GENERAL NOTES

1. TOTAL TRAFFIC: 4 THROUGH TRAMS PER DAY
   TYPICAL SPEED LIMIT: 40 MPH
   NO. OF SIGNAL MACHINES: 0
   NO SCHEDULED PASSENGER SERVICE
   SPECIAL VEHICLE MOVES: 0

2. DESIGN SPEED: 45 MPH
   AVERAGE DAILY TRAFFIC: 10,000 (2011)
   13,800 (2021)
   FUNCTIONAL CLASSIFICATION: EXIST: RURAL MINOR ARTERIAL
   PROP: URBAN COLLECTOR

3. EXISTING 133 LB RAIL

WORK TO BE PERFORMED BY THE RAILROAD AT THE STATE’S EXPENSE

1. SIGNAL CIRCUITS ARE DESIGNED TO GIVE 20 SECONDS MINIMUM WARNING TIME, PLUS 1 SECOND CLEARANCE TIME, PLUS 5 SECONDS EQUIPMENT RESPONSE TIME, PLUS 17 SECONDS ADVANCE TRAFFIC SIGNAL PREEMPTION FOR A TOTAL OF 48 SECONDS APPROACH TIME PRIOR TO THE ARRIVAL OF THE FASTEST TRAIN AT THIS CROSSING. REFER TO SIGNAL CIRCUIT LAYOUT FOR TOTAL APPROACH TIME.

2. CONSTANT WARNING CIRCUITS ARE TO BE USED AT THIS LOCATION. UPGRADES REQUIRED. POSSIBLE REMOTE HOUSE FOR CIRCUIT CAPABILITY.

3. CONDUIT, FILL DIRT AND CRUSHED COVER ROCK TO BE Furnished IN PLACE BY THE RAILROAD COMPANY OR ITS CONTRACTOR AT THE STATE’S EXPENSE.

4. THE RAILROAD COMPANY OR ITS CONTRACTOR WILL REMOVE AND REPLACE THE EXISTING GATES AND APPELSE OF THE FOUNDATIONS.

5. THE RAILROAD COMPANY OR ITS CONTRACTOR SHALL FURNISH, INSTALL, AND MAINTAIN SIGN MOUNTING BRACKETS FOR THE REPORT SIGN (I-23) AT THE STATE’S EXPENSE.

PREEMPTION SPECIFIC GENERAL NOTES

1. EXISTING TRAFFIC SIGNAL AT THIS LOCATION.

2. UTILIZING RAILROAD SIGNAL, AT THIS LOCATION.

3. REPLACEMENT OF CONTROLLER WITH CONSTANT WARNING CIRCUIT

4. EXISTING PREEMPTION AT THIS LOCATION, SIMULTANEOUS

5. WIRE CONNECTION IS PROPOSED FOR THIS LOCATION (STANDARD WIRE CONNECTION IS A 4 CONDUCTOR WIRE WITH 7 CONDUCTOR WIRE).

6. NO BORING REQUIRED.

7. THE RAILROAD OR ITS CONTRACTOR WILL FURNISH AND INSTALL A RELAY TO PROVIDE ADVANCE PREEMPTION TO EXISTING TRAFFIC SIGNAL. NORMALLY A CLOSED CIRCUIT IS REQUIRED BETWEEN THE CONTROL RELAY OF THE GRADE CROSSING WARNING DEVICES AND THE TRAFFIC SIGNAL CONTROLLER OR FLASHER AS STATED IN THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

8. THE RAILROAD OR ITS CONTRACTOR AGREES TO PROVIDE THE PREEMPTION CONDUCTOR WIRE INTO THE RAIL SIGNAL SYSTEM

DESCRIPTION OF PROJECT

4 COMPLETE FLASHING LIGHTS WITH (2-32), 3-16” GATE ASSEMBLIES AND 3 BELLS
1 COMPLETE 22” WALKOUT CANTILEVER ASSEMBLY WITH 1 BELL

WORK TO BE PERFORMED BY THE STATE CONSTRUCTION

1. THE STATE’S CONTRACTOR WILL FURNISH AND INSTALL THE APPROPRIATE PAVEMENT MARKINGS AS OUTLINED ON THE ATTACHED LAYOUT AND STANDARD SHEET AND IN ACCORDANCE WITH THE GUIDELINES IN THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

2. THE STATE’S CONTRACTOR WILL FURNISH AND INSTALL THE FOLLOWING SIGNS IN ACCORDANCE WITH THE GUIDELINES IN THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (W1010) AND THE STANDARD HIGHWAY SIGN DESIGNS MANUAL FOR TEXAS (SHSM-2). 2 EA. (W10-1), 2 EA. (W10-2), ADDITIONAL SIGNS TO BE ADDED: 2 EA. RR-88

3. THE STATE’S CONTRACTOR SHALL INSTALL THE RAISED MEDIAN AS WELL AS CURB AND GUTTER

PREEMPTION SPECIFIC GENERAL NOTES

1. TCDOT DISTRICT WILL COMPLETE THE PREEMPTION TIMING FORM.

2. TCDOT DISTRICT WILL APPROVE THE PREEMPTION TIMING FORM

3. THE STATE’S CONTRACTOR AGREES TO INSTALL THE PREEMPTION CONDUCTOR WIRE TO THE RAILROAD AT THE STATE’S EXPENSE.

4. THE STATE’S CONTRACTOR AGREES TO CONNECT THE PREEMPTION CONDUCTOR WIRE INTO THE HIGHWAY SIGNAL SYSTEM.

5. THE STATE’S CONTRACTOR AGREES TO MAINTAIN THE TRAFFIC SIGNAL AND PREEMPTION EQUIPMENT.

WORK TO BE PERFORMED BY THE STATE

1. THE STATE AGREES TO MAINTAIN THE PAVEMENT MARKINGS AND ADVANCE WARNING SIGNS PLACED ALONG THE ROADWAYS UNDER THEIR JURISDICTION IN ACCORDANCE WITH THE GUIDELINES IN THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND AS SHOWN ON THE LAYOUT AND STANDARD SHEETS AS ACKNOWLEDGED ON THE TITLE SHEET.

2. THE STATE AGREES TO TRIM AND MAINTAIN TREES AND VEGETATION FOR ADEQUATE VIABILITY OF THE CROSSING SIGNALS AND ADVANCE WARNING SIGNS AS ACKNOWLEDGED ON THE TITLE SHEET.
TRAFFIC DATA:

1. TOTAL TRAINS: 4 THROUGH TRAINS PER DAY
   TYPICAL SPEED RANGE: 40 MPH
   NO. OF SWITCH MOVES: 0
   NO SCHEDULED PASSENGER SERVICE
   SPECIAL VEHICLE MOVES: 0

2. DESIGN SPEED: 45 MPH
   AVERAGE DAILY TRAFFIC: 10,000 (2011)
   13,600 (2031)
   FUNCTIONAL CLASSIFICATION:
   EXISTING RURAL MINOR ARTERIAL
   PROPOSED COLLECTOR

3. EXISTING 133 LB RAIL

WORK TO BE PERFORMED BY RAILROAD:

1. PROPOSED 10'-0" CONCRETE CROSSING TO BE CONSTRUCTED IN FULL WIDTH.
2. REMOVE EXISTING CONCRETE PLACING AND ASPHALT CROSSING MATERIAL.
3. REMOVE RAILS AND TIES THROUGH THE CROSSING TO ALLOW FOR THE INSTALLATION OF CEMENT STABILIZED BASE AND UNDER DRAIN SYSTEM IF REQUIRED BY ENGINEER.
4. EXCAVATE THE EXISTING SUBGRADE BASE MATERIAL IF REQUIRED AT ENGINEER'S DISCRETION.
5. FURNISH AND INSTALL A NEW STABILIZED BASE MATERIAL IF REQUIRED.
6. FURNISH AND INSTALL FILTER FABRIC MEMBRANE WITH 4" PERFORATED DRAINAGE PIPE WHERE REQUIRED.
7. FURNISH AND INSTALL NEW CROSSTIE TREATED TIMBER CROSSTIES AND ROCK BALLAST.
8. PROVIDE CONTINUOUS WELDING OF RAILS THROUGH THE CROSSING.
9. FURNISH AND INSTALL ONE FULL DEPTH CONCRETE CROSSING PANELS.
10. RAISE RAIL TO ROADWAY ELEVATION.
11. CROSSING SHALL BE RESTORED TO PROVIDE SAFE PASSAGE OF TRAFFIC EACH NIGHT.
12. REMOVE NORTHERN CROSSING PANEL AFTER TRAFFIC IS SHIFTED TO THE SOUTHERN PORTION OF TRAMMEL FRIEND ROAD THE NEW ALIGNMENT OF TRAMMEL FRIEND ROAD SHIFTS SLIGHTLY TO THE SOUTH.

WORK TO BE PERFORMED BY THE STATE'S CONTRACTOR:

1. FURNISH AND INSTALL BARRICADES AND TRAFFIC CONTROL.
2. ALLOW ENTRANCE/EXIT URGENCY, AND MOUNT MARKERS TO PROVIDE SAFETY AND EVEN CROSSINGS.
3. FURNISH, INSTALL, APPROPRIATE PAVEMENT MARKINGS AND ADVANCE WARNING SIGNS IN ACCORDANCE WITH THE PLANS AND THE GUIDELINES IN THE TEXAS MUTCD
4. END CURB 10' FROM NEAR RAIL

GENERAL NOTES:

1. CEMENT STABILIZED BASE MATERIAL SHALL CONFORM TO ITEM 216 OF THE SPECIFICATION BOOK.
2. CEMENT STABILIZED BASE FOUNDATION TO EXTEND A MINIMUM OF TEN FEET BEYOND THE END OF PANELS.
3. PIPE UNDERDRAIN SHALL BE PERFORATED CORRUGATED GALVANIZED METAL PIPE, EXCEPT AS SHOWN.
4. CONCRETE PLACING WILL EXTEND A MINIMUM OF 3 FEET BEYOND EDGE OF ROADWAY.
PART I - GENERAL

1.01 DESCRIPTION

This project includes construction work within the Right-of-Way and/or adjacent property of the railroad, railroad tracks, wire lines and other facilities. These work involves the installation or replacement, maintenance and repairs, the relocation of the railroad tracks, as well as related work. All work is to be performed in accordance with the instructions and guidelines provided by the railroad. The work is to be completed within the specified time and to the standards required by the railroad. The work is to be performed in a manner that is safe, efficient, and in compliance with all applicable laws, regulations, and guidelines. This work shall be performed in accordance with the performance bond and the railroad's specifications. The railroad reserves the right to terminate the work at any time if the contractor fails to meet the requirements. This project is subject to the approval of the railroad, and the contractor shall comply with all requirements and specifications provided by the railroad.

1.02 RAILROAD CONTACTS

The primary point of contact for this project is the railroad representative. This representative is responsible for all matters related to the railroad, including but not limited to, scheduling, coordination, and communication. The contractor shall communicate with the railroad representative regarding all matters related to the project. The railroad representative is available to answer any questions or concerns related to the project. The contractor shall maintain open lines of communication with the railroad representative to ensure the successful completion of the project.

1.03 REQUEST FOR INFORMATION / CLARIFICATION

The railroad representative is responsible for providing all necessary information and clarification related to the project. The contractor shall submit a request for information (RFI) to the railroad representative for any questions or concerns related to the project. The railroad representative shall provide a response in a timely manner. The contractor shall comply with all requirements and specifications provided by the railroad.

2.00 PLANS & SPECIFICATIONS

The railroad representative has provided all necessary plans and specifications for the project. These plans and specifications are to be used as the basis for all work performed on the project. The contractor shall ensure that all work is performed in accordance with the plans and specifications provided by the railroad. The contractor shall review all plans and specifications prior to the start of the project to ensure a clear understanding of the requirements.

3.00 UTILITIES AND FIBER OPTIC

The railroad representative has provided all necessary information and plans for all utilities and fiber optic work. The contractor shall comply with all requirements and specifications provided by the railroad. The contractor shall coordinate with the railroad representative to ensure that all work is performed in a manner that is safe and in compliance with all applicable laws and regulations.

PART II - CONSTRUCTION

3.01 GENERAL

A. All work shall be in accordance with the railroad's specifications and plans. The contractor shall ensure that all work is performed in a manner that is safe, efficient, and in compliance with all applicable laws, regulations, and guidelines. The contractor shall ensure that all work is performed in accordance with the performance bond and the railroad's specifications. The contractor shall comply with all requirements and specifications provided by the railroad.

B. All work shall be performed in accordance with the railroad's specifications and plans. The contractor shall ensure that all work is performed in a manner that is safe, efficient, and in compliance with all applicable laws, regulations, and guidelines. The contractor shall ensure that all work is performed in accordance with the performance bond and the railroad's specifications. The contractor shall comply with all requirements and specifications provided by the railroad.

C. All work shall be performed in accordance with the railroad's specifications and plans. The contractor shall ensure that all work is performed in a manner that is safe, efficient, and in compliance with all applicable laws, regulations, and guidelines. The contractor shall ensure that all work is performed in accordance with the performance bond and the railroad's specifications. The contractor shall comply with all requirements and specifications provided by the railroad.

D. All work shall be performed in accordance with the railroad's specifications and plans. The contractor shall ensure that all work is performed in a manner that is safe, efficient, and in compliance with all applicable laws, regulations, and guidelines. The contractor shall ensure that all work is performed in accordance with the performance bond and the railroad's specifications. The contractor shall comply with all requirements and specifications provided by the railroad.

E. All work shall be performed in accordance with the railroad's specifications and plans. The contractor shall ensure that all work is performed in a manner that is safe, efficient, and in compliance with all applicable laws, regulations, and guidelines. The contractor shall ensure that all work is performed in accordance with the performance bond and the railroad's specifications. The contractor shall comply with all requirements and specifications provided by the railroad.

F. All work shall be performed in accordance with the railroad's specifications and plans. The contractor shall ensure that all work is performed in a manner that is safe, efficient, and in compliance with all applicable laws, regulations, and guidelines. The contractor shall ensure that all work is performed in accordance with the performance bond and the railroad's specifications. The contractor shall comply with all requirements and specifications provided by the railroad.

3.02 RAILROAD OPERATIONS

A. Trains and/or equipment are expected on any track, at any time. The contractor shall adhere to the schedule and structure below for the construction work. The contractor shall coordinate with the railroad for the safe and efficient operation of the railroad. The contractor shall ensure that all work is performed in a manner that is safe, efficient, and in compliance with all applicable laws, regulations, and guidelines. The contractor shall ensure that all work is performed in accordance with the performance bond and the railroad's specifications. The contractor shall comply with all requirements and specifications provided by the railroad.

B. All railroad tracks within and adjacent to the Railroad Right-of-Way shall be maintained and operated in accordance with the railroad's specifications and plans. The contractor shall ensure that all work is performed in a manner that is safe, efficient, and in compliance with all applicable laws, regulations, and guidelines. The contractor shall ensure that all work is performed in accordance with the performance bond and the railroad's specifications. The contractor shall comply with all requirements and specifications provided by the railroad.

C. Coordinate work windows with T&DOT and the Railroad's Right-of-Way. The contractor shall ensure that all work is performed in a manner that is safe, efficient, and in compliance with all applicable laws, regulations, and guidelines. The contractor shall ensure that all work is performed in accordance with the performance bond and the railroad's specifications. The contractor shall comply with all requirements and specifications provided by the railroad.

3.03 ENSUING

Do not begin work upon or over Railroad Right-of-Way until furnishing the railroad with the insurance policies, binders, endorsements, and other items as required by the railroad. The contractor shall ensure that all work is performed in a manner that is safe, efficient, and in compliance with all applicable laws, regulations, and guidelines. The contractor shall ensure that all work is performed in accordance with the performance bond and the railroad's specifications. The contractor shall comply with all requirements and specifications provided by the railroad.
3.09 MAINTENANCE OF RAILROAD FACILITIES
A. Maintain all ditches and drainage structures free of silt or other obstructions resulting from contractor's operations. Repair any damage to the Railroad facilities resulting from the contractor's operations. The Railroad will report any damage to the contractor's maintenance crew or project manager.
B. Perform all such maintenance and repair of damages due to the contractor's operations at the contractor's expense.
C. Submit a proposal to the railroad for review by the Railroad prior to beginning any site preparation, construction or installation of any project site. The Railroad will approve or disapprove the proposal. The proposal shall be in accordance with all applicable local, state and federal regulations when developing and implementing such construction projects.
D. Prior to the commencement of any construction activity, the contractor shall install a fence or barrier around any site of construction. The fence or barrier shall be maintained in a good state of repair and shall be removed prior to the completion of any construction activity.

3.10 SITE INSPECTIONS BY RAILROAD'S DESIGNATED REPRESENTATIVE
A. In addition to the office reviews of construction submitted, site inspections may be performed by the Railroad Designated Representative at significant points during construction.
1. Pre-construction meetings
2. The laying out of grades or grade changes or similar activities
3. The placing of grout or concrete on or near the Railroad tracks or bridges
4. The making of any repairs or installation of new construction on or near the Railroad tracks or bridges
B. Site inspection is not limited to the mileage points listed above.
C. Site visits to check progress of the work may be performed at any time throughout the construction as deemed necessary by the Railroad.

3.11 RAILROAD REPRESENTATIVES
Railroad representatives, conductors, flag person or watch person will be provided by the Railroad at the expense of the contractor to protect Railroad facilities, property and movements of its trains or engines. In general, the Railroad will furnish such personnel or other protective services as follows:
A. When any part of any equipment is standing or being operated within 25 feet of the tracks or where the equipment is standing or being operated on tracks or on trains which tracks may operate, or where any object is off the ground and any dimension thereof could extend inside the 25 foot limit, or when any erection or construction activities are in progress within such limits, regardless of elevation above or below track.
B. For any excavation below elevation of track subgrade if, in the opinion of the Railroad Designated Representative, track or other railroad facilities may be subject to settlement or movement.
C. During any clearing, grubbing, excavation or grading in proximity to Railroad facilities, which, in the opinion of the Railroad Designated Representative, may endanger Railroad facilities or operations.
D. During any contractor's operations when, in the opinion of the Railroad Designated Representative, Railroad facilities, including, but not limited to, tracks, buildings, signals, wire lines, or pipe lines, may be endangered.
E. Arrange with the Railroad Designated Representative to provide the adequate number of flag persons to accomplish the work.

3.12 COMMUNICATIONS AND SIGNAL LINES
If required, the Railroad will rearrange its communications and signal lines, its grade crossing warning devices, train signals and tracks, and facilities that are in use and maintained by the Railroad's forces in connection with its operation at expense of the contractor. This work by the Railroad will be done by its own forces and is not a part of the Work under this Contract.

3.13 TRAFFIC CONTROL
Coordinate any operations that control traffic across or around Railroad facilities with the Railroad Designated Representative.
PHASE IA (DETUR PLAN, SEE SHEET 113)

1. THE STATE'S CONTRACTOR SHALL CLOSE ROADWAY AND PROVIDE DETOUR.

2. THE RAILROAD'S CONTRACTOR SHALL REMOVE 40 LF OF EXISTING PANELING AND PROVIDE 104 LF OF NEW PANELING, EXTENDING FROM THE EXISTING NORTHERN LIMIT ON TRAMWELE FRESNO ROAD, SOUTH TO THE NEW SOUTHERN LIMIT OF FINAL ROADWAY.

PHASE IB (THIS SHEET)

1. THE STATE'S CONTRACTOR SHALL BUILD BOTH MEDIANs AROUND CROSSING, SOUTHERN SIDE OF ROADWAY, CURB, AND ACCESS DRIVEWAY TO RAILROAD CABLE.

2. THE RAILROAD'S CONTRACTOR SHALL INSTALL BOTH EASTBOUND GATES AND EASTBOUND CANTILEVER, MEDIUM GATE FOR WESTBOUND TRAFFIC, AND PROPOSED TRAIN CABIN WITH CABLING TO EXISTING GATE.

3. THE RAILROAD'S CONTRACTOR SHALL INSTALL SOUTHBOUND GATE FOR WESTBOUND TRAFFIC.

4. THE STATE'S CONTRACTOR SHALL INSTALL CONDUIT AND TRAFFIC SIGNAL CABLE TO NEW RAILROAD CABIN AND TEST EXISTING SIMULTANEOUS PREAMPT AT TEMPORARY SIGNAL.

5. THE RAILROAD'S CONTRACTOR SHALL REMOVE THE EXISTING CABIN.

LEGEND

- SIGNAL POLE
- MAST ARM
- SIGNAL CONTROLLER
- PROPOSED SIGNAL HEAD
- EXISTING SIGNAL HEAD
- OVERHEAD WIRE
- VIVOS CAMERA
- OPTICOM DETECTOR
- PULL BOX (C T D)
- SERVICE & WATER DISCONNECT
- LUMINARIE & ARM
- CONDUIT (SPEW)
- CONDUIT (HEAVY)
- DETECTION ZONE
- HIGH EYRAL STRENGTH CONCRETE
- PERMANENT PAVEMENT
1. The railroad's contractor shall adjust southern gate for eastbound traffic and activate.
2. The railroad's contractor shall provide temporary gate for westbound traffic.
3. The state's contractor shall build northern half of roadway, including curb.
4. The railroad's contractor shall remove the original eastbound and westbound gates.
5. The railroad's contractor shall install northernmost gate for westbound traffic.
6. The railroad's contractor shall remove northern portion of planking such that planking extends 3' past end of pavement with the remaining 96' of panels to be centered on the proposed roadway.
7. The railroad's contractor shall adjust track signaling to provide advanced preemption.
NOTES:

PHASE 3 (THIS SHEET):
1. THE RAILROAD'S CONTRACTOR SHALL ADJUST TRACK SIGNALING TO PROVIDE ADVANCED PREDEMIPT.
2. THE RAILROAD'S CONTRACTOR SHALL RELOCATE TEMPORARY GATE FROM WESTBOUND TRAFFIC DURING PHASE 2 TO EASTBOUND TRAFFIC DURING PHASE 3.

FINAL ROADWAY COMPLETION (FOLLOWING PHASE 3):
3. THE STATE AND RAILROAD WILL JOINTLY TEST ADVANCED PREDEMIPT AT NEWLY CONSTRUCTED TRAFFIC SIGNAL.
4. THE RAILROAD'S CONTRACTOR SHALL REMOVE TEMPORARY GATE.
5. THE RAILROAD'S CONTRACTOR SHALL ACTIVATE AND ADJUST ALL NEW GATES.

LEGEND

- SIGNAL POLE
- MAST ARM
- SIGNAL CONTROLLER
- HORIZONTAL SIGNAL HEAD
- SIGN ON MAST ARM
- VIVIDS CAMERA
- OPTICOM DETECTOR
- PULL BOX (TY D1)
- SERVICE & WATER DISCONNECT
- LUMINAIRE & ARM
- CONDUIT (TRENCH)
- CONDUIT (BORE)
- DETECTION ZONE
- HIGH EARLY
- STRENGTH
- CONCRETE
- PERMANENT PAVEMENT

Signal Schedule

A, B

Electrical Schedule

<table>
<thead>
<tr>
<th>ITEM</th>
<th>DESCRIPTION</th>
<th>ROW DESIGNATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>P.501</td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>P.502</td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>P.503</td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>P.504</td>
<td></td>
</tr>
</tbody>
</table>

The diagram shows the layout of the electrical and signal systems for the project, with various poles, wires, and signal heads labeled for phase 3 and final roadways completion.