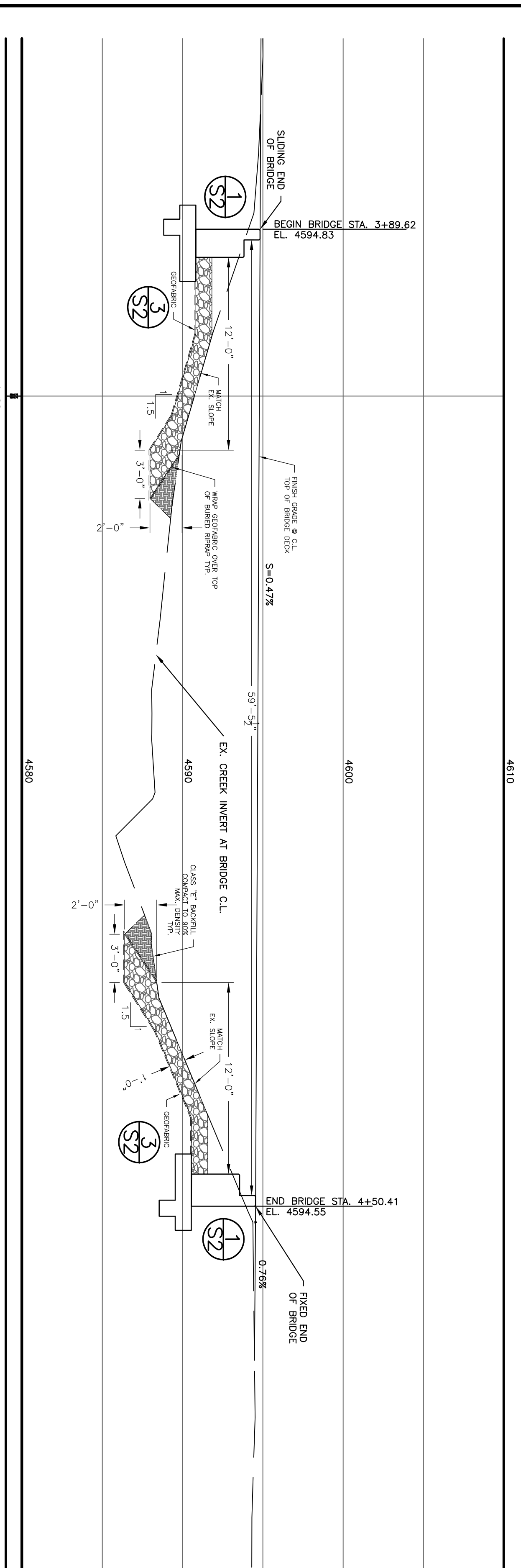
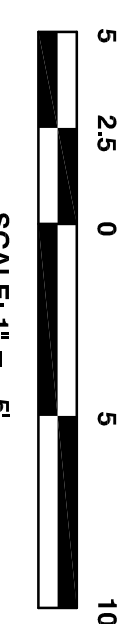


BRIDGE PLAN  
SCALE: 1" = 5'



BRIDGE PROFILE  
SCALE: 1" = 5'



DESIGN CRITERIA:

- 2012 IRC
- 2012 N. NEVADA AMENDMENTS
- CITY DEVELOPMENT CODE, LATEST EDITION, IMPROVEMENT CONSTRUCTION SHALL COMPLY WITH THESE PLANS, CURRENT "ORANGE BOOK" STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, AND THE CURRENT USFA FOREST SERVICE SPECIFICATIONS FOR CONSTRUCTION OF ROADS AND BRIDGES.
- 150 PSF/FOOT PASSIVE PRESSURE
- 45 PSF/FOOT ACTIVE PRESSURE
- .25 COEFF. OF FRICTION
- 24" MIN. FROST DEPTH
- 30 PSF GROUND SNOW LOAD
- 130 MPH ULT. WIND SPEED, EXP. C
- SEISMIC DESIGN CATEGORY "E"

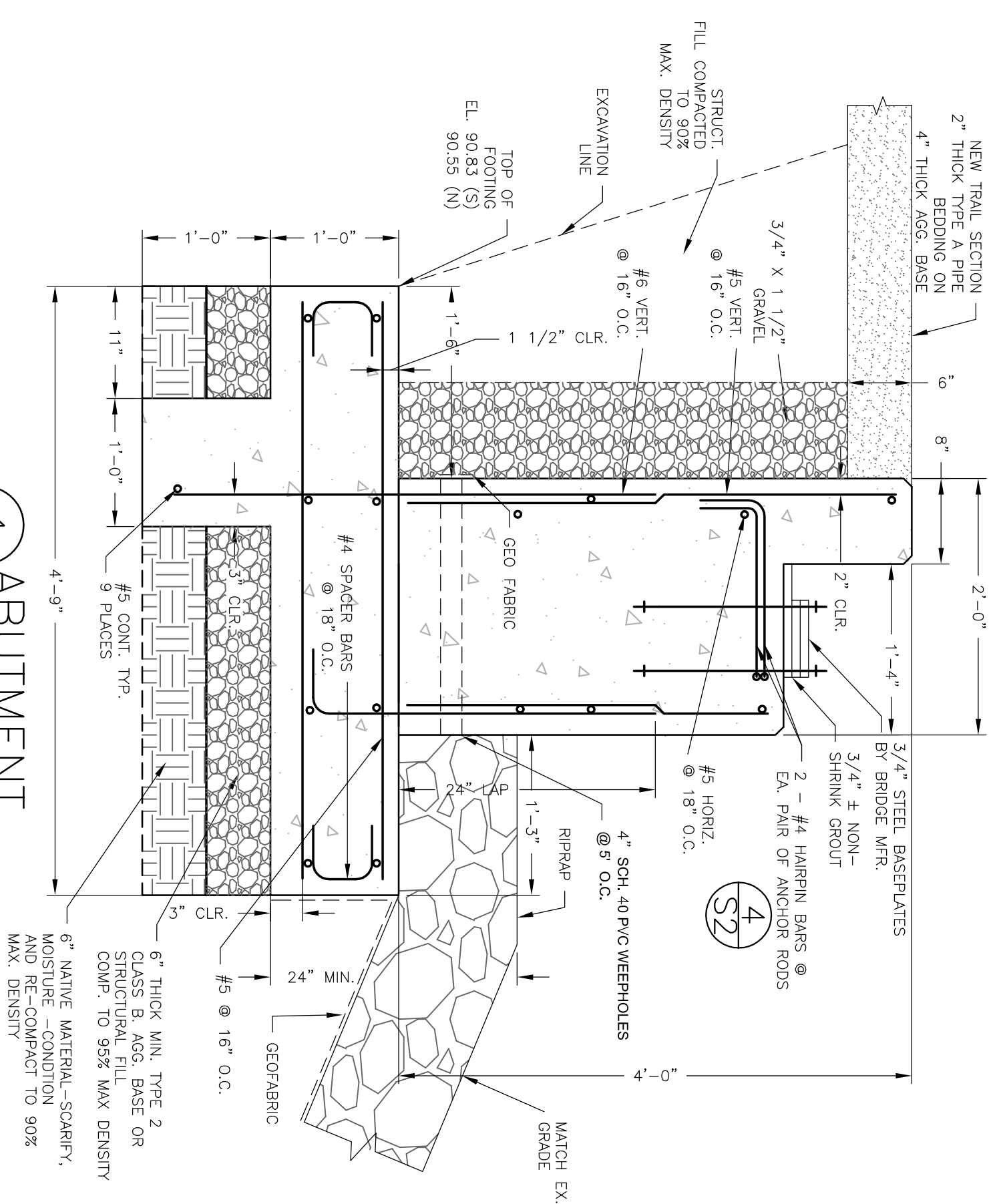
GENERAL NOTES:

1. ALL CONSTRUCTION MATERIALS AND METHODS SHALL CONFORM TO THE REQUIREMENTS OF CARSON CITY DEVELOPMENT CODE, LATEST EDITION, IMPROVEMENT CONSTRUCTION SHALL COMPLY WITH THESE PLANS, CURRENT "ORANGE BOOK" STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, AND THE CURRENT USFA FOREST SERVICE SPECIFICATIONS FOR CONSTRUCTION OF ROADS AND BRIDGES.
2. CONTRACTOR SHALL NOTIFY 48 HOURS PRIOR TO ANY EXCAVATION WORK, THE FOLLOWING UNDERGROUND UTILITY SERVICE: UNDERGROUND SERVICES ASSOCIATION (USA) 1-800-227-2600.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING SURVEY MONUMENTS AND OTHER SURVEY MARKERS DURING CONSTRUCTION.
4. THE CONTRACTOR AGREES TO ASSUME SOLE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, TO AND FURTHER AGREES THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS IN ACCORDANCE WITH THE PROVISIONS OUTLINED BY THE PROJECT CONTROL AND THE STANDARD SPECIFICATIONS.
5. SHOULD IT APPEAR THAT THE WORK TO BE DONE, OR ANY MATTER RELATIVE HERETO, IS NOT SUFFICIENTLY DETAILED OR EXPLAINED ON THESE PLANS, THE CONTRACTOR SHALL CONTACT THE ENGINEER FOR SUCH FURTHER EXPLANATIONS AS MAY BE NECESSARY.
6. AT ALL TIMES DURING CONSTRUCTION ADEQUATE TEMPORARY EROSION CONTROLS SHALL BE IN PLACE AS SHOWN ON THE PLANS.
7. FG IN RIRRAP AREAS IS TOP OF RIRRAP.

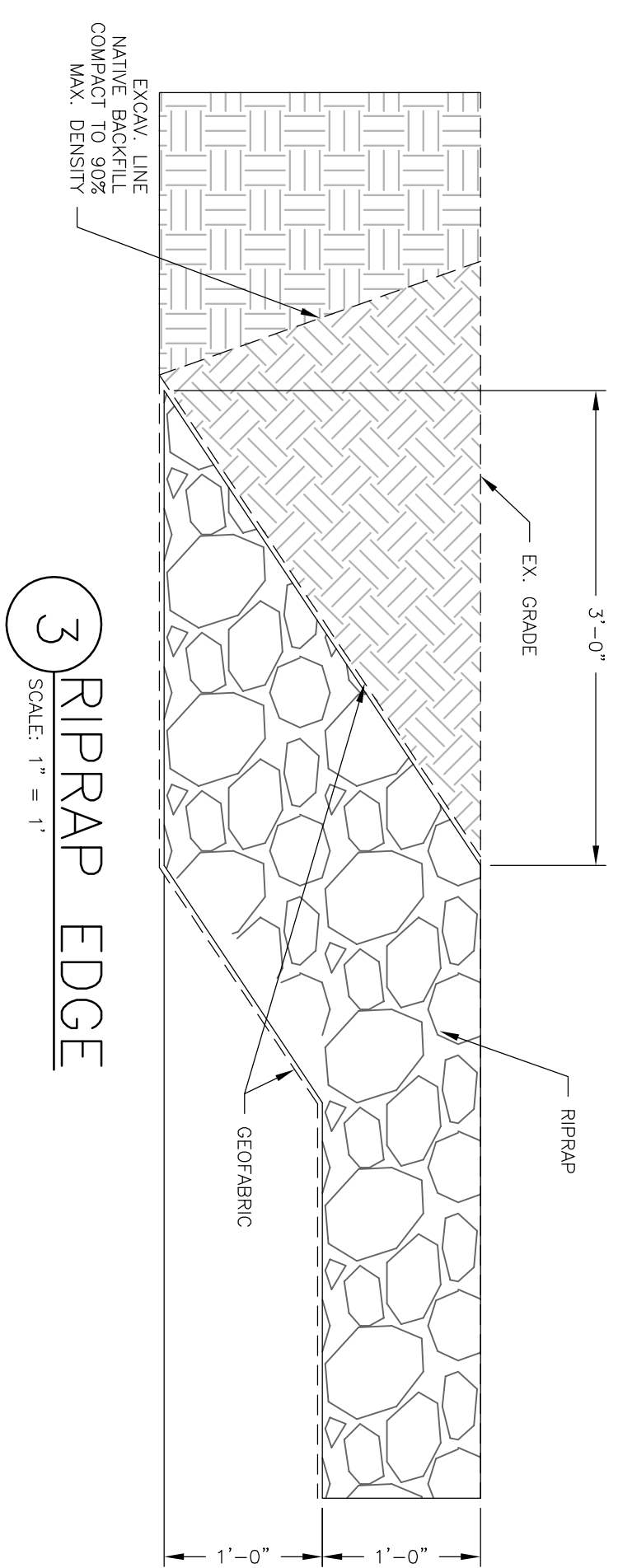
STRUCTURAL NOTES:

1. REFER TO PLANS BY LUMOS & ASSOCIATES FOR CIVIL DETAILS, LAYOUT AND STATIONING.
2. STATIONING AND ELEVATIONS ON THESE PLANS WERE OBTAINED FROM PLANS BY LUMOS & ASSOCIATES DATED FEB. 2013. VERIFY STATIONING, BRIDGE LENGTH, AND ELEVATIONS PRIOR TO CONSTRUCTION.
3. IF SATURATED SUBGRADE CONDITIONS BELOW FOOTINGS ARE FOUND, SUBGRADE SHALL BE OVER-EXCAVATED 24" MIN. BELOW BOTTOM OF FOOTING. BACKFILL WITH CLASS 150 RIRRAP TO 12" BELOW BOTTOM OF FOOTING. INSTALL GEOTEXTILE (SEE SPECIFICATIONS), INSTALL 12" OF STRUCTURAL FILL COMPACTED TO 95% MAX. DENSITY, AND PROCEED WITH CONSTRUCTION.
4. CONCRETE CONSTRUCTION JOINTS SHALL BE LEFT ROUGH AND UNFINISHED BEYOND A WOOD FLOAT FINISH. SURFACE SHALL HAVE ALL LANTAGE REMOVED BY SAND-BLASTING OR CAREFULLY WASHING WITH WATER AFTER CONCRETE HAS TAKEN ITS INITIAL SET. THE INTENT IS TO ACHIEVE A STRONG BOND BETWEEN FIRST AND SECOND CONCRETE PLACEMENT.

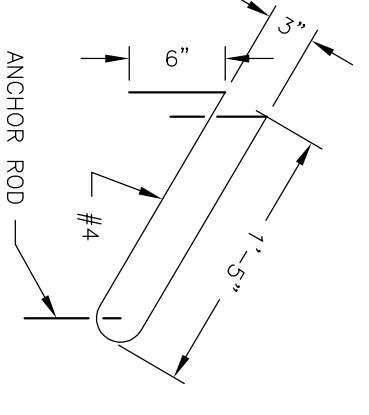
JOB # 141006 DESIGN BY: RFL DRAWN BY: PDB CHECKED BY: RFL DATE: 08-4-2105 SHEET: S1	CARSON CITY PUBLIC WORKS <b>EAGLE CREEK BRIDGE          PLAN, PROFILE, AND DETAILS</b> CARSON CITY, NV	<b>RL ENGINEERING</b> 675 Fairview Drive #205 Carson City, NV 89701 PHONE (775)884-3205 FAX (775)884-3265 E-MAIL: rob.lauder@rl-engr.com	This drawing has been prepared by RL Engineering, for use by the client named in the title block for construction, operation, and maintenance of the facility named in the title block. This drawing may not be used for any other facility or purpose without written consent of the engineer. <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Rev. No.</th> <th>Date</th> </tr> </thead> <tbody> <tr> <td>1</td> <td></td> </tr> <tr> <td>2</td> <td></td> </tr> <tr> <td>3</td> <td></td> </tr> <tr> <td>4</td> <td></td> </tr> <tr> <td>5</td> <td></td> </tr> <tr> <td>6</td> <td></td> </tr> </tbody> </table>	Rev. No.	Date	1		2		3		4		5		6	
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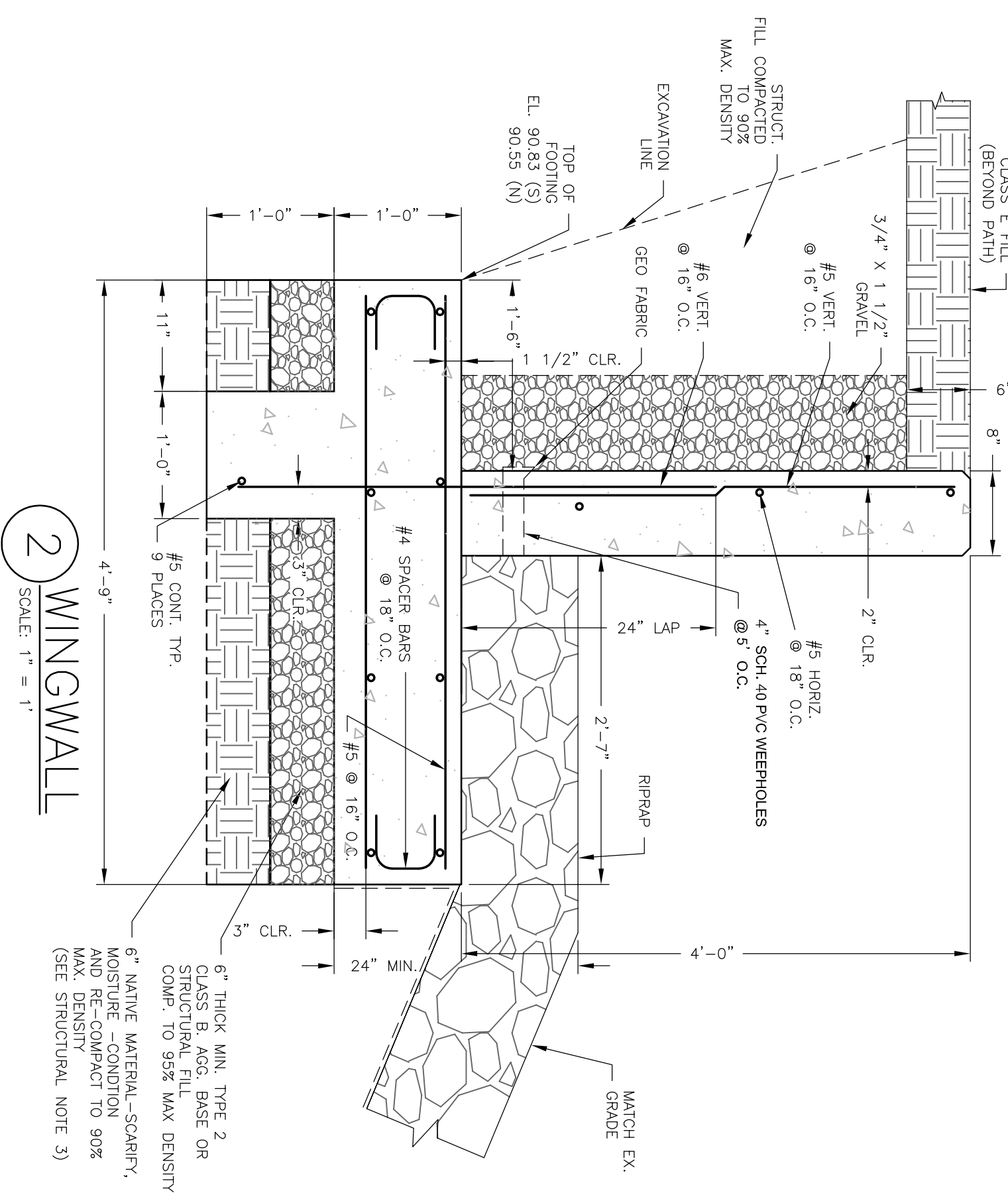
**1 ABUTMENT**  
SCALE: 1" = 1'



**3 RIPRAP EDGE**  
SCALE: 1" = 1'



**4 HAIRPIN**  
SCALE: 1" = 1'



**2 WINGWALL**  
SCALE: 1" = 1'

**SPECIFICATIONS:**

1. GENERAL:
  - A. ALL WORKMANSHIP AND MATERIALS SHALL CONFORM TO THE 2012 INT'L. BUILDING CODE (IBC), LOCAL ORDINANCES AND PERMITS AND ALL APPLICABLE STANDARDS AND SPECIFICATIONS AND SHALL BE SUBJECT TO APPROVAL OF THE ENGINEER. APPROVAL TO DEVIATE FROM THE PLANS MUST BE OBTAINED IN WRITING.
  - B. EARTHWORK:
    - A. AREAS WHERE FOOTING, SLABS, PAVEMENT AND OTHER CONSTRUCTION ARE PLANNED SHALL BE STRIPPED AND CLEARED OF ALL TOPSOIL, BRUSH, ROOTS, AND DELETED MATERIALS TO A MINIMUM DEPTH OF 6 INCHES STRIPPED SOIL CONTAINING ROOTS IS NOT CONSIDERED SUITABLE FOR REUSE AS STRUCTURAL FILL OTHER THAN FOR LANDSCAPE FILL AND SHALL BE STOCKPILED IN A LOCATION DIRECTED BY THE OWNER FOR USE IN LANDSCAPING AREAS OR REMOVED FROM THE SITE FOR DISPOSAL/RECYCLING. STRIPPING ACTIVITIES SHOULD BE INSPECTED BY A QUALIFIED GEOTECHNICAL ENGINEER TO VERIFY ADEQUATE REMOVAL OF ROOTS AND OTHER ORGANIC MATTER.
    - B. ALL EXPOSED CONCRETE SURFACES SHALL BE PROTECTED WITH A CURABLE MEMBRANE IMMEDIATELY AFTER CONSTRUCTION AND BEFORE PLACEMENT OF THE NEXT COURSE OF CONCRETE. THE PROTECTANT SHALL BE APPLIED TO THE EXPOSED CONCRETE SURFACES IMMEDIATELY AFTER PLACEMENT AND BEFORE FINISHING. THE PROTECTANT SHALL BE APPLIED TO THE EXPOSED CONCRETE SURFACES IMMEDIATELY AFTER PLACEMENT AND BEFORE FINISHING. THE PROTECTANT SHALL BE APPLIED TO THE EXPOSED CONCRETE SURFACES IMMEDIATELY AFTER PLACEMENT AND BEFORE FINISHING.
  - C. STRUCTURAL FILL WHERE USED SHALL BE FREE OF VEGETATION, DEBRIS AND OTHER DELETERIOUS MATERIAL. STRUCTURAL FILL SHALL CONFORM TO THE FOLLOWING GRADATION SPECIFICATION (UNLESS NOTED OTHERWISE IN THE GEOTECHNICAL REPORT):
 

SIZE	% BY WEIGHT PASSING
4 INCH	100
3/4 INCH	70-100
NO. 40	15-70
NO. 200	5-25
  - D. STRUCTURAL FILL SHALL HAVE A LIQUID LIMIT OF NO MORE THAN 35 AND A PLASTICITY INDEX OF NO MORE THAN 15 WHEN TESTED BY ASTM D4188.
  - E. STRUCTURAL FILL PLACED UNDERNEATH FOOTINGS AND STRUCTURAL SLABS SHALL BE COMPACTED TO A MINIMUM OF 95% OF MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D1557 AND MOISTURE CONTENT DURING COMPACTION SHOULD BE MAINTAINED WITHIN TWO PERCENT ABOVE OPTIMUM MOISTURE CONTENT. MAXIMUM LOOSE LIFT THICKNESS OF STRUCTURAL FILL SHOULD NOT EXCEED 8 INCHES.
2. CONCRETE:
  - A. REINFORCED CONCRETE SHALL CONFORM TO THE APPLICABLE REQUIREMENTS OF THE 2012 INT'L. BUILDING CODE AND ACI STANDARD NO. 318-11.
  - B. ALL REINFORCING STEEL SHALL CONFORM TO ASTM A 615, GRADE 60. ALL REINFORCING STEEL SHALL BE ACCURATELY PLACED IN THE FORMS AND HELD FIRMLY IN PLACE BEFORE AND DURING THE PLACEMENT OF CONCRETE. ALL REINFORCING STEEL SHALL BE PROTECTED FROM CORROSION BY AN ANTI-OXIDANT CONCRETE ADMIXTURE.
  - C. CONCRETE SHALL BE COMPRESSED OF TYPE II OR IP CEMENT WITH ASTM C 33 AGGREGATES. SHALL BE 6-SACK MIX MINIMUM AND A MAXIMUM SLUMP OF 4".
  - D. CONCRETE COVERAGE FOR REINFORCING STEEL SHALL BE THE CLEAR DISTANCE TO THE EXTERIOR FACE OF BAR AS FOLLOWS: FOUNDATIONS POURED AGAINST GROUND - 3"; FORMED SURFACES EXPOSED TO GROUND OR WEATHER - 1-1/2"; SLABS-ON-GRADE - 1" CLEAR AT TOP.
  - E. A VAPOR BARRIER SHALL BE INSTALLED UNDER INTERIOR CONCRETE SLABS WHERE OFFICE USE OCCURS. THE VAPOR BARRIER SHALL BE INSTALLED UNDER EXTERIOR CONCRETE SLABS WHERE OFFICE USE OCCURS. THE VAPOR BARRIER SHALL BE INSTALLED UNDER EXTERIOR CONCRETE SLABS WHERE OFFICE USE OCCURS. THE VAPOR BARRIER SHALL BE INSTALLED UNDER EXTERIOR CONCRETE SLABS WHERE OFFICE USE OCCURS. THE VAPOR BARRIER SHALL BE INSTALLED UNDER EXTERIOR CONCRETE SLABS WHERE OFFICE USE OCCURS. THE VAPOR BARRIER SHALL BE INSTALLED UNDER EXTERIOR CONCRETE SLABS WHERE OFFICE USE OCCURS.
  - F. ALL EXPOSED CONCRETE EDGES SHALL BE CHAMFERED OR TOOLED 3/4". PROVIDE CONSTRUCTION AND TOOLED JOINTS AS SHOWN ON DRAWINGS.
  - G. ALL CONCRETE SHALL BE VIBRATED INTO PLACE.
  - H. ALL CONCRETE SHALL BE PROTECTED FROM WEATHER AND DAMAGE BY A CURABLE MEMBRANE IMMEDIATELY AFTER PLACEMENT AND BEFORE FINISHING.
  - I. FALSE WORK SHALL CONFORM TO ORANGE BOOK STANDARDS.
  - J. CONCRETE SHALL BE CURED USING ASTM C309, TYPE I, CLASS B. CLEAR WATER-BASED CURE-SEAL MEMBRANE FORMING. MINIMUM 30% SOLID. EVOLUCHEMICAL COMPANY "SUPER DIAMOND CLEAR VOX" OR EQUAL.
  - K. COMPRESSIBLE JOINT FILLER SHALL CONFORM TO THE REQUIREMENTS OF ASTM D1751; SONNEBOARD "SONOFLEX-F".
  - L. ALL ANCHOR BOLTS SHALL BE ASTM A307 OR BETTER.
  - M. ALL ANCHOR BOLTS SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM A307 OR BETTER.
  - N. CONCRETE STRENGTHS DENIED BY USE:
    1. EXTERIOR CONCRETE EXPOSED TO FROST - SIDEWALKS, CURB, GUTTER, DRIVEWAYS, UNHEATED GARAGE SLABS, ETC.
    - A. COMPRESSIVE STRENGTH (28 DAYS): 4,000 PSI.
    - B. SLUMP: 2" TO 4.5-7.5"
    - C. ENTRAINED AIR: 4% TO 6% MAX.
    - D. FINISH: BROOM
    - E. SACKS CEMENT PER CUBIC YARD: 6 MIN.
    - F. FINISH: BROOM
3. RIPRAP SHALL BE CLASS 150 LOOSE RIPRAP IN ACCORDANCE WITH CCPW SPEC. SECTION 200.0.7.04 AS FOLLOWS:
 

LOOSE RIPRAP	
TABLE 200.07.04.1	
% BY MASS PASSING	CLASS 150
SEIVE	SEIVE SIZE (INCHES)
100	10
70-85	9
30-50	6
5-15	2
0	1
D <sub>95</sub>	6

TEST	ASTM METHOD	REQUIREMENT
Resistance to Wear	C558 (500 REV.)	45% Max
Absorption	C127	4.2 Max
Apparent Spec. Grav.	C97	2.5 Min.
Durability	D5744	52 Min.

5. GEOFABRIC SHALL BE MIRAFI HP370 OR APPROVED EQUAL. LWP ALL JOINTS 24" MIN.

SHEET: <b>S2</b>	<b>CARSON CITY PUBLIC WORKS</b> <b>STRUCTURAL DETAILS &amp; SPECIFICATIONS</b> CARSON CITY, NV	<b>RL ENGINEERING</b> 675 Fairview Drive #205 Carson City, NV 89701 PHONE (775)884-3205 FAX (775)884-3265 E-MAIL: rob.lauder@rl-engr.com	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Rev. No.</th> <th>Date</th> </tr> </thead> <tbody> <tr> <td>1</td> <td></td> </tr> <tr> <td>2</td> <td></td> </tr> <tr> <td>3</td> <td></td> </tr> <tr> <td>4</td> <td></td> </tr> <tr> <td>5</td> <td></td> </tr> <tr> <td>6</td> <td></td> </tr> </tbody> </table> <p>This drawing has been prepared by RL Engineering, for use by the client named in the title block for construction, operation, and maintenance of the facility named in the title block. This drawing may not be used for any other purpose without written consent of the engineer.</p>	Rev. No.	Date	1		2		3		4		5		6	
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