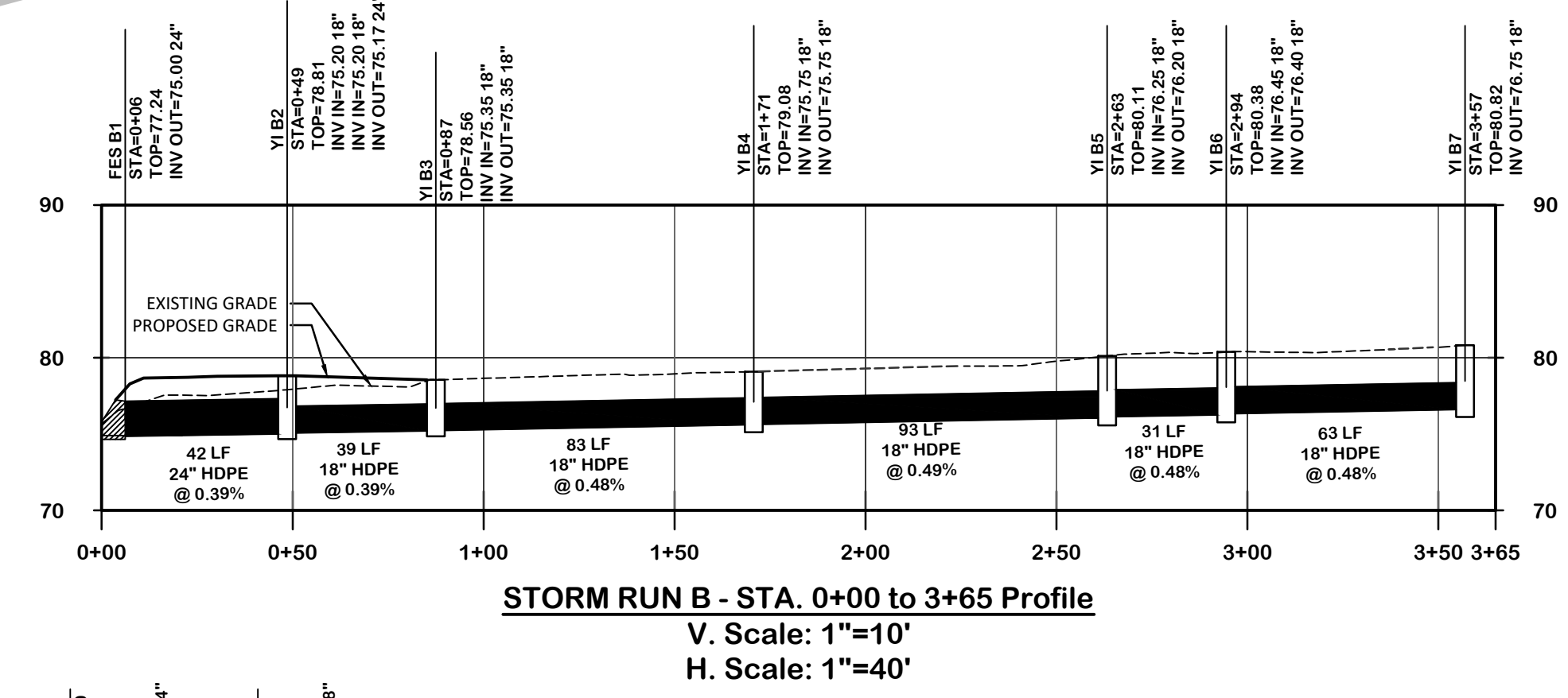
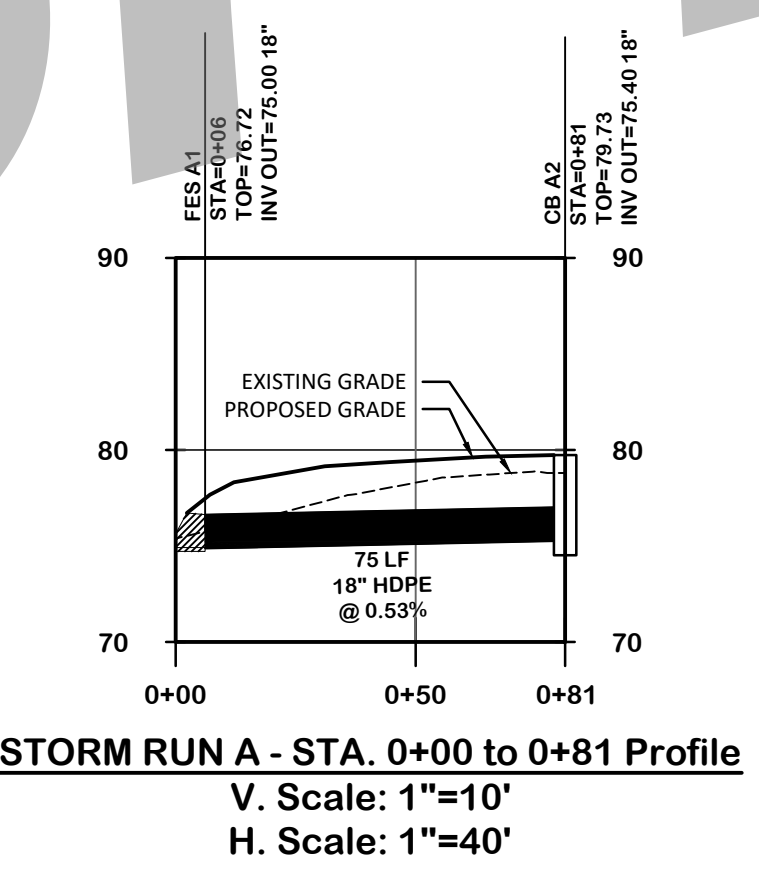


**LIVE OAK DR - STA. 0+00 to 7+43**  
HORIZ. SCALE: 1" = 40'

GRAPHIC SCALE



**TRINITY MISSIONARY BAPTIST TEMPLE**  
DRIVEWAY PIPE REPLACEMENT  
HORIZ. SCALE: 1" = 20'



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Expiration Date: 10-01-23

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for  
City of Hinesville  
Liberty County, Georgia

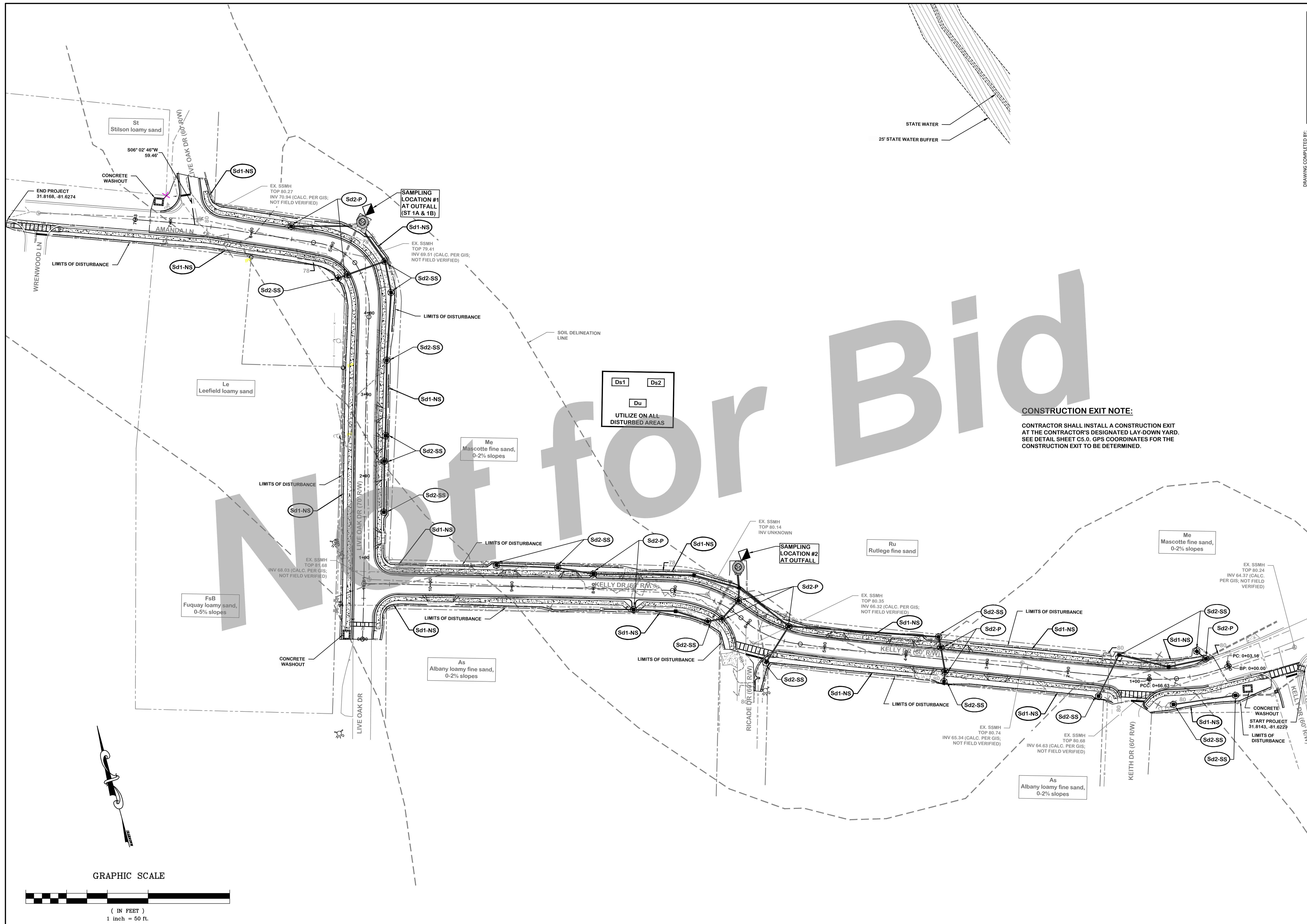
Live Oak Dr & Trinity M.B.T.  
Drainage Plan & Profiles

DATE: June 1, 2022  
FILE NO: 2021-89PJU  
SHEET: C 2.4

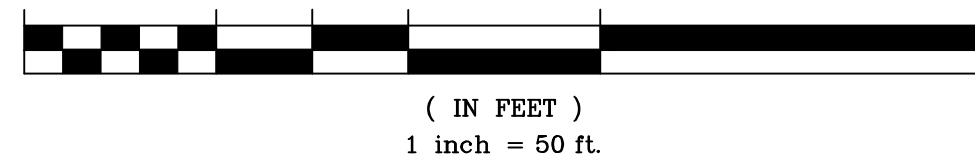








GRAPHIC SCALE



**CONSTRUCTION EXIT NOTE:**

CONTRACTOR SHALL INSTALL A CONSTRUCTION EXIT AT THE CONTRACTOR'S DESIGNATED LAY-DOWN YARD. SEE DETAIL SHEET C5.0. GPS COORDINATES FOR THE CONSTRUCTION EXIT TO BE DETERMINED.

DRAWING COMPLETED BY:

REVISED:



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Expiration Date: 10-01-25

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**Kelly Drive Sidewalk & Roadway Improvements**  
for  
**City of Hinesville**  
Liberty County, Georgia

**Erosion, Sedimentation & Pollution Control Plan - Phase II**

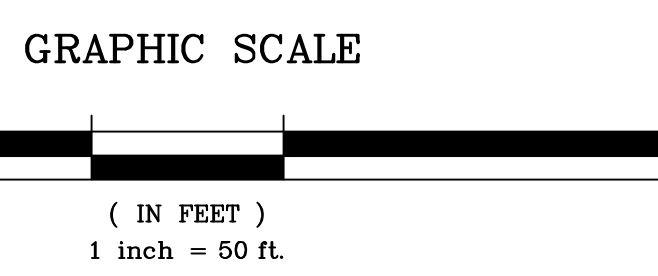
DATE: June 1, 2022  
FILE NO: 2021-89PRJ  
SHEET: C 3.2

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Not for Bid

**CONSTRUCTION EXIT NOTE:**  
 CONTRACTOR SHALL INSTALL A CONSTRUCTION EXIT AT THE CONTRACTOR'S DESIGNATED LAY-DOWN YARD. SEE DETAIL SHEET C5.0. GPS COORDINATES FOR THE CONSTRUCTION EXIT TO BE DETERMINED.

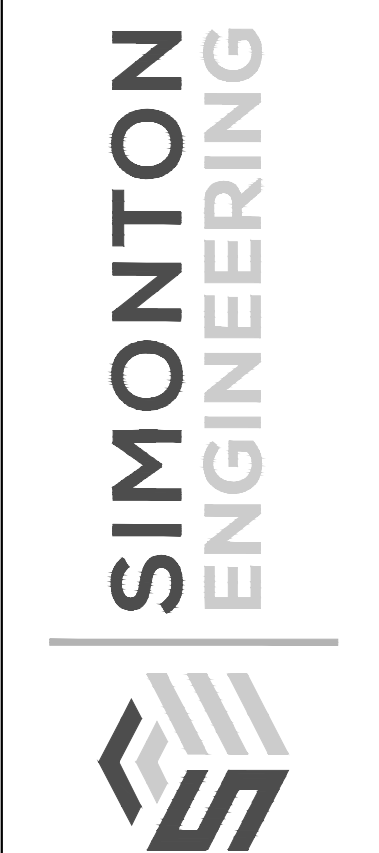


DRAWING COMPLETED BY: \_\_\_\_\_  
 REVISED: \_\_\_\_\_



Level II Certification No. 935  
 Expiration Date: 10-01-25

1050 PARKSIDE COMMONS  
 GREENSBORO, GA 30642  
 TEL: (769) 454-0870  
 www.simontonengineering.com



**Kelly Drive Sidewalk & Roadway Improvements**  
 for  
**City of Hinesville**  
 Liberty County, Georgia

**Erosion, Sedimentation & Pollution Control Plan - Phase III**

DATE: June 1, 2022  
 FILE NO: 2021-89PRJ  
 SHEET: C 3.3

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LEGEND FOR EROSION AND SEDIMENT CONTROL PRACTICES

STRUCTURAL PRACTICES

| CODE | PRACTICE                     | DETAIL | MAP SYMBOL | DESCRIPTION                                                                                                                                                          |
|------|------------------------------|--------|------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Cd   | CHEQUON                      |        |            | A small temporary barrier or dam constructed across a wash, drainage ditch or area of concentrated flow.                                                             |
| Co   | CONSTRUCTION EXIT            |        |            | A crushed stone pad located at the construction site exit to provide a place for removing mud from tires thereby protecting public streets.                          |
| Di   | DIVERSION                    |        |            | An earth channel or dike located above, below, or across a slope to divert runoff. This may be a temporary or permanent structure.                                   |
| Fr   | STONE FILTER RING            |        |            | A temporary stone barrier constructed at storm drain inlets and pond outlets.                                                                                        |
| Sd1  | SEDIMENT BARRIER             |        |            | A barrier to prevent sediment from leaving the construction site. It may be sandbags, bales of straw or hay, brush, logs and poles, gravel, or a silt fence.         |
| Sd2  | INLET SEDIMENT TRAP          |        |            | An impounding area created by excavating around a storm drain drop inlet. The excavated area will be filled and stabilized on completion of construction activities. |
| St   | STORMDRAIN OUTLET PROTECTION |        |            | A paved or short section of riprap channel at the outlet of a storm drain system preventing erosion from the concentrated runoff.                                    |

VEGETATIVE PRACTICES

| CODE | PRACTICE                                          | DETAIL | MAP SYMBOL | DESCRIPTION                                                                                                                                         |
|------|---------------------------------------------------|--------|------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| Ds1  | DISTURBED AREA STABILIZATION (WITH MULCHING ONLY) |        |            | Establishing temporary protection for disturbed areas where seedlings may not have a suitable growing season to produce an erosion retarding cover. |
| Ds2  | DISTURBED AREA STABILIZATION (WITH TEMP SEEDING)  |        |            | Establishing a temporary vegetative cover with fast growing seedlings on disturbed areas.                                                           |
| Ds3  | DISTURBED AREA STABILIZATION (WITH PERM SEEDING)  |        |            | Establishing a permanent vegetative cover such as trees, shrubs, vines, grasses, or legumes on disturbed areas.                                     |
| Du   | DUST CONTROL ON DISTURBED AREAS                   |        |            | Controlling surface and air movement of dust on construction site, roadways and similar sites.                                                      |
| Ss   | SLOPE STABILIZATION                               |        |            | A protective covering used to prevent erosion and establish temporary or permanent vegetation on steep slopes, shore lines, or channels.            |

SPECIFICATIONS

A. FOR TEMPORARY PROTECTION OF CRITICAL AREAS WITHOUT SEEDING. THIS STANDARD APPLIES TO GRADES OR CLEARED AREA WHICH MAY BE SUBJECTED TO EROSION FOR 6 MONTHS OR LESS. WHERE SEEDING MAY NOT HAVE A SUITABLE GROWING SEASON TO PRODUCE AN EROSION RETARDANT COVER, BUT WHICH CAN BE STABILIZED WITH A MULCH COVER.

SITE PREPARATION

- GRADE, AS NEEDED AND FEASIBLE, TO PERMIT THE USE OF EQUIPMENT FOR APPLYING AND ANCHORING MULCH.
- INSTALL NEEDED EROSION CONTROL MEASURES AS REQUIRED SUCH AS DIKES, DIVERSIONS, BERMS TERRACES AND SEDIMENT BARRIERS. AS NEEDED AND FEASIBLE, LOOSEN COMPACT SOIL TO A MINIMUM DEPTH OF 3 INCHES.

MULCHING MATERIALS

- DRY STRAW OR HAY - SPREAD AT A RATE OF 2 1/2 TONS PER ACRE. WOOD WASTE, CHIPS, SAWDUST OR BARK - SPREAD 2 TO 3 INCHES DEEP (ABOUT 6 TO 9 TONS PER ACRE).
- EROSION CONTROL MATTING OR NETTING, SUCH AS ACELSIOR, JUTE, TEXTILE AND PLASTIC MATTING AND NETTING - APPLIED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.
- CUTBACK ASPHALT, SLOW CURING - APPLIED AT 1200 GALLONS PER ACRE (OR 1/4 GALLON PER SQ. YD.).
- POLYETHYLENE FILM - SECURED OVER BANKS OR STOCKPILED SOIL MATERIAL FOR TEMPORARY PROTECTION.

APPLYING AND ANCHORING MULCH

- APPLY STRAW OR HAY MULCH UNIFORMLY BY HAND OR MECHANICALLY. ANCHOR AS APPROPRIATE AND FEASIBLE. IT MAY BE PRESSED INTO THE SOIL WITH A DISK HARROW WITH THE DISK SET STRAIGHT OR WITH A SPECIAL "PACKER DISK". THE DISK MAY BE SMOOTH OR SERRATED AND SHOULD BE 20 INCHES OR MORE IN DIAMETER AND 8 TO 12 INCHES APART. THE EDGES OF THE DISK SHOULD BE DULL ENOUGH NOT TO CUT THE MULCH BUT PRESS IT INTO THE SOIL LEAVING MUCH OF IT IN AN ERRECT POSITION. STRAW HAY MULCH SPREAD WITH SPECIAL BLOWER-TYPE EQUIPMENT MAY BE ANCHORED WITH EMULSIFIED ASPHALT (GRADE AE-5 OR SS-1). THE ASPHALT EMULSION MUST BE SPRAYED ONTO THE MULCH AS IT IS EJECTED FROM THE MACHINE. USE 100 GALLONS OF WATER PER ACRE.
- SPREAD WOOD WASTE UNIFORMLY ON SLPES THAT ARE 3:1 AND FLATTER. NO ANCHORING IS NEEDED.
- COMMERCIAL MATTING AND NETTING - FOLLOW MANUFACTURER'S SPECIFICATION INCLUDED WITH THE MATERIAL.
- APPLY ASPHALT SO AREA HAS UNIFORM APPEARANCE. (NOTE: USE IN AREAS OF PEDESTRIAN TRAFFIC COULD CAUSE PROBLEMS OR "TRACKING IN" OR DAMAGE TO SHOES, CLOTHING, ETC.).

- B. TO CONSERVE MOISTURE AND CONTROL WEEDS IN NURSERIES, ORNAMENTAL BEDS, AROUND SHRUBS, AND ON BAR AREAS ON LAWNS.
- MULCHING MATERIALS
- USE ONE OF THE MATERIALS LISTED BELOW AND APPLY AT THICKNESS INDICATED.
- | MATERIAL                                                                                                                                                                                                                                                                                   | DEPTH     |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| 1. GRAIN STRAW OR GRASS HAY                                                                                                                                                                                                                                                                | 6" TO 10" |
| 2. PINE NEEDLE                                                                                                                                                                                                                                                                             | 4" TO 6"  |
| 3. WOOD WASTE (SAWDUST, BARK, CHIPS)                                                                                                                                                                                                                                                       | 4" TO 8"  |
| 4. SHREDDED RESIDUES (CROPS, LEAVES, ETC.)                                                                                                                                                                                                                                                 | 4" TO 6"  |
| 5. COMPLETELY COVER AREA WITH BLACK POLYETHYLENE FILM AND HOLD IN PLACE BY PLACING SOIL ON THE OUTER EDGE. WHEN USING ORGANIC MULCHES, APPLY 20-30 POUNDS OF NITROGEN IN ADDITION TO THE NORMAL AMOUNT NEEDED FOR PLANT GROWTH TO OFFSET THE TIE UP OF NITROGEN BY DECOMPOSITION OF MULCH. |           |

Ds2 SPECIES AND PLANTING SCHEDULE

| SPECIES                        | BROADCAST RATES (1) |                  | PLANTING DATES BY RESOURCE AREAS (3) | REMARKS                                                                                                            |
|--------------------------------|---------------------|------------------|--------------------------------------|--------------------------------------------------------------------------------------------------------------------|
|                                | PER ACRE            | PER 1000 SQ. FT. |                                      |                                                                                                                    |
| LESPEDEZA, ANNUAL ALONE        | 40 lb.              | 0.9 lb.          | P                                    | 200,000 SEED PER POUND. MAY VOLUNTEER FOR SEVERAL YEARS. USE UNCLEAN CL.                                           |
| LESPEDEZA, ANNUAL IN MIXTURES  | 10 lb.              | 0.6 lb.          | P                                    |                                                                                                                    |
| LOVEGRASS, WEEPING ALONE       | 4 lb.               | 0.1 lb.          | P                                    | 1,500,000 SEED PER POUND. MAY LAST FOR SEVERAL YEARS. MIX WITH SERICEA LESPEDEZA.                                  |
| LOVEGRASS, WEEPING IN MIXTURES | 2 lb.               | 0.05 lb.         | P                                    |                                                                                                                    |
| MILLET, BROWNTOP ALONE         | 40 lb.              | 0.9 lb.          | P                                    | 137,000 SEED PER POUND. QUICK DENSE COVER. WILL PRODUCE TOO MUCH COMPETITION IN MIXTURES IF SEEDING AT HIGH RATES. |
| MILLET, BROWNTOP IN MIXTURES   | 10 lb.              | 0.2 lb.          | P                                    |                                                                                                                    |
| MILLET, PEARL ALONE            | 50 lb.              | 0.9 lb.          | P                                    | 88,000 SEED PER POUND. QUICK DENSE COVER. MAY REACH 5 FEET IN HEIGHT. NOT RECOMMENDED FOR MIXTURES.                |
| MILLET, PEARL IN MIXTURES      |                     |                  | P                                    |                                                                                                                    |
| RYE ALONE                      | 3 bu (168 lb.)      | 3.9 lb.          | P                                    | 18,000 SEED PER POUND. QUICK COVER. DROUGHT TOLERANT AND WINTERHARDY.                                              |
| RYE IN MIXTURES                | 1/2 bu (28 lb.)     | 0.6 lb.          | P                                    |                                                                                                                    |
| RYEGRASS, ANNUAL ALONE         | 40 lb.              | 0.9 lb.          | P                                    | 227,000 SEED PER POUND. DENSE COVER. VERY COMPETITIVE AND IS NOT TO BE USED IN MIXTURES.                           |
| RYEGRASS, ANNUAL IN MIXTURES   |                     |                  | P                                    |                                                                                                                    |
| SUDANGRASS ALONE               | 60 lb.              | 1.4 lb.          | P                                    | 55,000 SEED PER POUND. GOOD ON DROUGHTY SITES. NOT RECOMMENDED FOR MIXTURES.                                       |
| SUDANGRASS IN MIXTURES         |                     |                  | P                                    |                                                                                                                    |

(1) BROADCAST RATES ARE IN PURE LIVE SEED (PLS)  
 (2) M-L REPRESENTS THE MOUNTAIN, BLUE RIDGE, AND RIDGES AND VALLEYS MLRA'S  
 P REPRESENTS THE SOUTHERN PIEDMONT MLRA  
 C REPRESENTS SOUTHERN COASTAL PLAIN, SAND HILLS, BLACK LANDS, AND ATLANTIC COAST FLATWOODS MLRA'S  
 (3) DARK LINES INDICATE OPTIMUM DATES, GRAY LINES INDICATE PERMISSIBLE BUT MARGINAL DATES.

FERTILIZER AND LIME REQUIREMENTS FOR TEMPORARY VEGETATION (Ds2)

| TYPES OF SPECIES                   | PLANTING YEAR | FERTILIZER (N-P-K) | RATE (LBS./ACRE) | N TOP DRESSING RATE (LBS./ACRE) | LIME APPLICATION (TONS/ACRE) |
|------------------------------------|---------------|--------------------|------------------|---------------------------------|------------------------------|
| Cool Season Grasses                | First         | 6-12-12            | 1500             | 50-100                          | 1                            |
|                                    | Second        | 6-12-12            | 1000             | 30                              |                              |
|                                    | Maintenance   | 10-10-10           | 400              | 30                              |                              |
| Cool Season Grasses and Legumes    | First         | 6-12-12            | 1500             | 0-50                            | 1                            |
|                                    | Second        | 6-12-12            | 1000             | -                               |                              |
|                                    | Maintenance   | 10-10-10           | 400              | -                               |                              |
| Temporary Cover Crops Seeded Alone | First         | 10-10-10           | 500              | 30                              | 1                            |
| Warm Season Grasses                | First         | 6-12-12            | 1500             | 50-100                          | 1                            |
|                                    | Second        | 6-12-12            | 800              | 30                              |                              |
|                                    | Maintenance   | 10-10-10           | 400              | 30                              |                              |

Ds2 DISTURBED AREA STABILIZATION (WITH TEMP SEEDING)

(COORDINATE WITH FINAL LANDSCAPING PLAN)

| SPECIES                                                 | BROADCAST RATES (1) PLS 2/ |                  | PLANTING DATES BY RESOURCE AREAS (3) | SPECIFICATIONS                                                                                                                                                                                                                |
|---------------------------------------------------------|----------------------------|------------------|--------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                         | PER ACRE                   | PER 1000 SQ. FT. |                                      |                                                                                                                                                                                                                               |
| BERMUDA, COMMON (CYNODON DACTYLON)                      | 10 LBS.                    | 0.2 LB.          | P                                    | 1,787,000 SEEDS PER POUND. QUICK COVER. LOW GROWING AND SOO FORMING. FULL SUN. GOOD FOR ATHLETIC FIELDS.                                                                                                                      |
| HALLED SEED ALONE                                       | 10 LBS.                    | 0.2 LB.          | P                                    |                                                                                                                                                                                                                               |
| WITH OTHER PERENNIALS                                   | 6 LBS.                     | 0.1 LB.          | P                                    |                                                                                                                                                                                                                               |
| BERMUDA, COMMON (CYNODON DACTYLON)                      | 10 LBS.                    | 0.2 LB.          | P                                    | PLANT WITH WINTER ANNUALS. PLANT WITH TALL FESCUE.                                                                                                                                                                            |
| WITH TEMPORARY COVER WITH OTHER PERENNIALS              | 10 LBS.                    | 0.2 LB.          | P                                    |                                                                                                                                                                                                                               |
| BERMUDA SPRIGS (CYNODON DACTYLON)                       | 45 CU. FT.                 | 0.9 CU. FT.      | P                                    | A CUBIC FT. CONTAINS APPROXIMATELY 600 SPRIGS. A BUSHEL CONTAINS 1.25 C.F. OR APPROXIMATELY 800 SPRIGS.                                                                                                                       |
| COASTAL, COMMON, MIDLAND, OR TIFT 44 (CYNODON DACTYLON) | OR SOD PLUGS 3" x 3"       |                  | P                                    |                                                                                                                                                                                                                               |
| COASTAL, COMMON, OR TIFT 44                             |                            |                  | P                                    |                                                                                                                                                                                                                               |
| CENTPEDE (EREMOCHLOA OPHUROIDES)                        | BLOCK SOD ONLY             |                  | P                                    | DROUGHT TOLERANT. FULL SUN OR PARTIAL SHADE. EFFECTIVE ADJACENT TO CONCRETE AND IN CONCENTRATED FLOW AREAS. IRRIGATION IS NEEDED UNTIL FULLY EST. DO NOT PLANT NEAR PARTURES. WINTERHARDY AS FAR NORTH AS ATHENS AND ATLANTA. |
| FESCUE, TALL (CYNODON DACTYLON)                         | 50 LBS.                    | 1.1 LB.          | P                                    | 227,000 SEED PER POUND USE ALONE ONLY ON BETTER SITES. NOT FOR DROUGHTY SOILS. MIX WITH PERENNIAL LESPEDEZA OR CROWN-VETCH. APPLY TOPDRESSING IN SPRING FOLLOWING FALL PLANTING. NOT FOR HEAVY USE AREAS OR ATHLETIC FIELDS.  |
| WITH OTHER PERENNIALS                                   | 30 LBS.                    | 0.7 LB.          | P                                    |                                                                                                                                                                                                                               |

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 P REPRESENTS THE SOUTHERN PIEDMONT MLRA  
 C REPRESENTS SOUTHERN COASTAL PLAIN, SAND HILLS, BLACK LANDS, AND ATLANTIC COAST FLATWOODS MLRA'S  
 (3) DARK LINES INDICATE OPTIMUM DATES, GRAY LINES INDICATE PERMISSIBLE BUT MARGINAL DATES.

Ds3 PERMANENT GRASSING MULCHING RATES

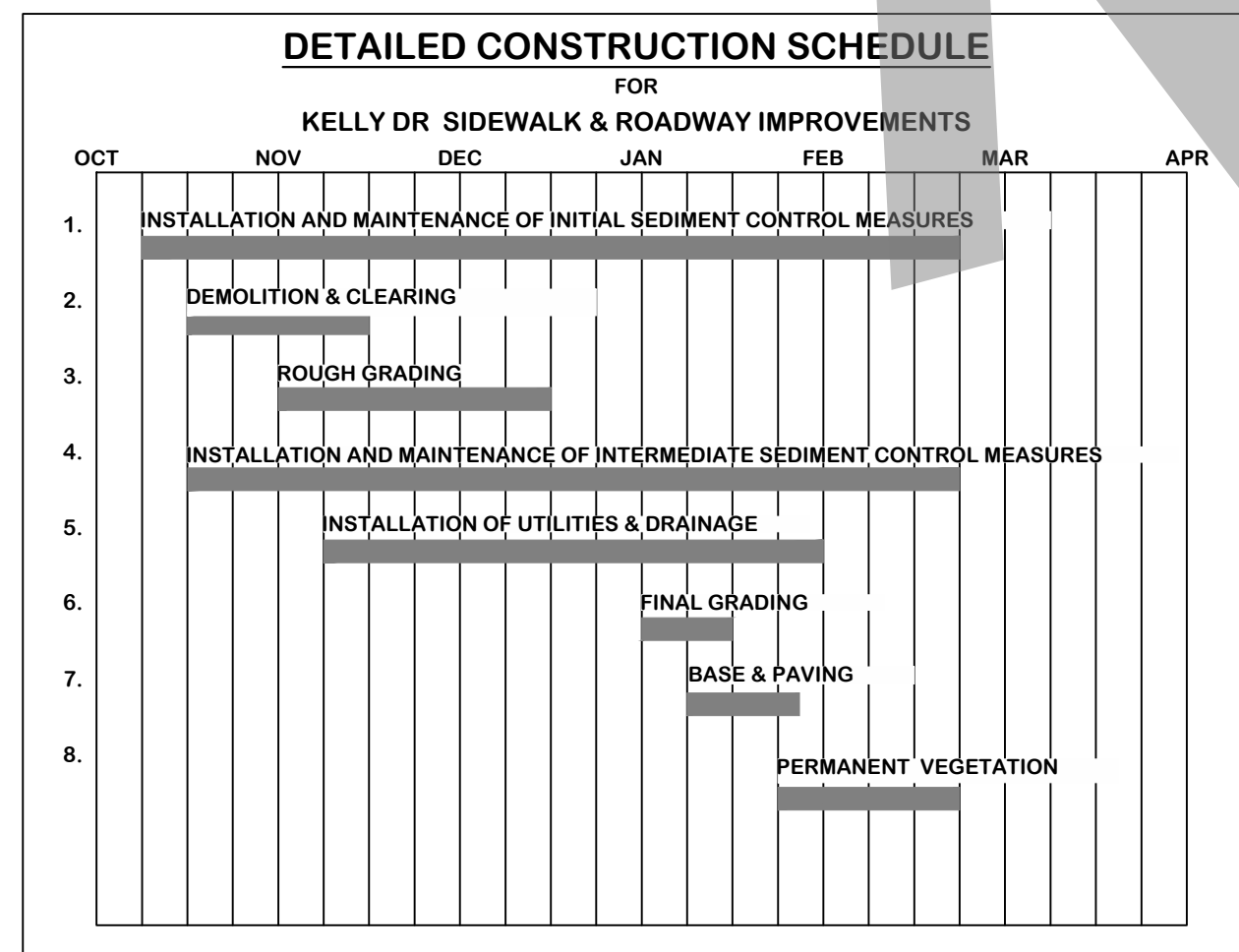
| MATERIAL                             | DEPTH    |
|--------------------------------------|----------|
| 1. GRAIN STRAW OR GRASS HAY          | 4" TO 6" |
| 2. PINE NEEDLE                       | 3" TO 5" |
| 3. WOOD WASTE (SAWDUST, BARK, CHIPS) | 4" TO 6" |

Ds3 DISTURBED AREA STABILIZATION (WITH PERM SEEDING)

KELLY DR SIDEWALK & ROADWAY IMPROVEMENTS - EROSION CONTROL SCHEDULE

ITEM (SEE CONSTRUCTION SCHEDULE THIS SHEET)

- Installation of Initial Sediment Control Measures - Before clearing and rough grading begins, perimeter silt fence and construction exit will be installed per project plans to ensure sedimentation does not reach sensitive areas.
- Demolition & Clearing - Mulch and temporary vegetation will be installed to ensure stabilization. Erosion and sediment control measures shall be installed prior to or concurrent with land disturbing activities and maintained until site is stabilized.
- Rough Grading - Temporary/Permanent grassing practices will be utilized to ensure stabilization at all stages.
- Installation of Intermediate Erosion and Sediment Control Measures - As construction progress, additional erosion and sediment control measures required by plan and as needed will be provided to ensure sediment does not leave the site. Erosion control devices will be maintained until site is stabilized.
- Installation of Utilities - Temporary/Permanent grassing practices will be utilized to ensure stabilization at all stages.
- Final Grading - After all utilities in place, final grading is to occur to the elevations shown on the plan. Temporary/Permanent grassing practices will be utilized to ensure stabilization at all stages.
- Base & Paving - Silt Fence will be maintained and grassing practices will be utilized to control sedimentation.
- Permanent Vegetation - The project will be grassed in all location whereas needed to establish a permanent stand of grass. Erosion control devices will be maintained until a permanent stand of grass is achieved and an N.O.T. is issued.



PROJECT NARRATIVE

This site is located on Kelly Dr and Live Oak Dr in Hinesville, GA in Liberty County. The site has a total acreage of +/- 3 acres. The plan proposes a disturbed acreage of 2.47 acres. The proposed project is the installation of curb & gutter, sidewalks and associated infrastructure along Kelly Dr and Live Oak Dr. The existing site is composed of an asphalt paved road with ditches and driveways that serve several residents along the roadway, as well as wooded areas.

Land disturbing activities include but are not limited to Demolition, Clearing and Grubbing, Grading, Paving, Installation of Utilities & Drainage, Concrete Sidewalk Installation, Grassing, and other activities typically associated with roadway construction.

Pre-development runoff is 26.27 CFS. Post development runoff is 20.55 CFS. Type NS Silt Fence, Mulching, Inlet Sediment Traps, and Grassing will be used to deter pollutants during construction. Grasses, vegetation and mulching will be used once construction is complete.

SEDIMENT STORAGE SUMMARY:

DISTURBED AREA = 2.47 AC  
 REQUIRED SEDIMENT STORAGE = 165.49 C.Y.  
 (67 C.Y./AC X 2.47 AC = 165.49 C.Y.)

SILT FENCE SEDIMENT STORAGE

SILT FENCE REQUIRED = 100' PER 1/4 ACRE  
 2.47 AC X 100'/0.25 AC = 988 LF  
 STORAGE IN REQ. SILT FENCE = 988 LF X 0.17 CY/LF = 167.96 CY

AVAILABLE STORAGE = 3059 LF X 0.17 CY/LF = 520.03 CY

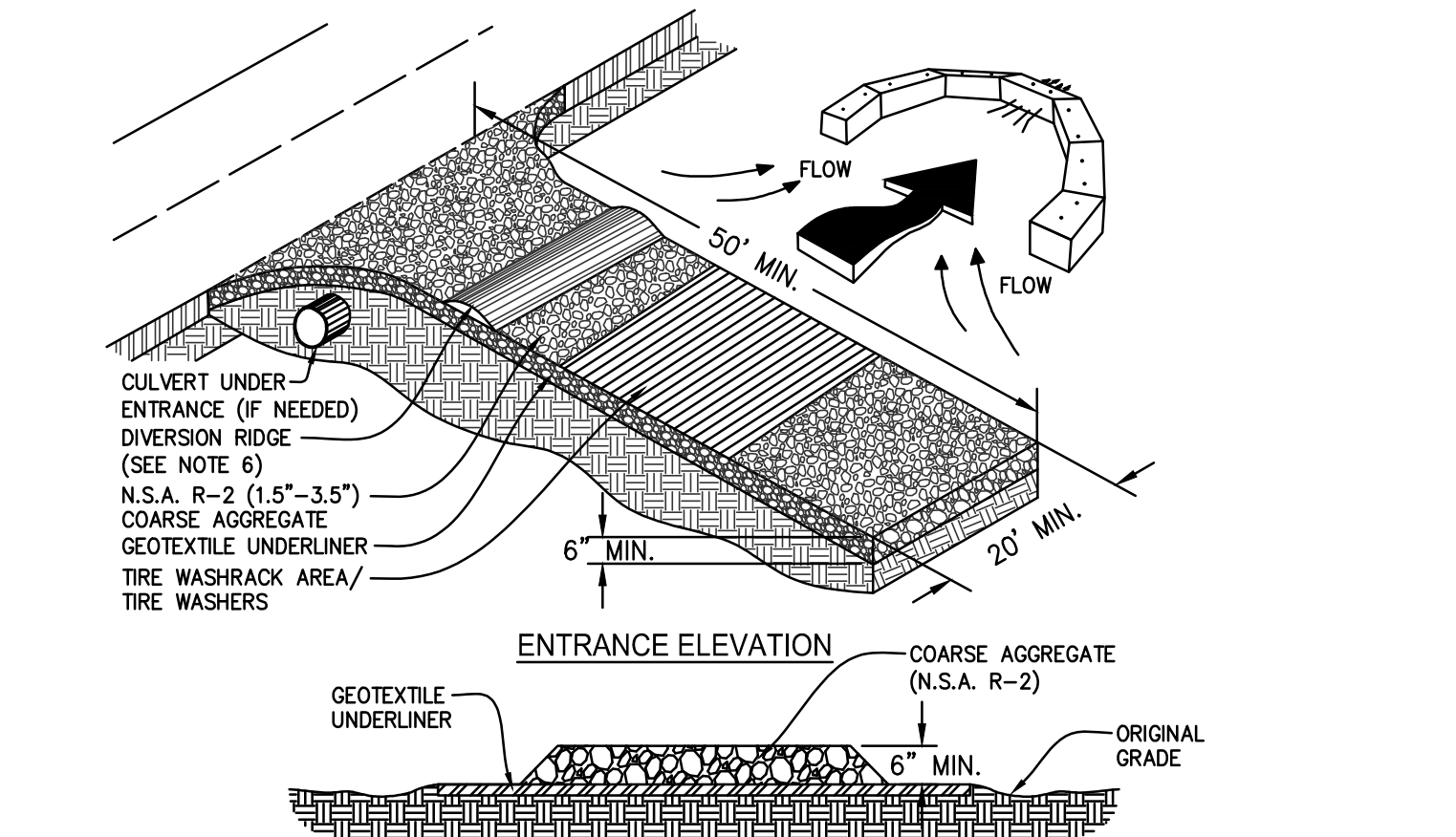
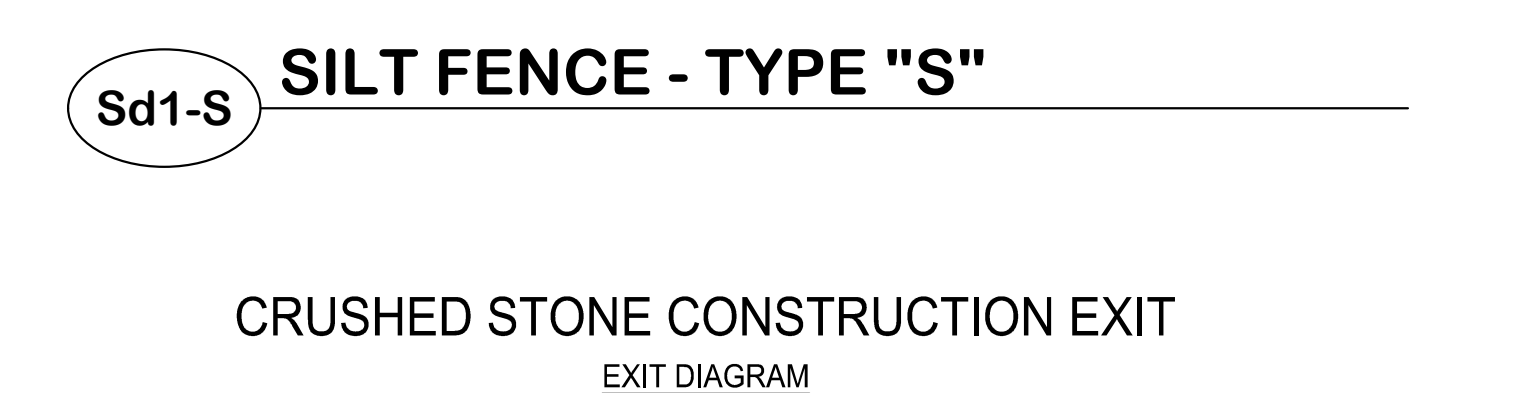
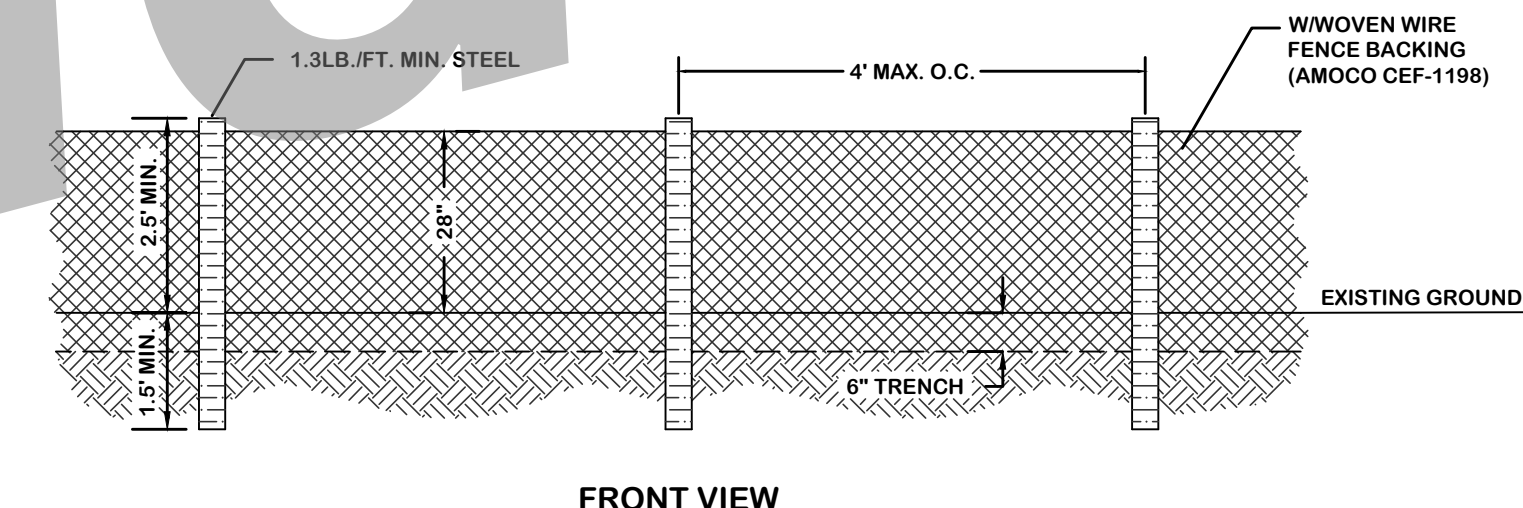
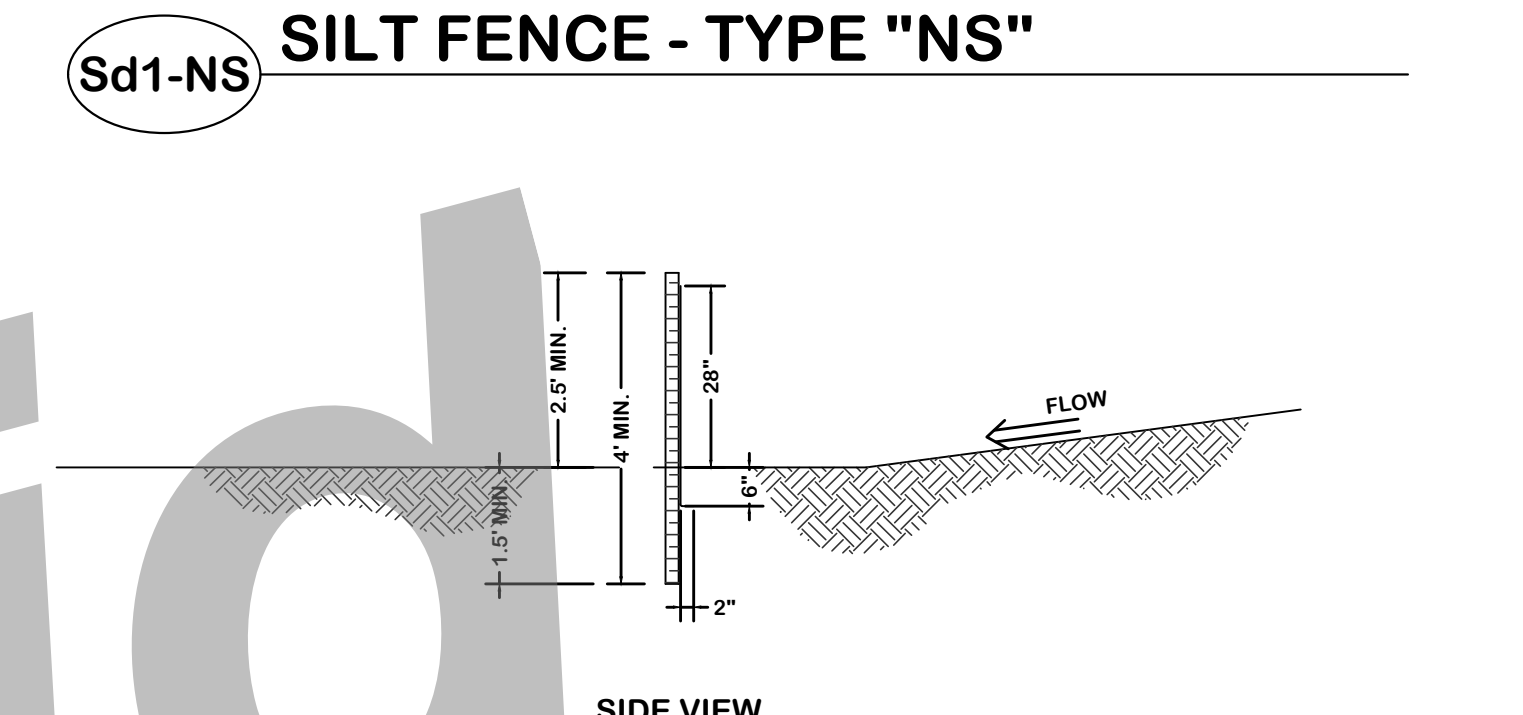
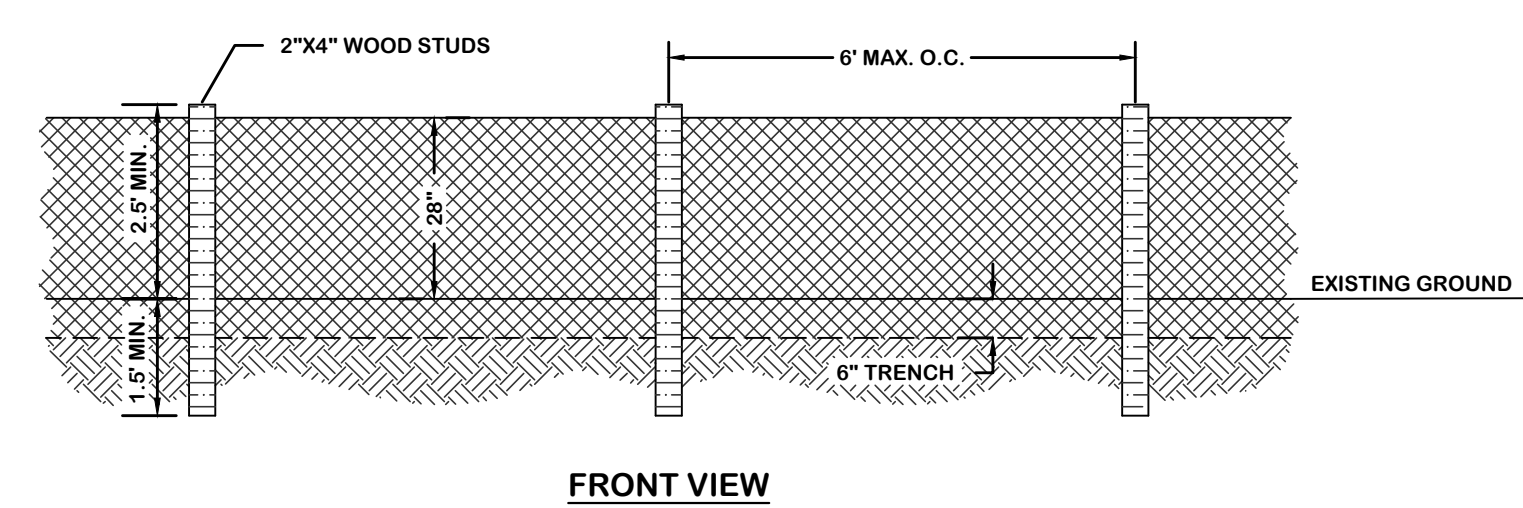
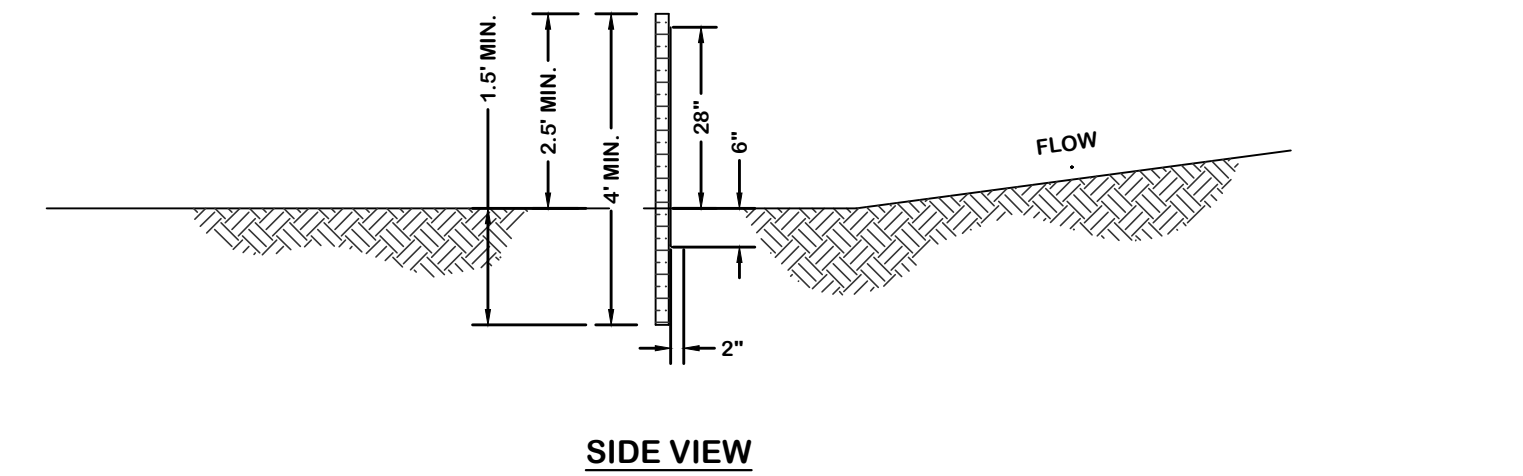
Sd2-SS SEDIMENT STORAGE

STORAGE PROVIDED = 59.18 CY  
 (see detail and chart on sheet C5.2)

TOTAL SEDIMENT STORAGE ACHIEVED = 579.21 CY  
 \*Although the required sediment storage has been exceeded using silt fences, additional storage will be provided through inlet sediment traps.

Due to the linear nature of this project and limited area available, sediment ponds are unable to be used. Sediment will be contained through the use of silt fence, and inlet sediment traps.

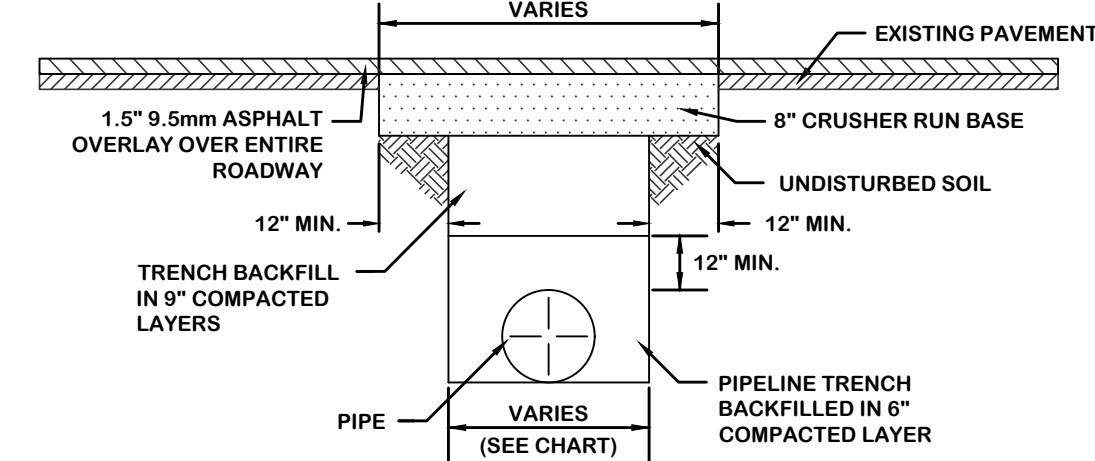
It is our professional opinion that sufficient sediment storage will be obtained with proper installation and maintenance of proposed BMP's.



- NOTES:
- AVOID LOCATING ON STEEP SLOPES OR AT CURVES ON PUBLIC ROADS.
  - REMOVE ALL VEGETATION AND OTHER UNSUITABLE MATERIAL FROM THE FOUNDATION AREA, GRADE, AND CROWN FOR POSITIVE DRAINAGE.
  - AGGREGATE SIZE SHALL BE IN ACCORDANCE WITH NATIONAL STONE ASSOCIATION R-2 (1.5"-3.5" STONE).
  - GRAVEL PAD SHALL HAVE A MINIMUM THICKNESS OF 6".
  - PAD WIDTH SHALL BE EQUAL FULL WIDTH AT ALL POINTS OF VEHICULAR EGRESS, BUT NO LESS THAN 20'.
  - A DIVERSION RIDGE SHOULD BE CONSTRUCTED WHEN GRADE TOWARD PAVED AREA IS GREATER THAN 2K.
  - INSTALL PIPE UNDER THE ENTRANCE IF NEEDED TO MAINTAIN DRAINAGE DITCHES.
  - WHEN WASHING IS REQUIRED, IT SHOULD BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN (DIVERT ALL SURFACE RUNOFF AND DRAINAGE FROM THE ENTRANCE TO A SEDIMENT CONTROL DEVICE).
  - WASHRACKS AND/OR TIRE WASHERS MAY BE REQUIRED DEPENDING ON SCALE AND CIRCUMSTANCE. IF NECESSARY, WASHRACK DESIGN MAY CONSIST OF ANY MATERIAL SUITABLE FOR TRUCK TRAFFIC THAT REMOVE MUD AND DIRT.
  - MAINTAIN AREA IN A WAY THAT PREVENTS TRACKING AND/OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.

Co CONSTRUCTION EXIT

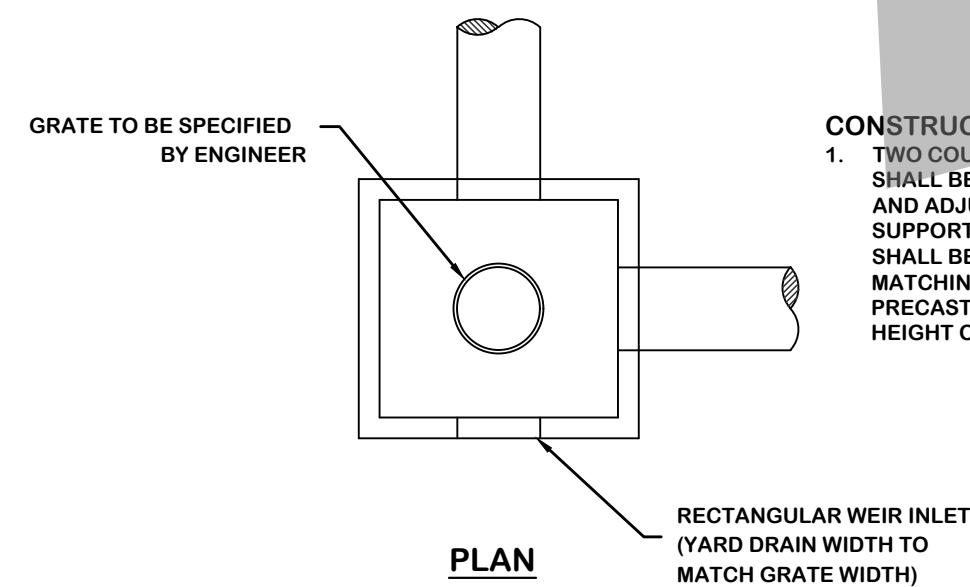
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 REVISED: \_\_\_\_\_  
  
 Level II Certification No. 935  
 Expiration Date: 10-01-23  
 1050 PARKSIDE COMMONS  
 GREENSBORO, GA 30642  
 TEL: (706) 454-0870  
 www.simontongen.com  
**SIMONTON ENGINEERING**  
 Kelly Drive Sidewalk & Roadway Improvements for City of Hinesville, Liberty County, Georgia  
 Details  
 DATE: June 1, 2022  
 FILE NO: 2021-889P  
 SHEET: C5.0



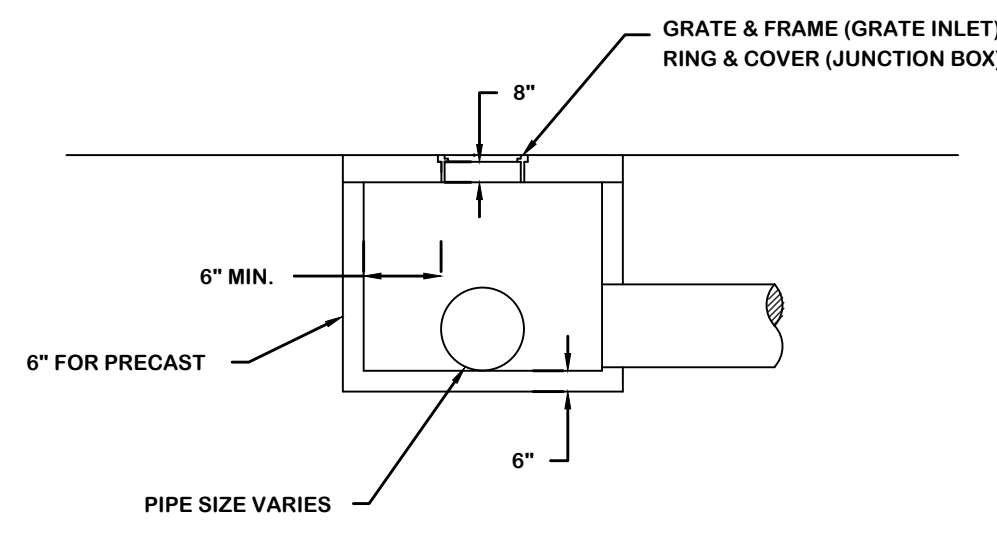
NOTE:  
MAXIMUM PAVEMENT WIDTH FOR CUT DEPTH OVER 6 FEET SHALL BE 8 FEET UNLESS NOTED OTHERWISE ON PLANS.

| PIPE DIAMETER | MAXIMUM TRENCH WIDTH 0'-6" CUT DEPTH | MAXIMUM PAVEMENT WIDTH 0'-6" CUT DEPTH |
|---------------|--------------------------------------|----------------------------------------|
| 6" TO 15"     | 16" + DIA.                           | 40" + DIA.                             |
| 18" TO 21"    | 20" + DIA.                           | 44" + DIA.                             |
| 24" TO 30"    | 24" + DIA.                           | 48" + DIA.                             |
| 33" TO 42"    | 36" + DIA.                           | 60" + DIA.                             |
| 48"           | 36" + DIA.                           | 60" + DIA.                             |

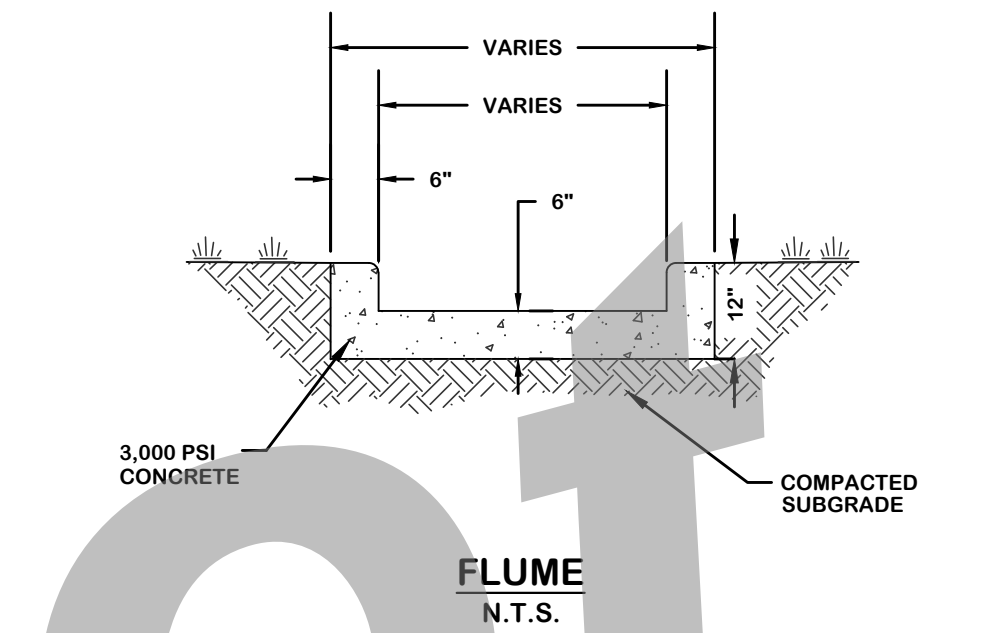
**PAVEMENT REMOVAL & REPLACEMENT**  
N.T.S.



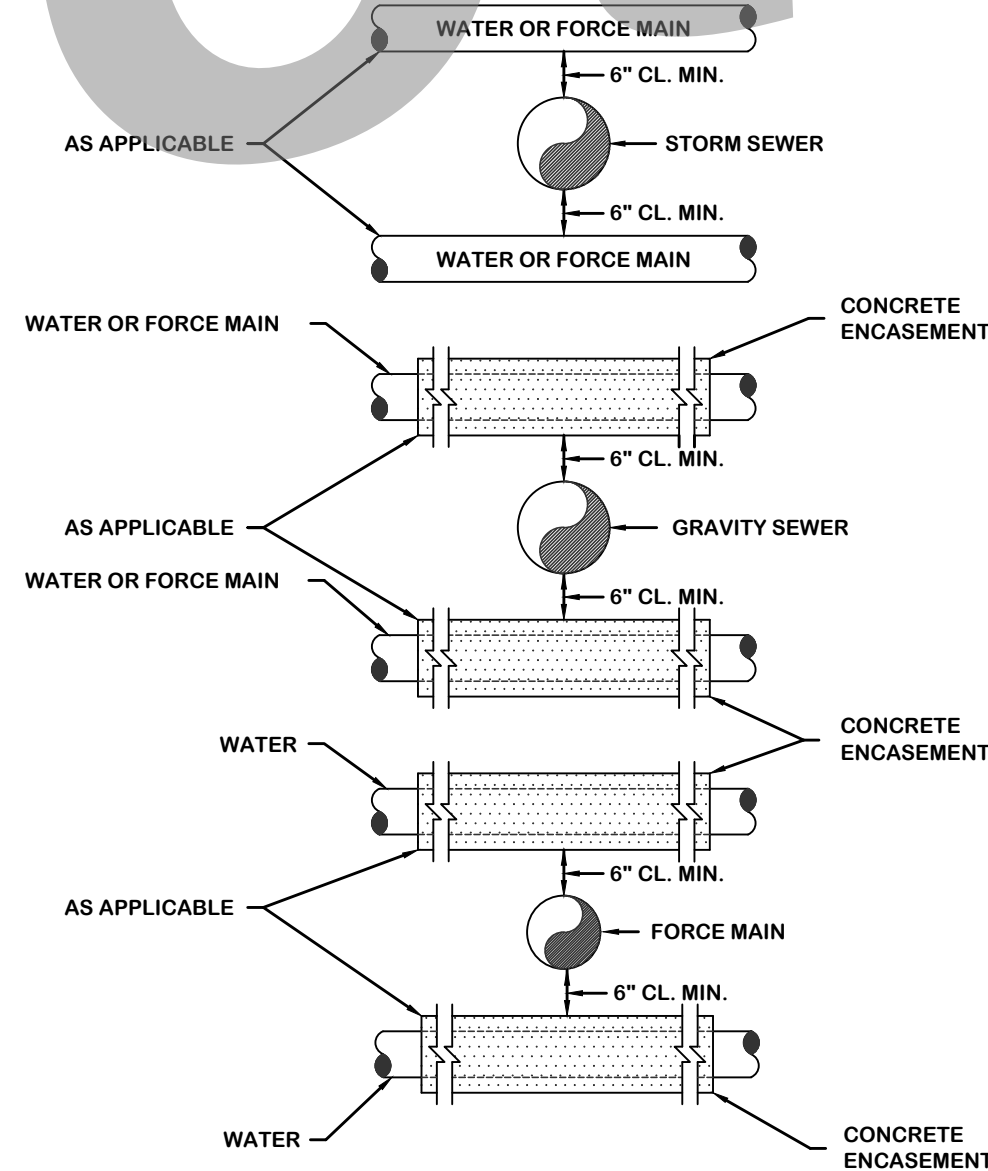
CONSTRUCTION NOTES:  
1. TWO COURSES OF BRICK MAX SHALL BE ALLOWED FOR LEVELING AND ADJUSTMENT OF LID. ANY SUPPORT OTHER THAN BRICK SHALL BE POURED IN PLACE MATCHING THE THICKNESS OF THE PRECAST WALL TO A MAXIMUM HEIGHT OF 24 INCHES.



**JUNCTION BOX / GRATE INLET**  
N.T.S.

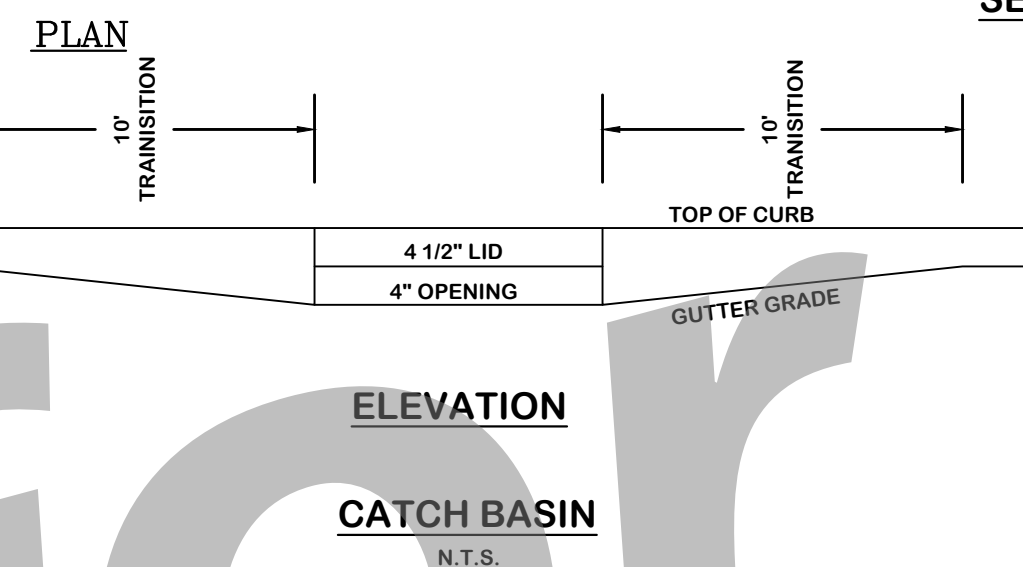
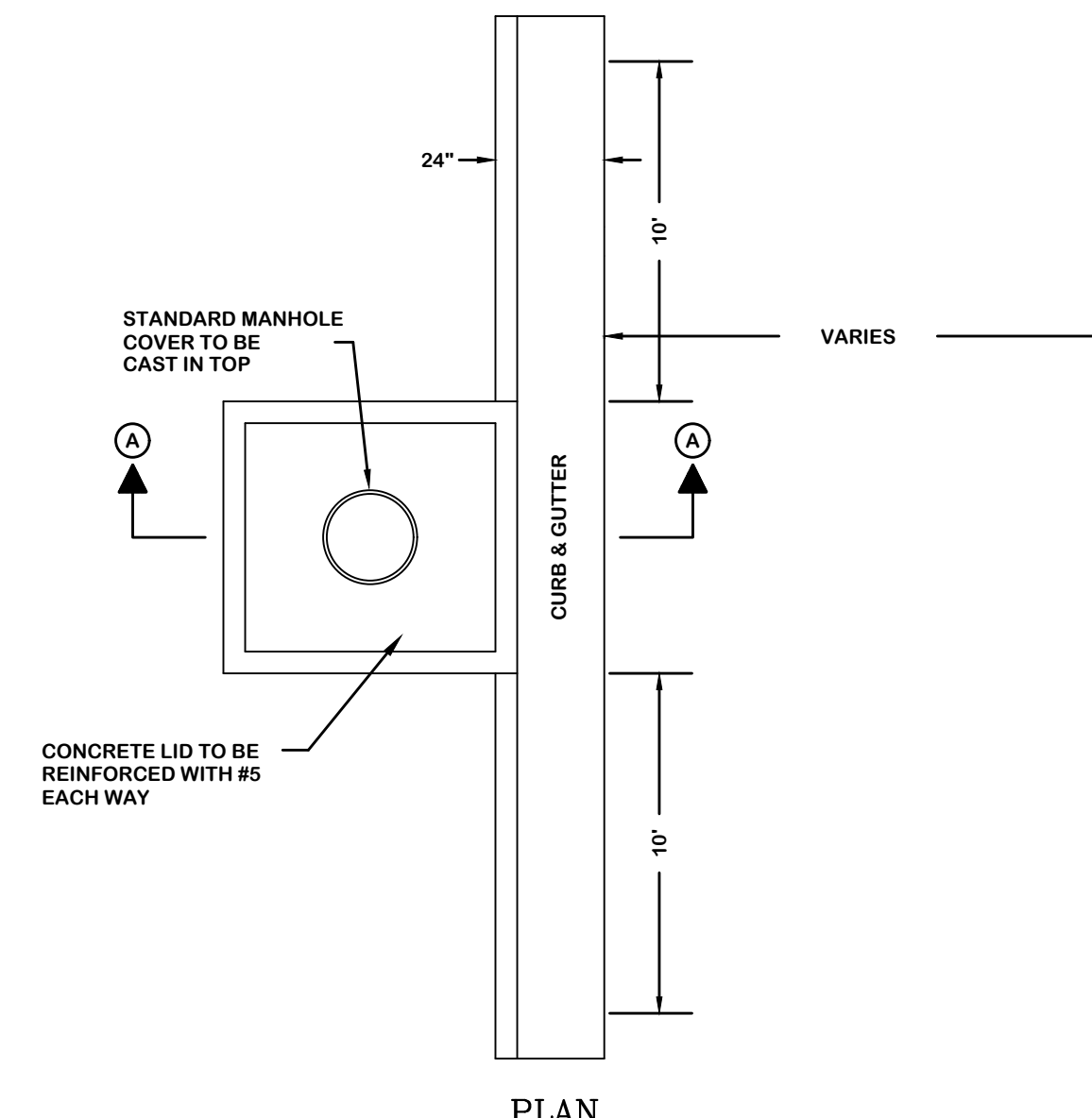


**FLUME**  
N.T.S.

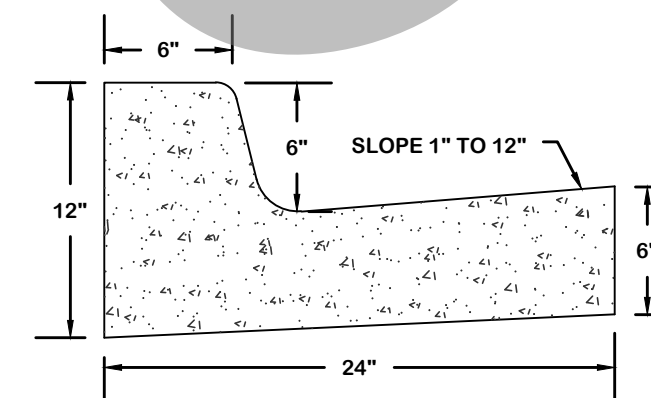


NOTES:  
1. CONCRETE ENCASEMENT TO EXTEND A MINIMUM OF 10' ON BOTH SIDES OF CROSSING.  
2. FOR ELEVATION OF PIPES, SEE PLANS.  
3. CONCRETE ENCASEMENT REQUIRED IF 18" VERTICAL SEPARATION IS NOT MAINTAINED.

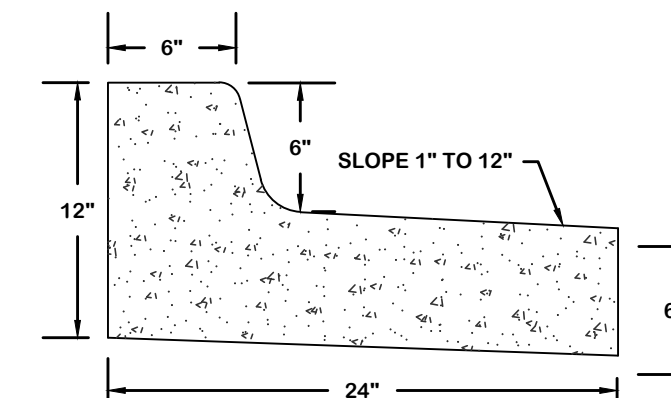
**SEPERATION DETAIL**  
N.T.S.



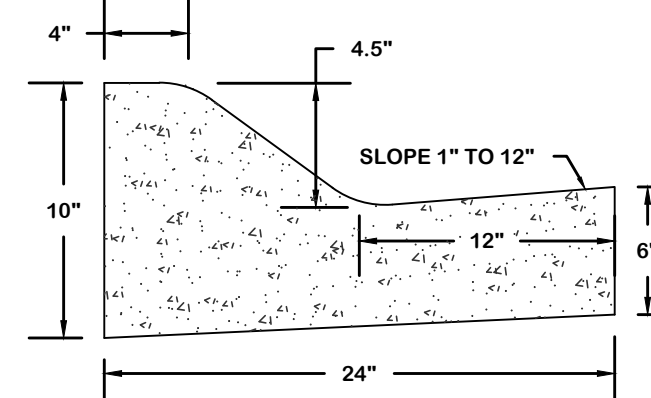
**CATCH BASIN**  
N.T.S.



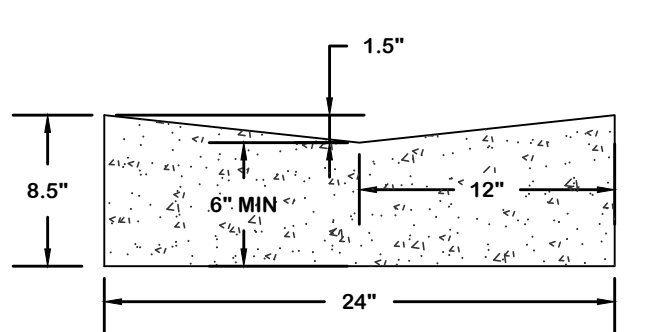
**STANDARD TYPE CURB & GUTTER**  
N.T.S.



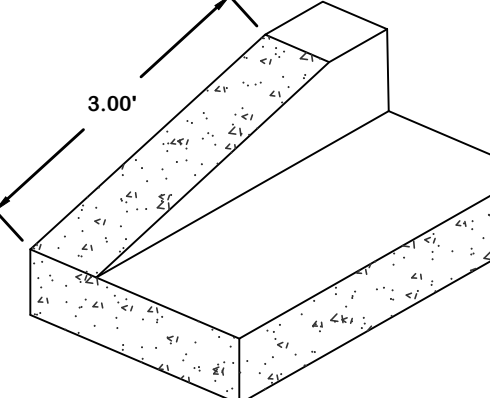
**SPILL-OUT TYPE CURB & GUTTER**  
N.T.S.



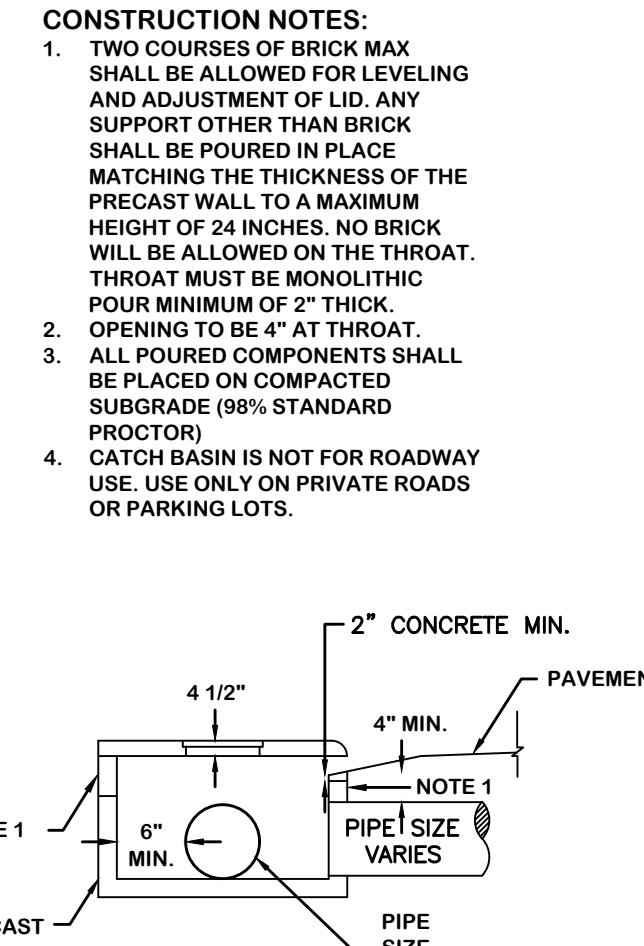
**ROLLED TYPE CURB & GUTTER**  
N.T.S.



**VALLEY TYPE CURB & GUTTER**  
N.T.S.

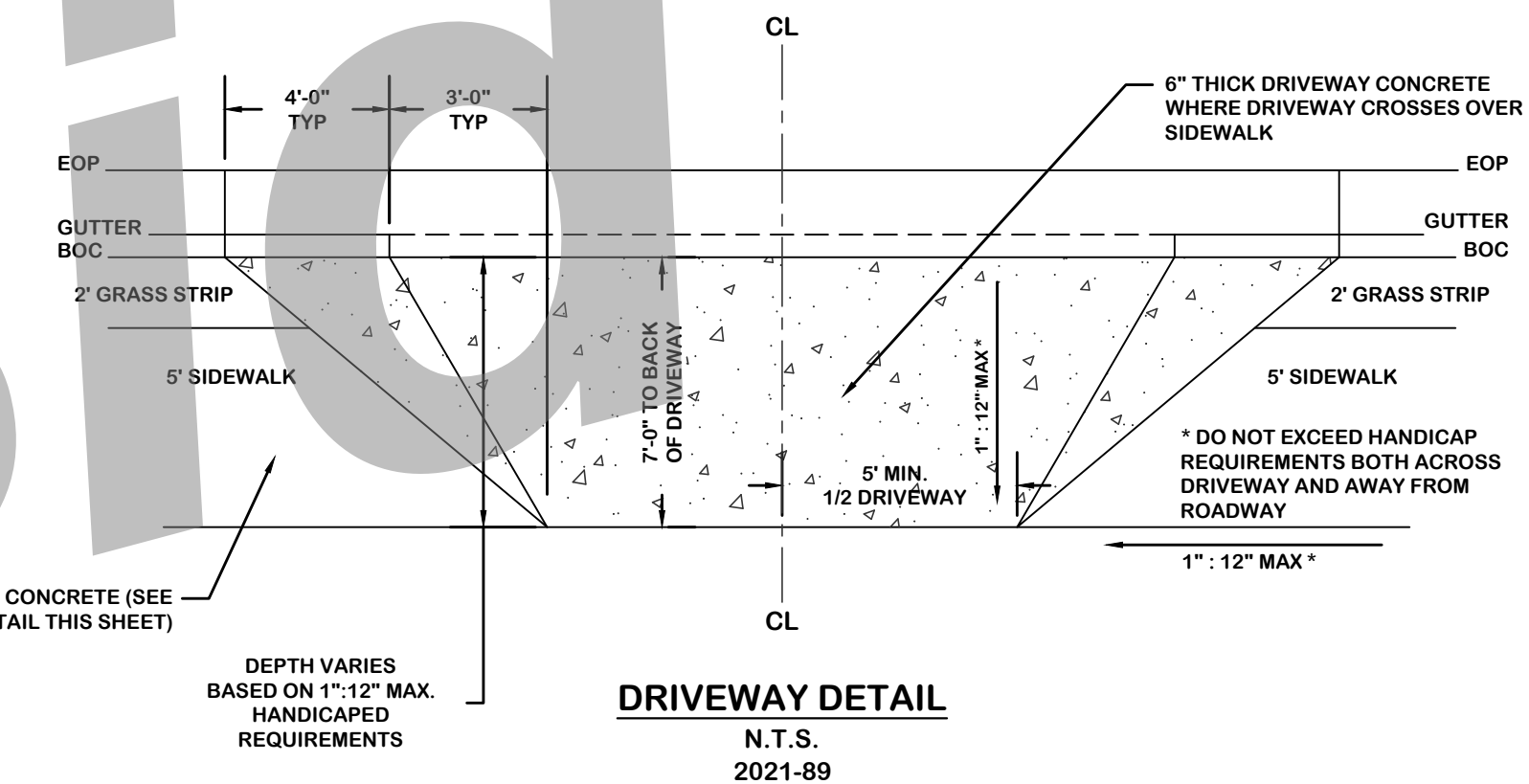


**CURB TERMINATION DETAIL**  
N.T.S.

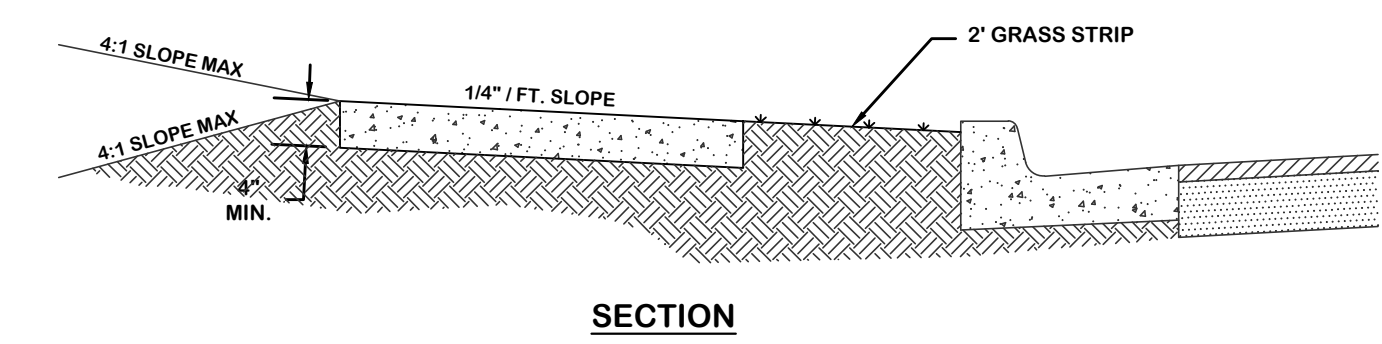


**PIPE BEDDING DETAIL**  
N.T.S.

**SECTION A-A**



**DRIVEWAY DETAIL**  
N.T.S.  
2021-89



**SECTION**

1/2" THICK EXPANSION JOINT FILLER SHALL BE PLACED A MAXIMUM OF 30' INTERVALS AND AT ALL INTERSECTIONS W/STEPS, CURBS, OR ANY OTHER WALKS ABUTTING STRUCTURES.

FINAL FINISH SHALL BE MEDIUM TO LIGHT BROOM FINISH AND UNIFORM EXCEPT 6" EDGE WITH SMOOTH TROWEL FINISH. ALL EDGES

CONSTRUCTION JOINT DEPTH SHALL BE 1/4 OF THE SLAB THICKNESS AND 1/8" WIDE AND SHALL BE SAWED OR TROWELED WITHIN 24 HOURS OF POURING.

COMPACTED BASE 100% MODIFIED PROCTOR

CONSTRUCTION JOINTS

3,000 LB CONCRETE W/FIBERMESH

**TYPICAL SIDEWALK DETAIL**  
N.T.S.

DRAWING COMPLETED BY:

REVISED:



Level II Certification No. 935  
Expiration Date: 10-01-23

1050 PARKSIDE COMMONS  
GREENSBORO, GA 30642  
TEL: (706) 454-0870  
www.simontonengineering.com

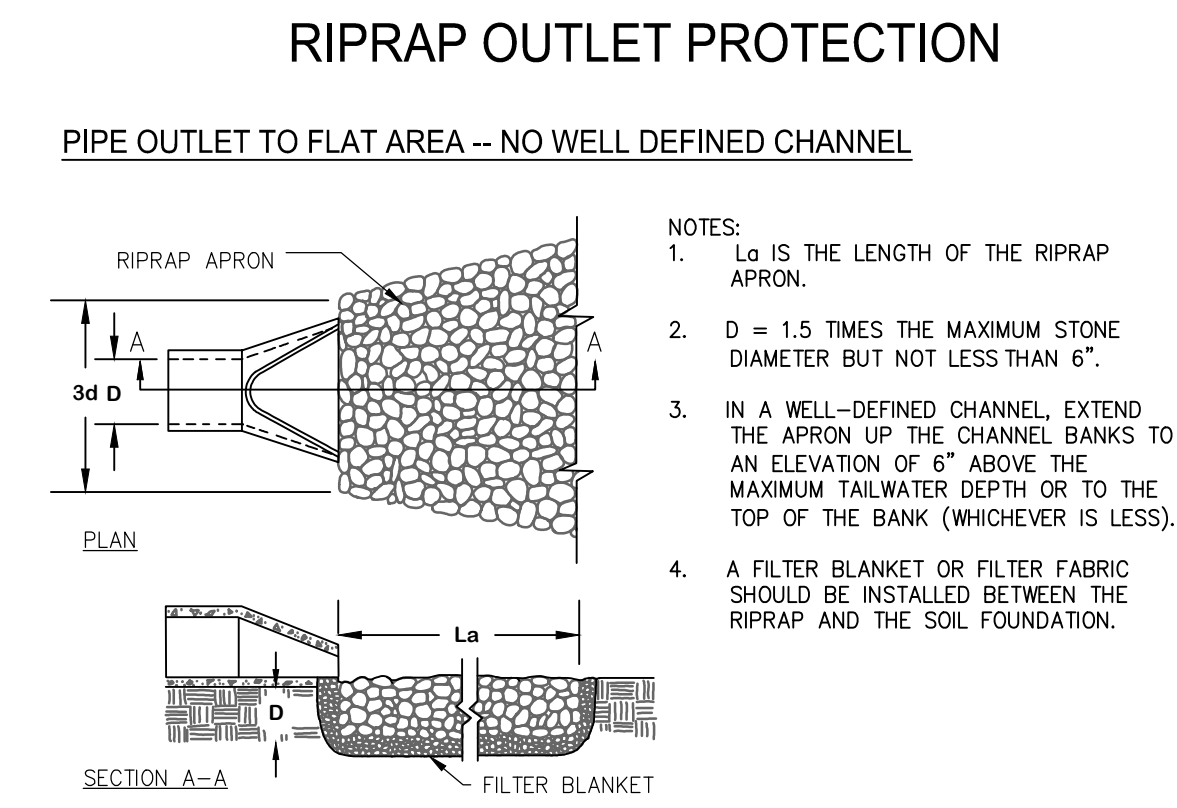
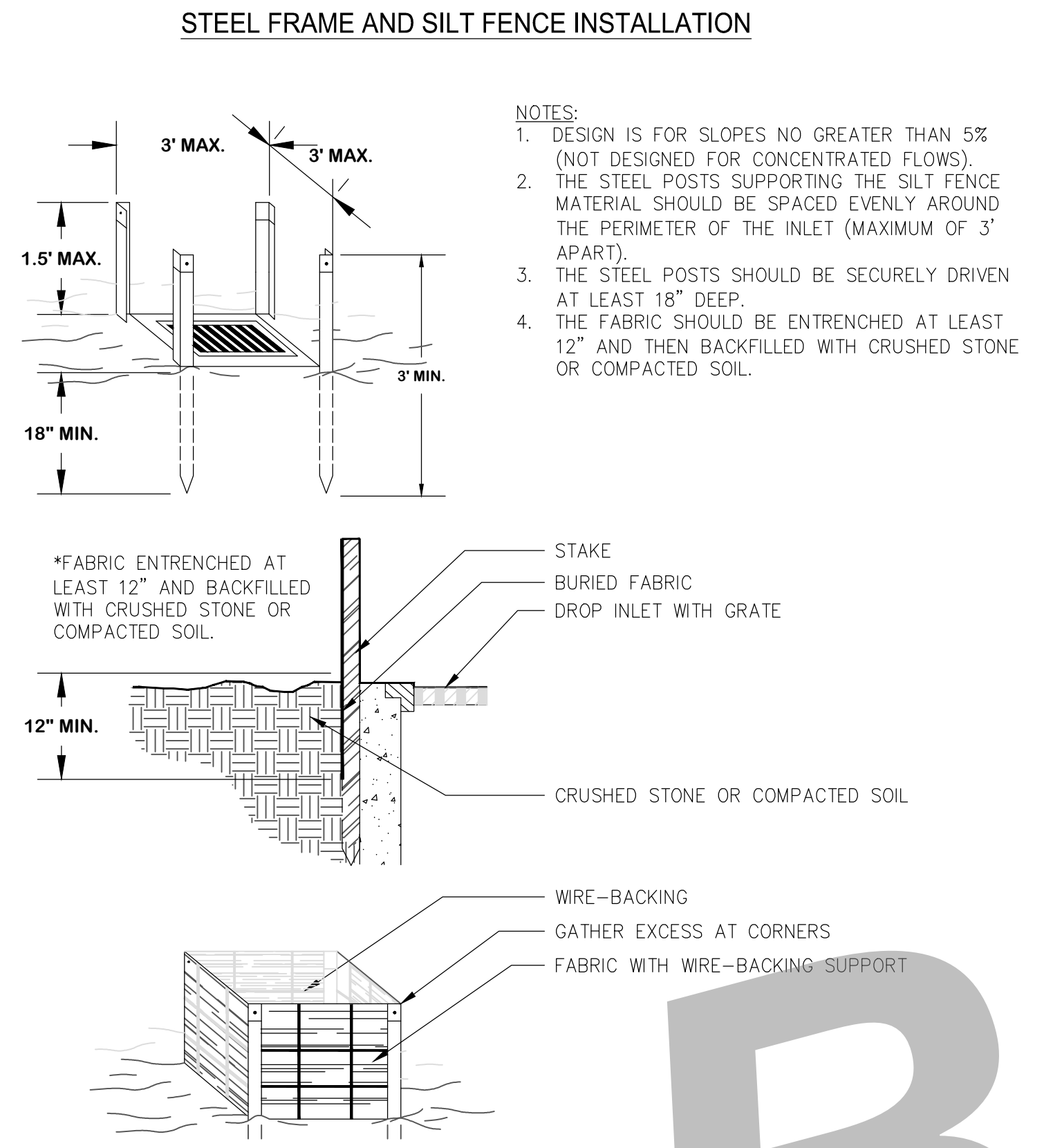
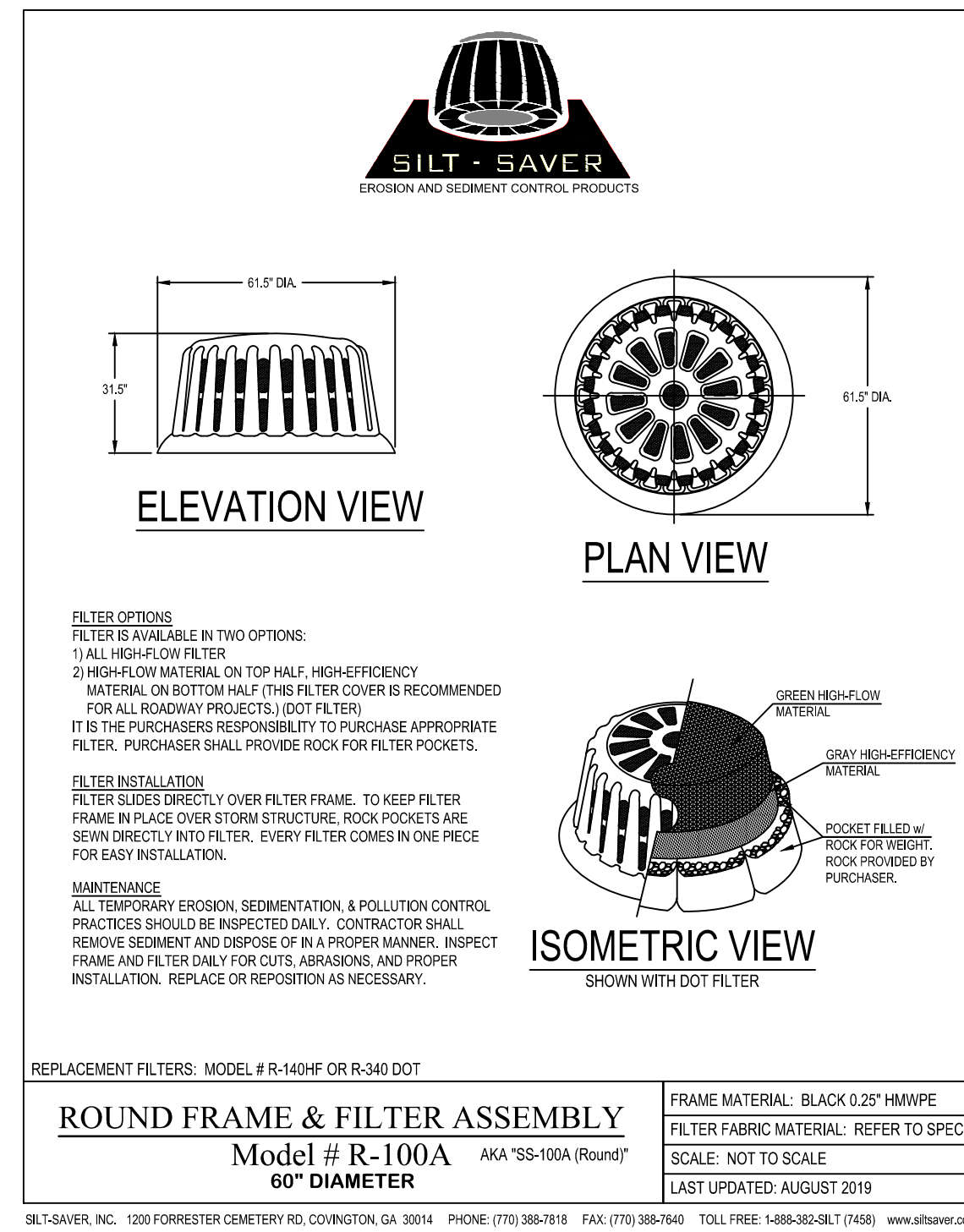
**SIMONTON**  
ENGINEERING



Kelly Drive Sidewalk &  
Roadway Improvements  
for  
City of Hinesville  
Liberty County, Georgia

Details

DATE: June 1, 2022  
FILE NO: 2021-89PPJ  
SHEET: C 5.1



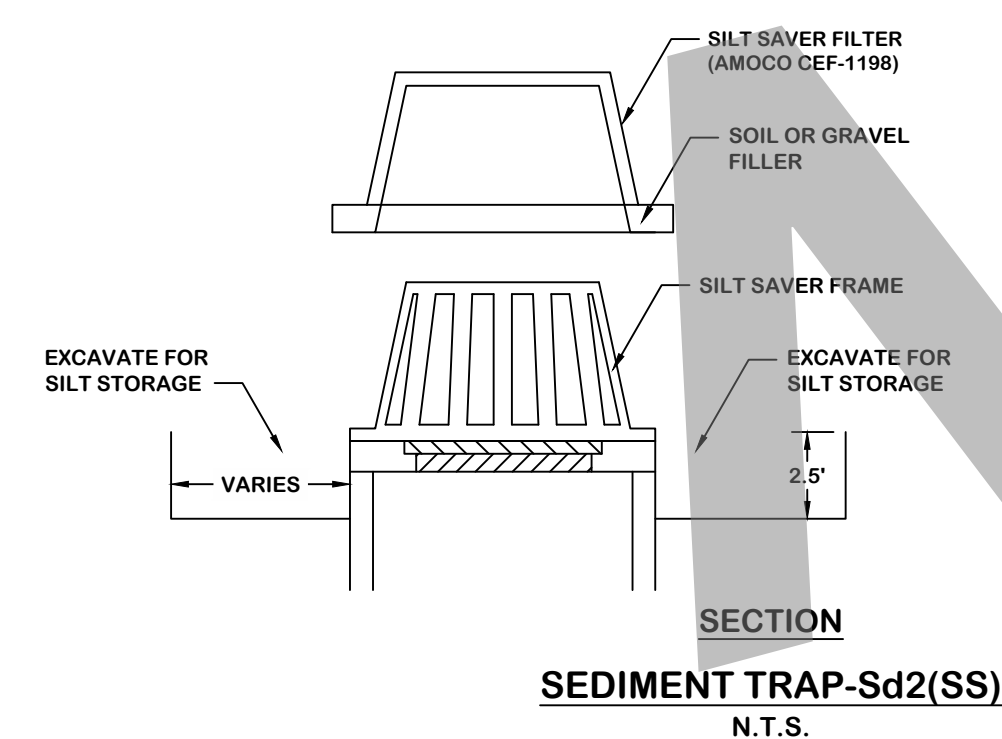
**St SIZE CHART**

| I.D. OUTLET | PIPE DIA. | La  | W1 | W2  | d50 | FLOW RATE | VELOCITY  | D   |
|-------------|-----------|-----|----|-----|-----|-----------|-----------|-----|
| 1A FES A1   | 18"       | 10' | 5' | 12' | 4"  | 2.11 CFS  | 2.77 FT/S | 9"  |
| 1B FES B1   | 24"       | 14' | 6' | 18' | 6"  | 4.91 CFS  | 3.32 FT/S | 14" |
| 2 HW D1     | 24"       | 14' | 6' | 18' | 6"  | 9.91 CFS  | 4.47 FT/S | 14" |

\*ALL TAILWATER CONDITIONS ARE MINIMUM.

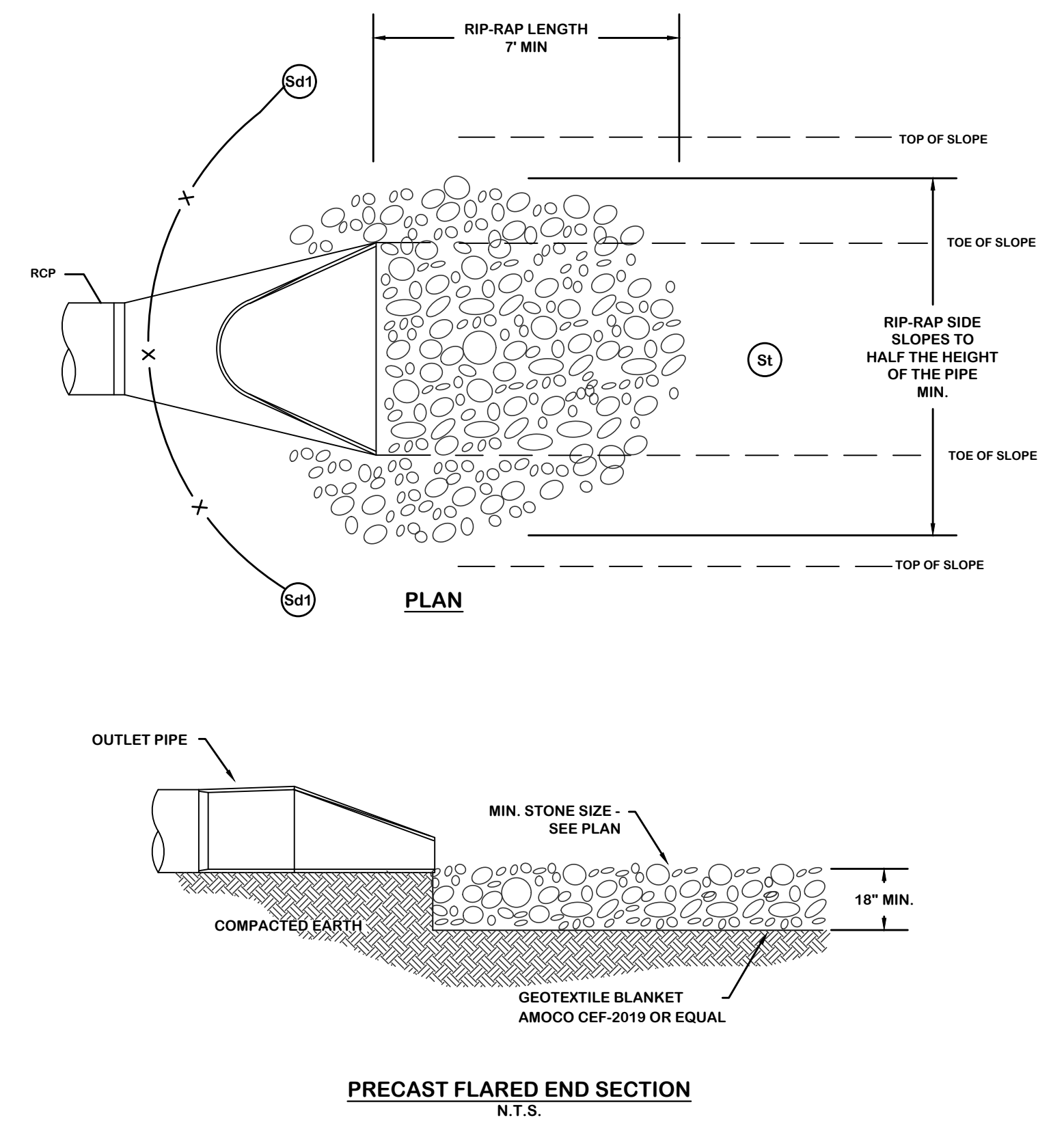
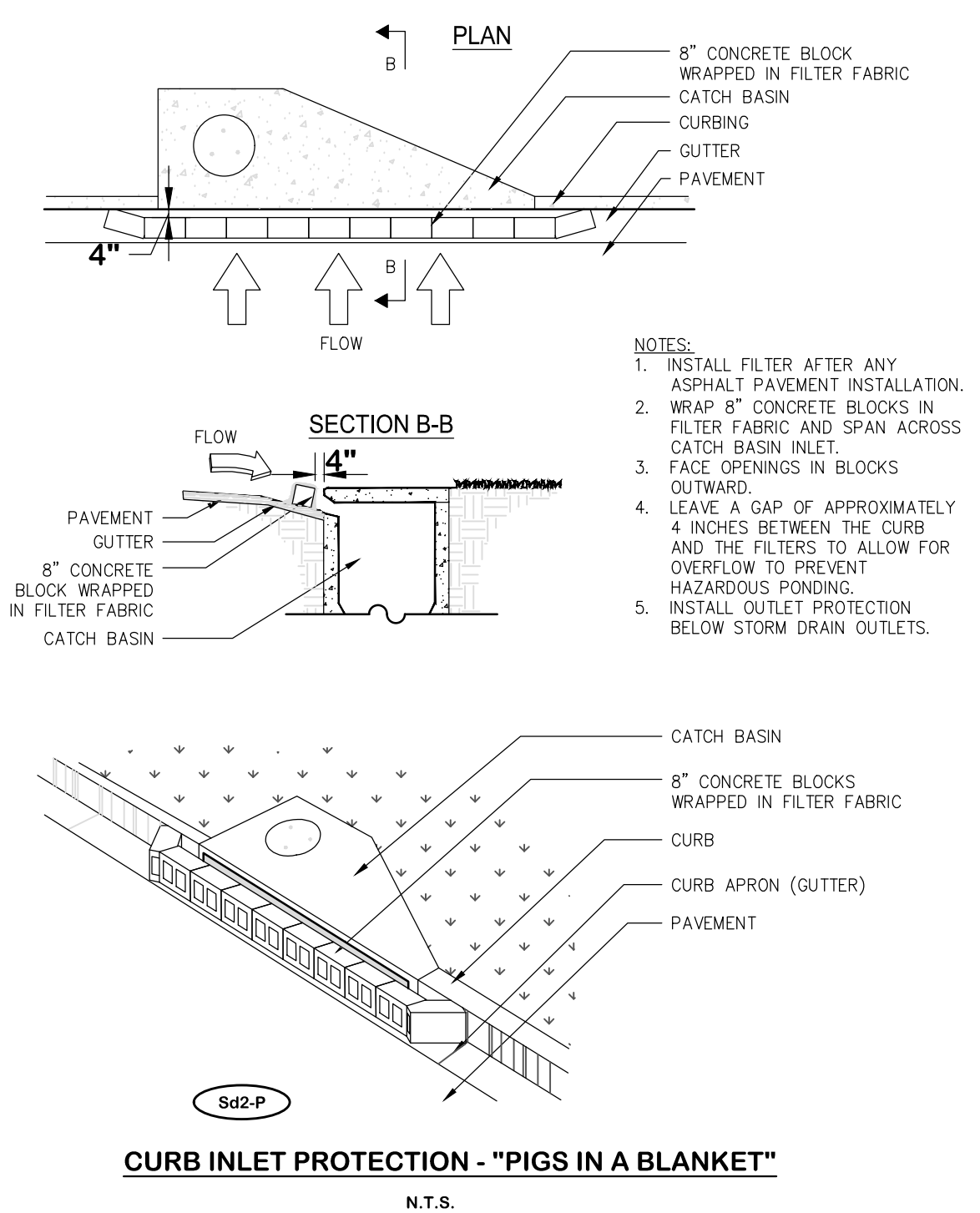
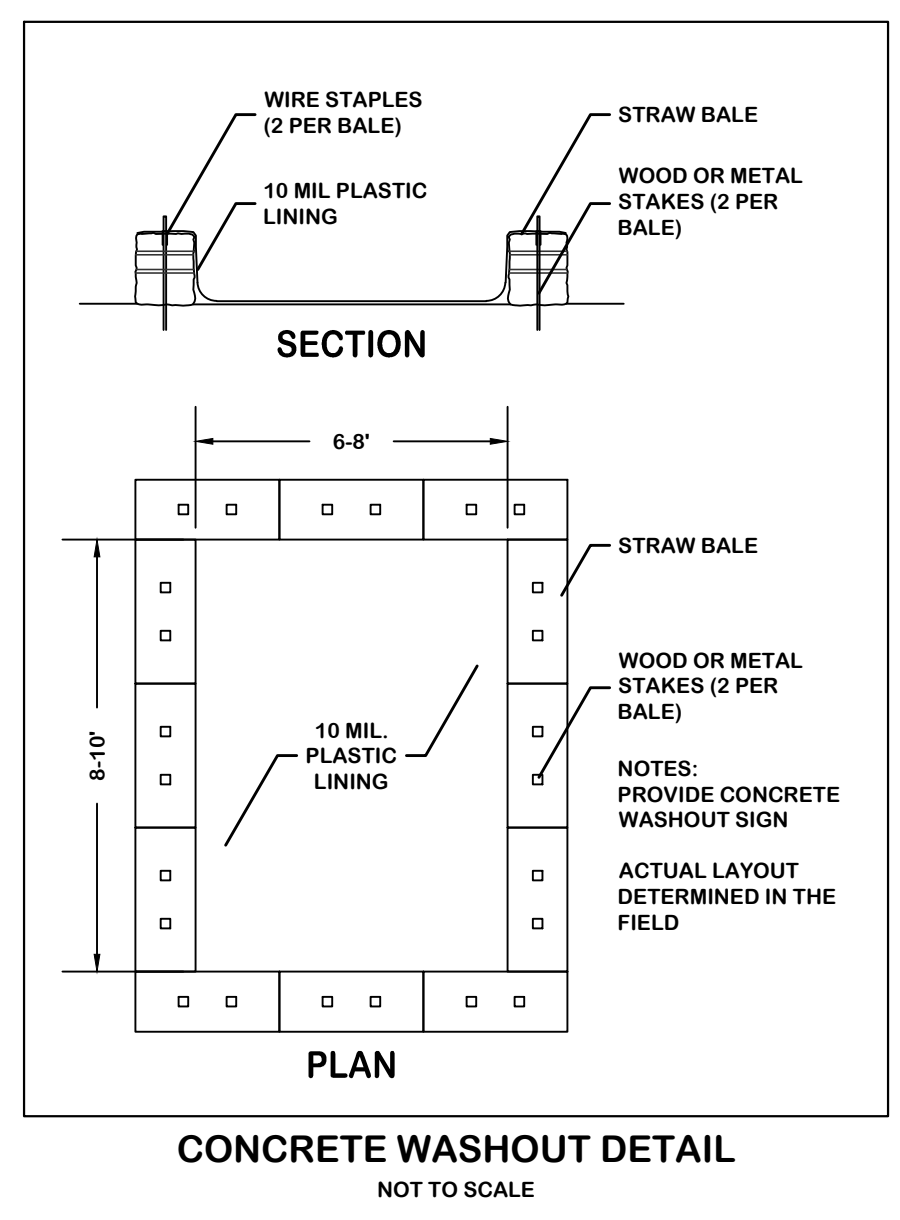
**Sd2-F FILTER FABRIC WITH SUPPORTING FRAME**

**St RIPRAP OUTLET PROTECTION**



**Sd2 Sizing Chart**

| INLET I.D. | DRAINAGE AREA (ACRES) | REQ. SEDIMENT STORAGE (CF) | EXCAVATION DEPTH (FT) | SIDE SLOPES (FT) | MIN. SURFACE AREA REQ. (SF) | EXCAVATION SHAPE | DIAMETER (FT) |
|------------|-----------------------|----------------------------|-----------------------|------------------|-----------------------------|------------------|---------------|
| Y1G2       | 0.032                 | 58.89                      | 2.5                   | 2:1              | 23.56                       | CIRCULAR         | 5             |
| Y1B2       | 0.027                 | 50.54                      | 2.5                   | 2:1              | 20.22                       | CIRCULAR         | 5             |
| Y1B3       | 0.047                 | 85.92                      | 2.5                   | 2:1              | 34.37                       | CIRCULAR         | 7             |
| Y1B4       | 0.049                 | 89.33                      | 2.5                   | 2:1              | 35.73                       | CIRCULAR         | 7             |
| Y1B5       | 0.016                 | 28.36                      | 2.5                   | 2:1              | 11.35                       | CIRCULAR         | 5             |
| Y1B6       | 0.029                 | 51.91                      | 2.5                   | 2:1              | 20.76                       | CIRCULAR         | 4             |
| Y1B7       | 0.026                 | 47.72                      | 2.5                   | 2:1              | 19.09                       | CIRCULAR         | 5             |
| Y1C4       | 0.054                 | 97.72                      | 2.5                   | 2:1              | 39.09                       | CIRCULAR         | 7             |
| Y1C3       | 0.029                 | 53.24                      | 2.5                   | 2:1              | 21.30                       | CIRCULAR         | 5             |
| Y1D5       | 0.091                 | 164.91                     | 2.5                   | 2:1              | 65.96                       | CIRCULAR         | 9             |
| Y1F1       | 0.054                 | 97.76                      | 2.5                   | 2:1              | 39.10                       | CIRCULAR         | 7             |
| Y1E5       | 0.073                 | 131.85                     | 2.5                   | 2:1              | 52.74                       | CIRCULAR         | 8             |
| Y1E2       | 0.111                 | 201.17                     | 2.5                   | 2:1              | 80.47                       | CIRCULAR         | 10            |
| Y1K4       | 0.042                 | 76.70                      | 2.5                   | 2:1              | 30.68                       | CIRCULAR         | 6             |
| Y1K3       | 0.022                 | 39.45                      | 2.5                   | 2:1              | 15.78                       | CIRCULAR         | 4             |
| Y1M1       | 0.041                 | 73.30                      | 2.5                   | 2:1              | 29.32                       | CIRCULAR         | 6             |
| Y1L2       | 0.081                 | 145.85                     | 2.5                   | 2:1              | 58.34                       | CIRCULAR         | 9             |
| Y1L1       | 0.057                 | 103.12                     | 2.5                   | 2:1              | 41.25                       | CIRCULAR         | 7             |



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 SUITE 100  
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**SIMONTON ENGINEERING**

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