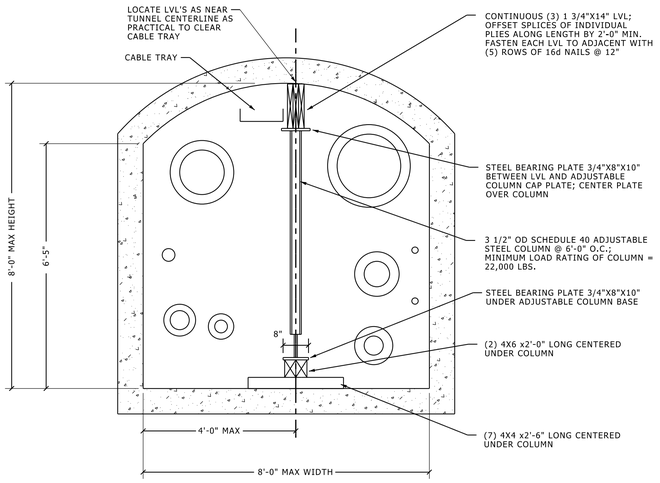
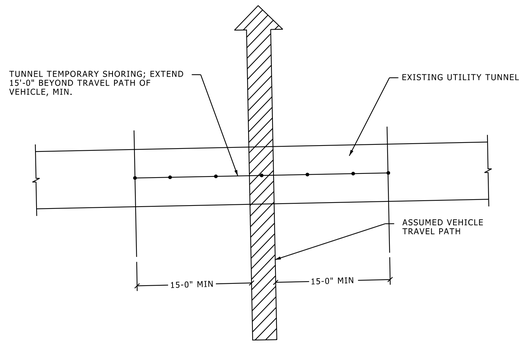


TUNNEL TEMPORARY SHORING DETAIL

NO SCALE

NOTE:

TUNNEL SHORING DESIGN IS BASED ON A MAXIMUM GROSS VEHICLE WEIGHT OF 25,000 LBS AND A MAXIMUM AXLE LOAD OF 16,000 LBS. NOTIFY ENGINEER IF ANTICIPATED LOAD EXCEEDS THIS DESIGN BASIS PRIOR TO TRANSIT ACROSS TUNNEL SEGMENT.



PARTIAL TUNNEL PLAN

NO SCALE

TUNNEL SHORING NOTES

1. LVL = LAMINATED VENEER LUMBER
2. DESIGN OF LVL MEMBERS BASED ON MICROLLAM BY iLEVEL (1.9E, Fb =2600 PSI). ALTERNATE LVL MANUFACTURERS WILL BE CONSIDERED IF DESIGN VALUES EXCEED THOSE OF DESIGN BASIS. SUBMIT ALTERNATE LVL LITERATURE TO ENGINEER FOR REVIEW PRIOR TO ORDERING.
3. DIMENSION LUMBER SHALL BE SPF NO. 1/NO. 2, HEM-FIR NO. 2, SOUTHERN PINE NO. 2, OR BETTER.
4. STEEL PLATES SHALL BE ASTM A36, Fy=36000 PSI.
5. NAIL SIZES NOTED ARE FOR COMMON WIRE NAILS. IF SINKER OR PNEUMATIC NAILS ARE USED, SUBSTITUTE SHALL EQUAL OR EXCEED DIAMETER OF COMMON WIRE NAILS SPECIFIED.
6. ADJUSTABLE STEEL COLUMNS SHALL BE ASTM A500, Fy=42000 PSI, TIGER BRAND OR EQUAL. SIZES NOTED ON SHORING DETAIL ARE A MINIMUM AND CONTRACTOR SHALL SELECT A COLUMN WITH AN ALLOWABLE CAPACITY GREATER THAN OR EQUAL TO LOADS SPECIFIED.
7. WHEN TIGHTENING ADJUSTABLE COLUMNS, TIGHTEN UNTIL COLUMN IS IN FIRM CONTACT WITH WOOD SUPPORTS AT EACH END, SUCH THAT COLUMN WILL NOT MOVE OR LOOSEN. DO NOT OVERTIGHTEN.
8. FIELD VERIFY TUNNEL CONDITIONS AT MULTIPLE LOCATIONS PRIOR TO ORDERING ANY MATERIALS.
9. IF A GAP BETWEEN LVL MEMBERS AND TUNNEL LID IS PRESENT OVER A LENGTH OF 6" OR GREATER, FILL GAP WITH NON-SHRINK GROUT. DO NOT ATTEMPT TO CLOSE GAP BY OVERTIGHTENING OF ADJUSTABLE COLUMNS.
10. SHORING DETAIL FOR USE WITH CONCRETE TUNNELS WITH A MAXIMUM CEILING SPAN OF 8 FEET AND MAXIMUM WALL HEIGHT OF 9 FT. THIS SHORING DETAIL IS NOT INTENDED FOR USE IN BRICK TUNNEL CONSTRUCTION.
11. CONTRACTOR SHALL INSPECT SHORING SYSTEM AT A MINIMUM ONCE PER WORK WEEK TO ENSURE THAT SUPPORTS REMAIN IN CONTACT WITH TUNNEL LID AND THAT ALL SHORING POSTS REMAIN IN CONTACT WITH SUPPORT BEAMS.
12. UNLESS SPECIFICALLY NOTED, CONTRACTOR IS RESPONSIBLE FOR REMOVAL OF ALL SHORING UPON PROJECT COMPLETION.

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

2' 1' 0 2'

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Tom Girard
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REPRESENTING

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WG — PROJECT LEAD
RRE/FTCH — DESIGNED BY
REVIEWED BY

MARK	ISSUED FOR/REVISIONS	DATE
•	New Master	• 11/17/14
•	Tunnel Group Revision	• 08/09/12

Tunnels

Tool Kit

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P00005340 — U OF M PROJECT NO.
9980 — BUILDING NO.

SHEET TITLE: Tunnels

Tunnel Temporary Shoring Detail

SHEET NO.

TK-12

SHEET NO. 12 OF 12 SHEET FILE NO. TK-12 03 14.dgn

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