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Texas Department of Transportation

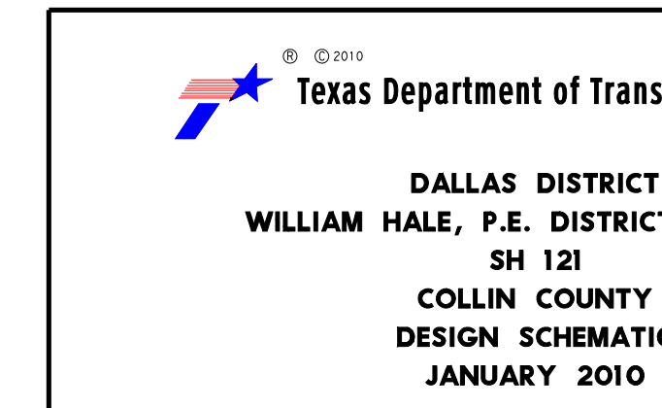
DALLAS DISTRICT
WILLIAM HALE, P.E. DISTRICT ENGINEER
SH 121
COLLIN COUNTY
DESIGN SCHEMATIC
JANUARY 2010

ROLL 8 of 11

FROM: SH 5 IN MELISSA TO: EASTLINE ROAD
BRIDGE REPLACEMENT AND HIGHWAY RECONSTRUCTION
PROJECT LENGTH: 15.11 MILES (79765')
BRIDGE: 0.30 MILES (1560')
ROADWAY: 14.81 MILES (78205')

CSJ: 0549-03-018 (SH 5 to FM 455)
CSJ: 0549-03-021 (FM 455 to CR635/FANNIN COUNTY LINE)

HORZ 0 100 200 300
VERT 0 10 20 30
GRAPHIC SCALE (IN FEET)


SH 121 CL STA 540+00
END CSJ 0549-03-018
BEGIN CSJ 0549-03-021
END PROJECT
END CSJ 0549-03-021
END STA 863+19.64
DESERT
160
EASTLINE RD.
ANNA
2862
78
75
5
455
MELISSA
545
BLUE RIDGE
SH 121
BEGIN PROJECT
BEGIN CSJ 0549-03-018
BEGIN STA 67+54.08
N

LOCATION MAP

INDEX OF ROLLS

ROLL	DESCRIPTION
1	SH 121 STA 67+54.38 TO STA. 187+00
2	SH 121 STA 187+00 TO STA. 327+00
3	SH 121 STA 327+00 TO STA. 467+00
4	SH 121 STA 467+00 TO STA. 607+00
5	SH 121 STA 607+00 TO STA. 747+00
6	SH 121 STA 747+00 TO EAST LINE RD. (FANNIN COUNTY LINE)
7	SH 121 STA 747+00 TO FANNIN COUNTLY LINE (TRANSITION)
8	SH 5 AND FANNIN ROAD
9	FM 455 AND CONNECTING RAMPS
10	FM 2862 AND CONNECTING RAMPS
11	SH 160 AND CONNECTING RAMPS

LEGEND

-·-·-	EXISTING R.O.W. (ACCESS BY PERMIT ONLY)
——	PROPERTY LINES
▬ · ▬	PROPOSED R.O.W. (ACCESS BY PERMIT ONLY IN ACCORDANCE WITH TXDOT ACCESS CONTROL MANUAL)
—·—·—	SH 121 CL
X X X X	OBLITERATE EXISTING ROADWAY
--W--	WATER UTILITY
- - - -	CITY LIMIT
🟩	SH 121 PAVEMENT
🟦	CROSS STREETS
▭	BRIDGE
🟪	DRIVEWAYS
——	RETAINING WALL
▨	DISPLACED STRUCTURE

<table>
<tr><th rowspan="2">DESIGN ROADWAY</th><th colspan="2">LIMITS</th><th rowspan="2">FUNCTIONAL CLASSIFICATION</th><th colspan="2">ADT</th><th rowspan="2">DESIGN SPEED</th></tr>
<tr><th>FROM</th><th>TO</th><th>2012</th><th>2032</th></tr>
<tr><td>SH 121 (SUBURBAN)</td><td>SH 5</td><td>Outer Loop +</td><td>ARTERIAL</td><td>18800</td><td>29400</td><td>45</td></tr>
<tr><td>SH 121 (RURAL)</td><td>Outer Loop +</td><td>SH 160</td><td>ARTERIAL</td><td>13500</td><td>21000</td><td>70</td></tr>
<tr><td>SH 121 RAMPS</td><td>Outer Loop +</td><td>SH 160</td><td>RAMP</td><td>NA</td><td>NA</td><td>35</td></tr>
<tr><td>FM 2933</td><td colspan="2">AT SH 121</td><td>COLLECTOR</td><td>1000</td><td>1600</td><td>40</td></tr>
<tr><td>455 N</td><td colspan="2">AT SH 121</td><td>ARTERIAL</td><td>1550</td><td>2250</td><td>40</td></tr>
<tr><td>455 S</td><td colspan="2">AT SH 121</td><td>COLLECTOR</td><td>500</td><td>700</td><td>40</td></tr>
<tr><td>E. HOUSTON ST (FM 2862)</td><td colspan="2">AT SH 121</td><td>COLLECTOR</td><td>1700</td><td>2700</td><td>50</td></tr>
<tr><td>SH 160</td><td colspan="2">AT SH 121</td><td>ARTERIAL</td><td>4100</td><td>6600</td><td>50</td></tr>
<tr><td>N. McDonald Street (SH 5 SOUTH)</td><td colspan="2">AT SH 121</td><td>ARTERIAL</td><td>7300</td><td>11,300</td><td>40</td></tr>
<tr><td>MC KINNEY ST (SH 5 NORTH)</td><td colspan="2">AT SH 121</td><td>ARTERIAL</td><td>6400</td><td>9900</td><td>40</td></tr>
<tr><td>DENTON ST (FM 545)</td><td colspan="2">AT SH 121</td><td>COLLECTOR</td><td>4200</td><td>6500</td><td>30</td></tr>
<tr><td colspan="7">COUNTY ROADS</td></tr>
<tr><td>CR 418</td><td colspan="2">AT SH 121</td><td>LOCAL</td><td>600</td><td>900</td><td>30</td></tr>
<tr><td>LANDFILL ENTRANCE</td><td colspan="2">AT SH 121</td><td>LOCAL</td><td>NA</td><td>NA</td><td>30</td></tr>
<tr><td>416</td><td colspan="2">AT SH 121</td><td>LOCAL</td><td>NA</td><td>NA</td><td>30</td></tr>
<tr><td>419</td><td colspan="2">AT SH 121</td><td>LOCAL</td><td>300</td><td>600</td><td>20 *</td></tr>
<tr><td>420</td><td colspan="2">AT SH 121</td><td>LOCAL</td><td>NA</td><td>NA</td><td>20 *</td></tr>
<tr><td>475</td><td colspan="2">AT SH 121</td><td>LOCAL</td><td>250</td><td>450</td><td>30</td></tr>
<tr><td>507(509)</td><td colspan="2">AT SH 121</td><td>LOCAL</td><td>NA</td><td>NA</td><td>20 *</td></tr>
<tr><td>424 / 513</td><td colspan="2">AT SH 121</td><td>LOCAL</td><td>NA</td><td>NA</td><td>30</td></tr>
<tr><td>526 / 527</td><td colspan="2">AT SH 121</td><td>LOCAL</td><td>NA</td><td>NA</td><td>20 *</td></tr>
<tr><td>528 / 581</td><td colspan="2">AT SH 121</td><td>LOCAL</td><td>NA</td><td>NA</td><td>20 *</td></tr>
<tr><td>582</td><td colspan="2">AT SH 121</td><td>LOCAL</td><td>NA</td><td>NA</td><td>20 *</td></tr>
<tr><td>936</td><td colspan="2">AT SH 121</td><td>LOCAL</td><td>NA</td><td>NA</td><td>20 *</td></tr>
<tr><td>1002</td><td colspan="2">AT SH 121</td><td>LOCAL</td><td>NA</td><td>NA</td><td>20 *</td></tr>
<tr><td>COUNTY LINE RD</td><td colspan="2">AT SH 121</td><td>LOCAL</td><td>250</td><td>250</td><td>20 *</td></tr>
<tr><td>EASTLINE RD</td><td colspan="2">AT SH 121</td><td>LOCAL</td><td>200</td><td>350</td><td>30</td></tr>
<tr><td colspan="7">CITY STREETS</td></tr>
<tr><td>FANNIN RD</td><td colspan="2">AT SH 121</td><td>COLLECTOR</td><td>NA</td><td>NA</td><td>30</td></tr>
<tr><td>BARTLETT RD</td><td colspan="2">AT SH 121</td><td>LOCAL</td><td>NA</td><td>NA</td><td>30</td></tr>
<tr><td>CREEKSIDE RD</td><td colspan="2">AT SH 121</td><td>LOCAL</td><td>NA</td><td>NA</td><td>30</td></tr>
<tr><td>BERRY RD</td><td colspan="2">AT SH 121</td><td>LOCAL</td><td>2600</td><td>4000</td><td>30</td></tr>
<tr><td>EASTWOOD RD</td><td colspan="2">AT SH 121</td><td>LOCAL</td><td>NA</td><td>NA</td><td>30</td></tr>
<tr><td>LILLIAN DR</td><td colspan="2">AT SH 121</td><td>LOCAL</td><td>NA</td><td>NA</td><td>30</td></tr>
<tr><td>NUGENT ST</td><td colspan="2">AT SH 121</td><td>LOCAL</td><td>NA</td><td>NA</td><td>30</td></tr>
<tr><td>LIBERTY WAY</td><td colspan="2">AT SH 121</td><td>LOCAL</td><td>900</td><td>1400</td><td>30</td></tr>
<tr><td>REDWOOD BLVD</td><td colspan="2">AT SH 121</td><td>LOCAL</td><td>NA</td><td>NA</td><td>30</td></tr>
</table>

* = UNPAVED COUNTY ROAD
+ = FUTURE, BY OTHERS

NOTES:

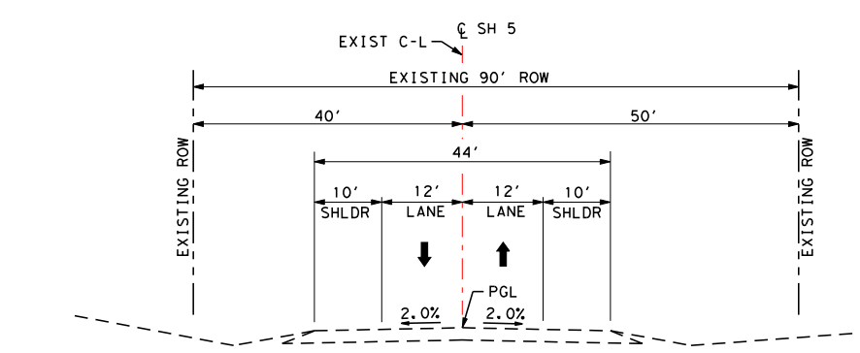
1. MEDIAN OPENINGS ARE PRELIMINARY AND SUBJECT TO CHANGE. FINAL MEDIAN OPENING LOCATIONS TO BE DETERMINED DURING PS&E AND IN COORDINATION WITH THE CITIES OF MELISSA AND ANNA.
2. SOURCE OF TRAFFIC DATA:
   TEXAS DEPARTMENT OF TRANSPORTATION
   TRANSPORTATION, PROGRAMING AND PLANNING DIVISION
   MARCH 27, 2007
3. ALL URBAN SECTIONS WILL HAVE CONCRETE CURB AND GUTTER WITH BARRIER CURBS.

These documents are not intended for Construction, Bidding or Permit Purposes. They were prepared by, or under the supervision of:

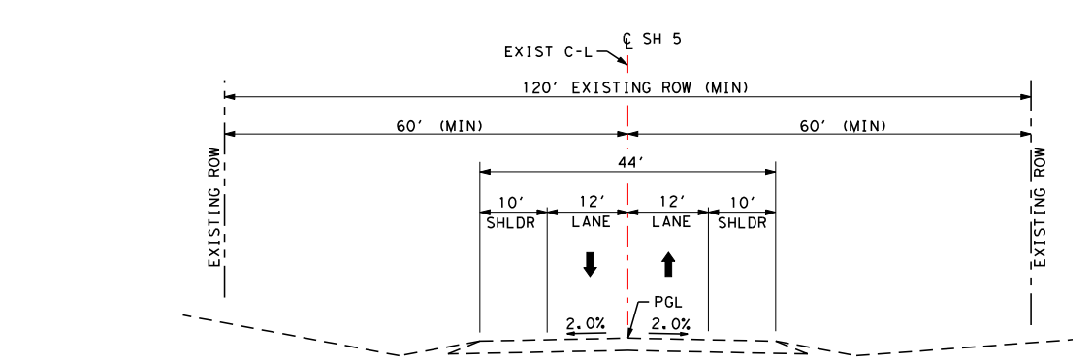
JOSEPH W. ATWOOD, P.E. 65631 04/19/10
PROJECT MANAGER PE# DATE

Lockwood, Andrews & Newnam, Inc.
T.B.P.E. Firm # 2614

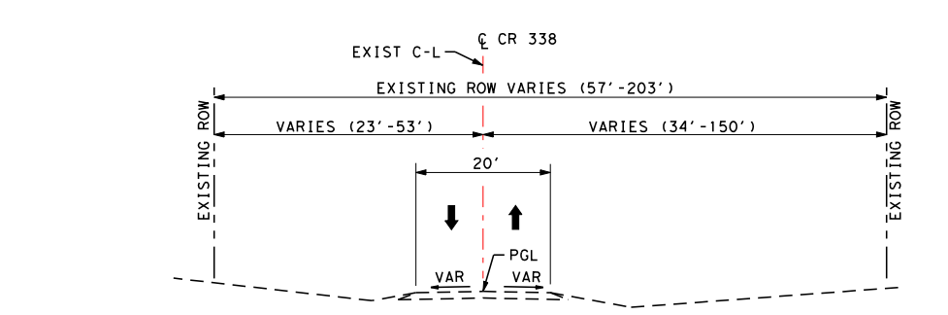
amellis
4/22/2010 4:05:42 PM
L:\110071\140-10336-000\prod\Exhibits\121 CROSS STREETS SH5*200.dgn


EXIST C-L ℄ SH 5
EXISTING 90' ROW
40'
50'
44'
10' SHLDR
12' LANE
12' LANE
10' SHLDR
2.0%
PGL
EXISTING ROW

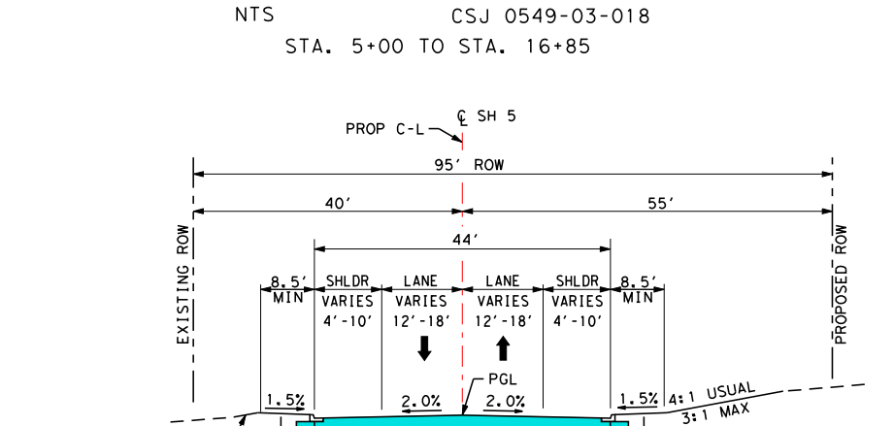
EXISTING SOUTH SH 5 TYPICAL SECTION
NTS CSJ 0549-03-018
STA. 5+00 TO STA. 16+85


EXIST C-L ℄ SH 5
120' EXISTING ROW (MIN)
60' (MIN)
60' (MIN)
44'
10' SHLDR
12' LANE
12' LANE
10' SHLDR
2.0%
PGL
EXISTING ROW

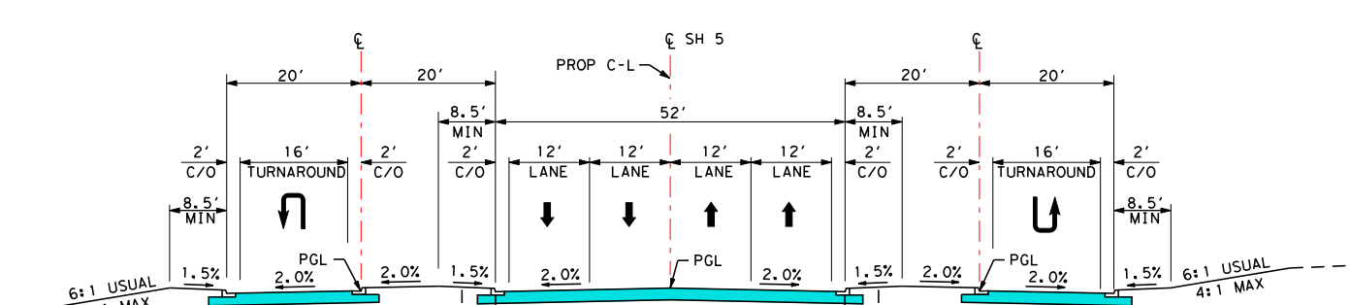
EXISTING NORTH SH 5 TYPICAL SECTION
NTS CSJ 0549-03-018
STA. 7+68.82 TO STA. 26+84.42


EXIST C-L ℄ CR 338
EXISTING ROW VARIES (57'-203')
VARIES (23'-53')
VARIES (34'-150')
20'
VAR
PGL
EXISTING ROW

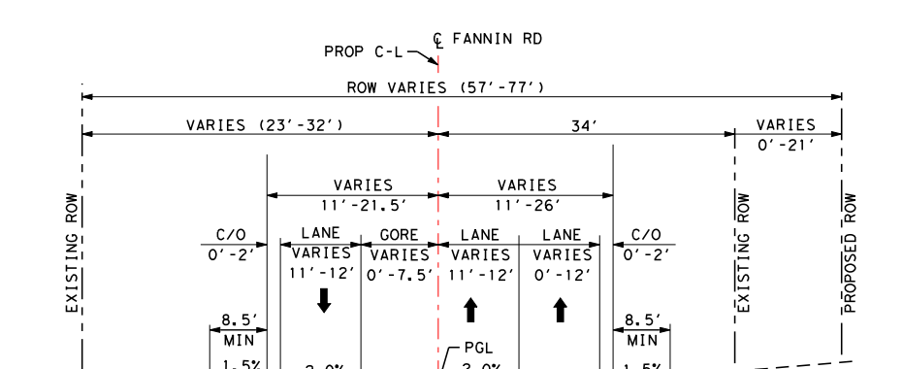
EXISTING CR 338 (FANNIN RD) TYPICAL SECTION
NTS CSJ 0549-03-018
STA. 5+00 TO STA. 10+00


PROP C-L ℄ SH 5
95' ROW
40'
44'
55'
8.5' MIN
SHLDR VARIES 4'-10'
LANE VARIES 12'-18'
LANE VARIES 12'-18'
SHLDR VARIES 4'-10'
2.0%
1.5%
PGL
4:1 USUAL 3:1 MAX
STORM DRAIN AS REQUIRED
EXISTING ROW

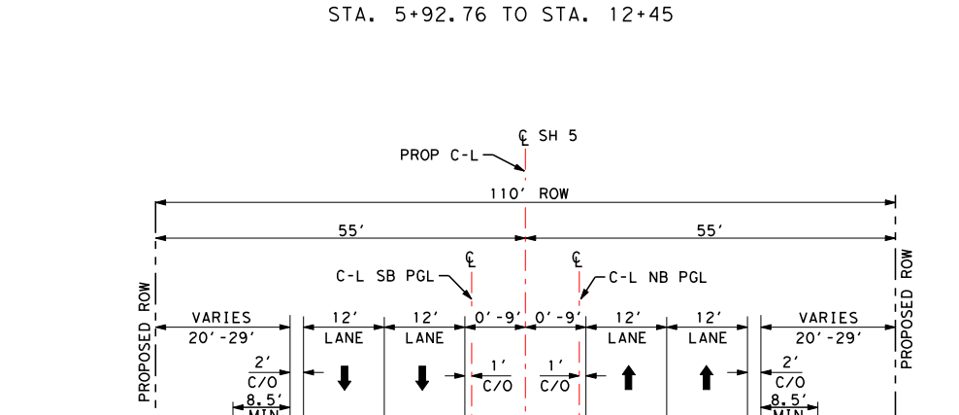
PROPOSED SOUTH SH 5 TYPICAL SECTION
NTS CSJ 0549-03-018
STA. 5+92.76 TO STA. 12+45


PROP C-L ℄ SH 5
52'
20'
20'
16'
2' C/O
TURNAROUND
12' LANE
8.5' MIN
2.0%
1.5%
PGL
6:1 USUAL 4:1 MAX
STORM DRAIN AS REQUIRED

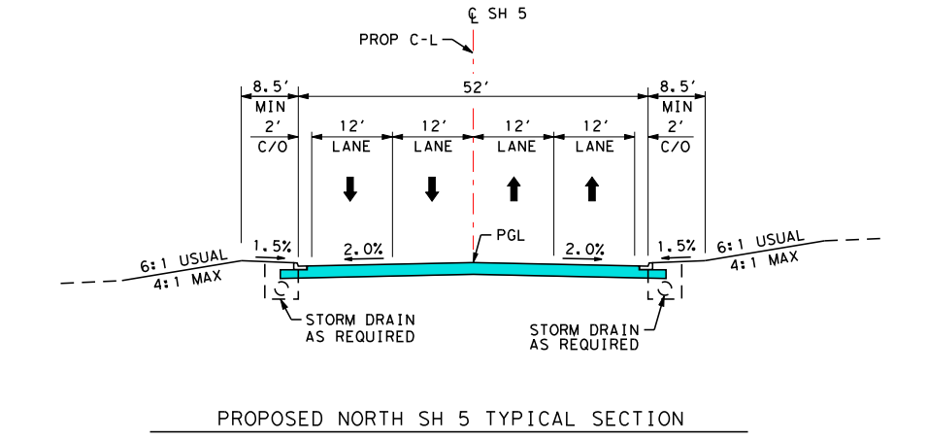
PROPOSED NORTH SH 5 TYPICAL SECTION
NTS CSJ 0549-03-018
STA. 7+68.84 TO STA. 11+86.01


PROP C-L ℄ FANNIN RD
ROW VARIES (57'-77')
VARIES (23'-32')
34'
VARIES 0'-21'
VARIES 11'-21.5'
VARIES 11'-26'
C/O 0'-2'
LANE VARIES 11'-12'
GORE VARIES 0'-7.5'
LANE VARIES 11'-12'
LANE 0'-12'
8.5' MIN
2.0%
1.5%
PGL
4:1 USUAL 3:1 MAX
STORM DRAIN AS REQUIRED
EXISTING ROW

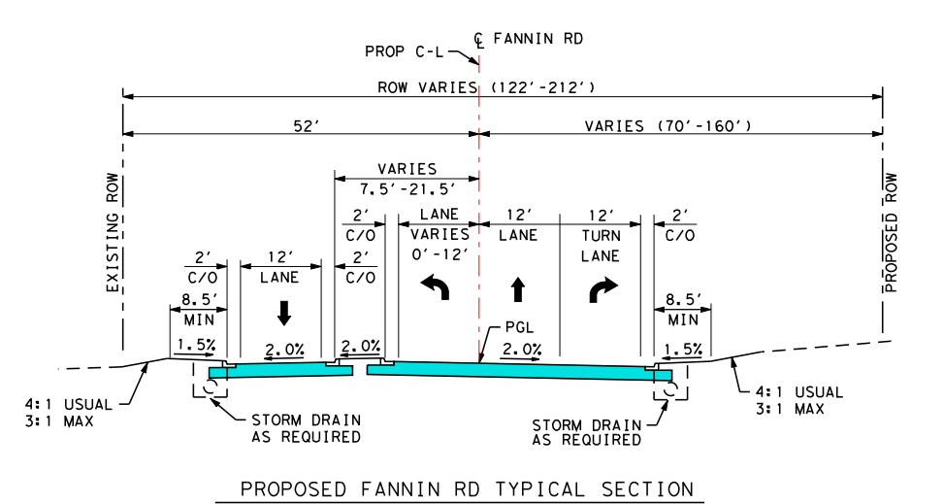
PROPOSED FANNIN RD TYPICAL SECTION
NTS CSJ 0549-03-018
STA. 5+00 TO STA. 7+17


PROP C-L ℄ SH 5
110' ROW
55'
55'
C-L SB PGL
C-L NB PGL
VARIES 20'-29'
12' LANE
2' C/O
2.0%
1.5%
3:1 MAX
4:1 USUAL 3:1 MAX
STORM DRAIN AS REQUIRED
PROPOSED ROW

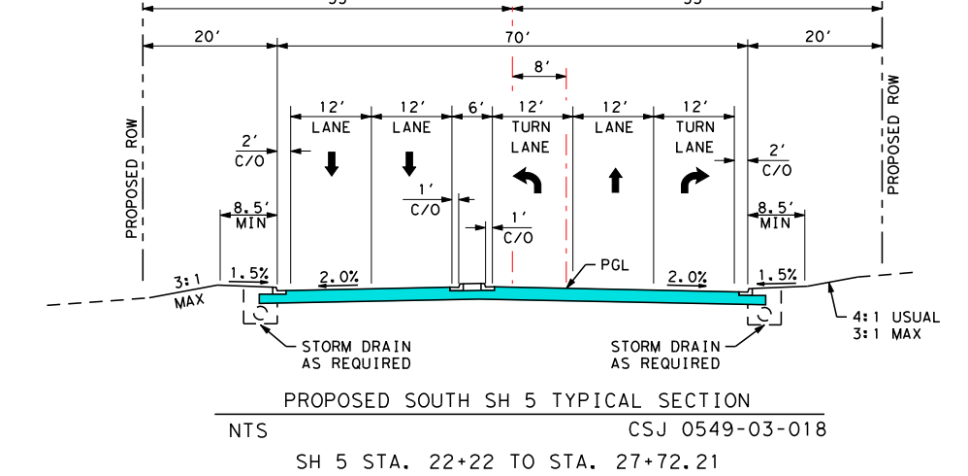
PROPOSED SOUTH SH 5 TYPICAL SECTION
NTS CSJ 0549-03-018
SH 5 STA. 12+45 TO STA. 22+22


PROP C-L ℄ SH 5
52'
8.5' MIN
2' C/O
12' LANE
2.0%
1.5%
PGL
6:1 USUAL 4:1 MAX
STORM DRAIN AS REQUIRED

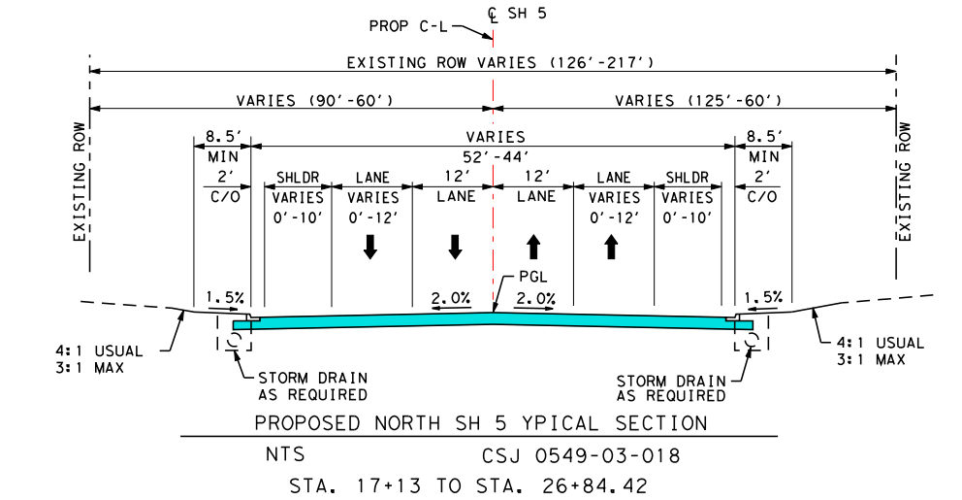
PROPOSED NORTH SH 5 TYPICAL SECTION
NTS CSJ 0549-03-018
STA. 11+86.01 TO STA. 17+13


PROP C-L ℄ FANNIN RD
ROW VARIES (122'-212')
52'
VARIES (70'-160')
VARIES 7.5'-21.5'
2' C/O
12' LANE
LANE VARIES 0'-12'
TURN LANE
8.5' MIN
2.0%
1.5%
PGL
4:1 USUAL 3:1 MAX
STORM DRAIN AS REQUIRED
EXISTING ROW

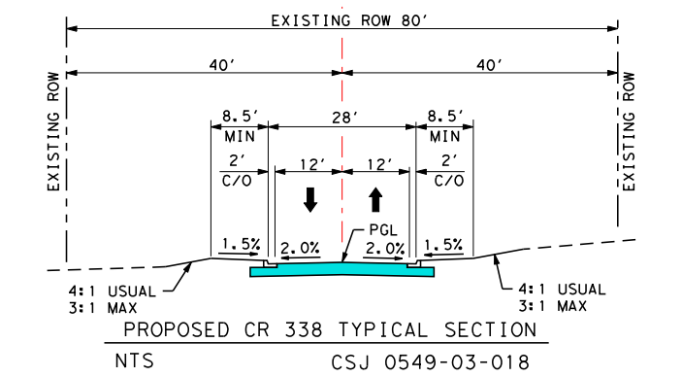
PROPOSED FANNIN RD TYPICAL SECTION
NTS CSJ 0549-03-018
STA. 7+17 TO STA. 11+34.11


PROP C-L ℄ SH 5
110' ROW
55'
55'
20'
70'
20'
8'
12' LANE
TURN LANE
1' C/O
2' C/O
8.5' MIN
2.0%
1.5%
PGL
4:1 USUAL 3:1 MAX
STORM DRAIN AS REQUIRED
PROPOSED ROW

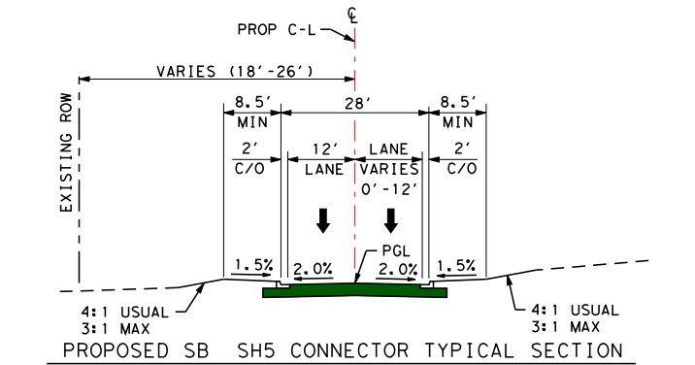
PROPOSED SOUTH SH 5 TYPICAL SECTION
NTS CSJ 0549-03-018
SH 5 STA. 22+22 TO STA. 27+72.21


PROP C-L ℄ SH 5
EXISTING ROW VARIES (126'-217')
VARIES (90'-60')
VARIES (125'-60')
VARIES 52'-64'
SHLDR VARIES 0'-10'
LANE VARIES 0'-12'
12' LANE
8.5' MIN
2' C/O
2.0%
1.5%
PGL
4:1 USUAL 3:1 MAX
STORM DRAIN AS REQUIRED
EXISTING ROW

PROPOSED NORTH SH 5 TYPICAL SECTION
NTS CSJ 0549-03-018
STA. 17+13 TO STA. 26+84.42


PROP C-L ℄ CR 338
EXISTING ROW 80'
40'
40'
28'
8.5' MIN
2' C/O
12' LANE
2.0%
1.5%
PGL
4:1 USUAL 3:1 MAX
EXISTING ROW

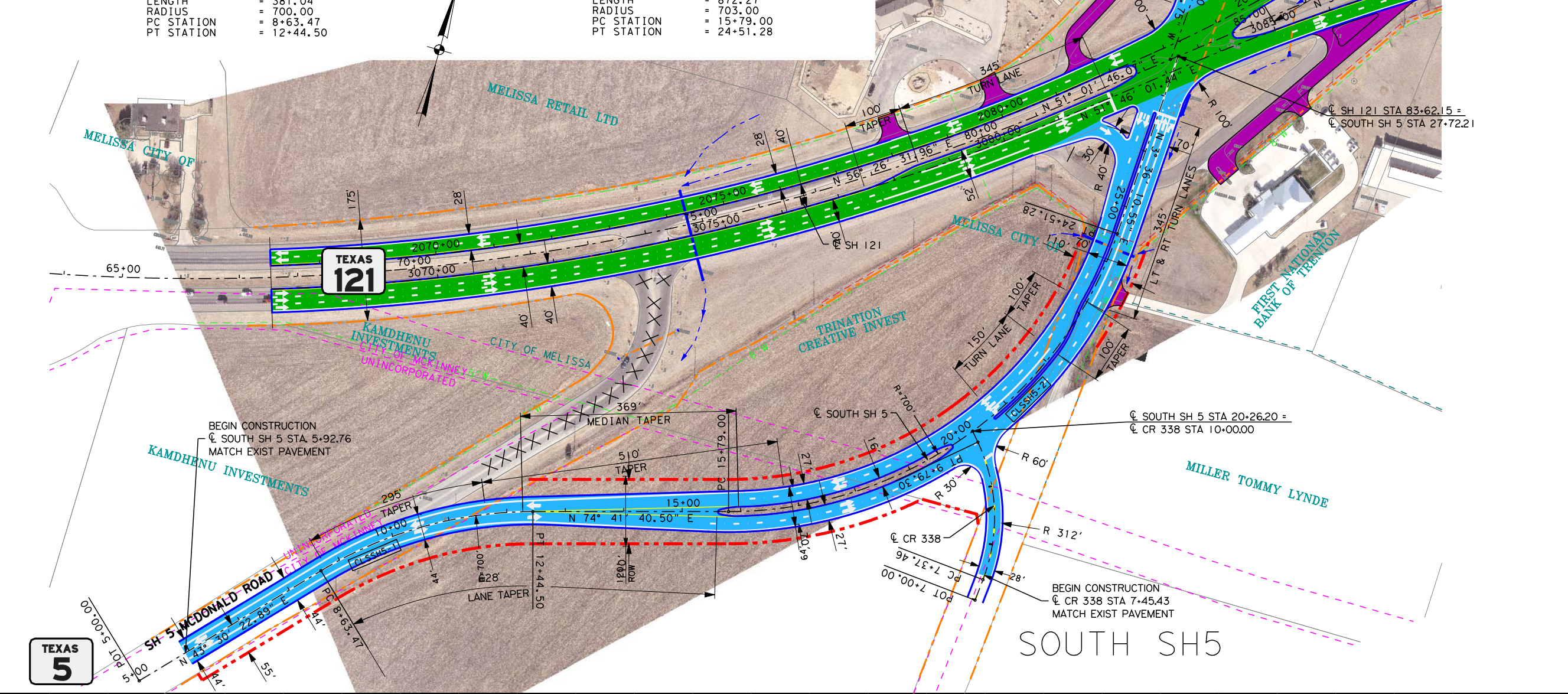
PROPOSED CR 338 TYPICAL SECTION
NTS CSJ 0549-03-018


PROP C-L ℄
VARIES (18'-26')
28'
8.5' MIN
2' C/O
12' LANE
LANE VARIES 0'-12'
2.0%
1.5%
PGL
4:1 USUAL 3:1 MAX
EXISTING ROW

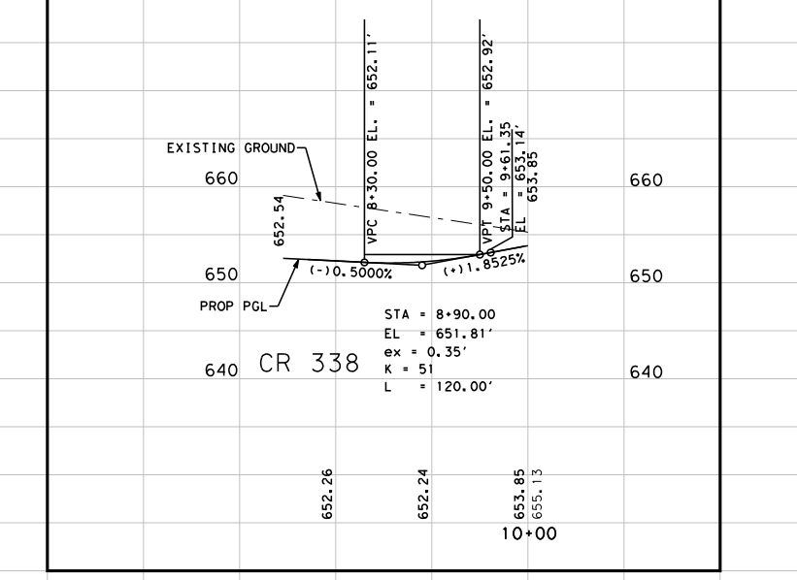
PROPOSED SB SH5 CONNECTOR TYPICAL SECTION
NTS CSJ 0549-03-018

CLSSH5-1
PI STATION = 10+58.83
DELTA = 31° 11′ 17.62" (RT)
DEGREE OF CURVE = 8° 11′ 06.40"
TANGENT = 195.37
LENGTH = 381.04
RADIUS = 700.00
PC STATION = 8+63.47
PT STATION = 12+44.50

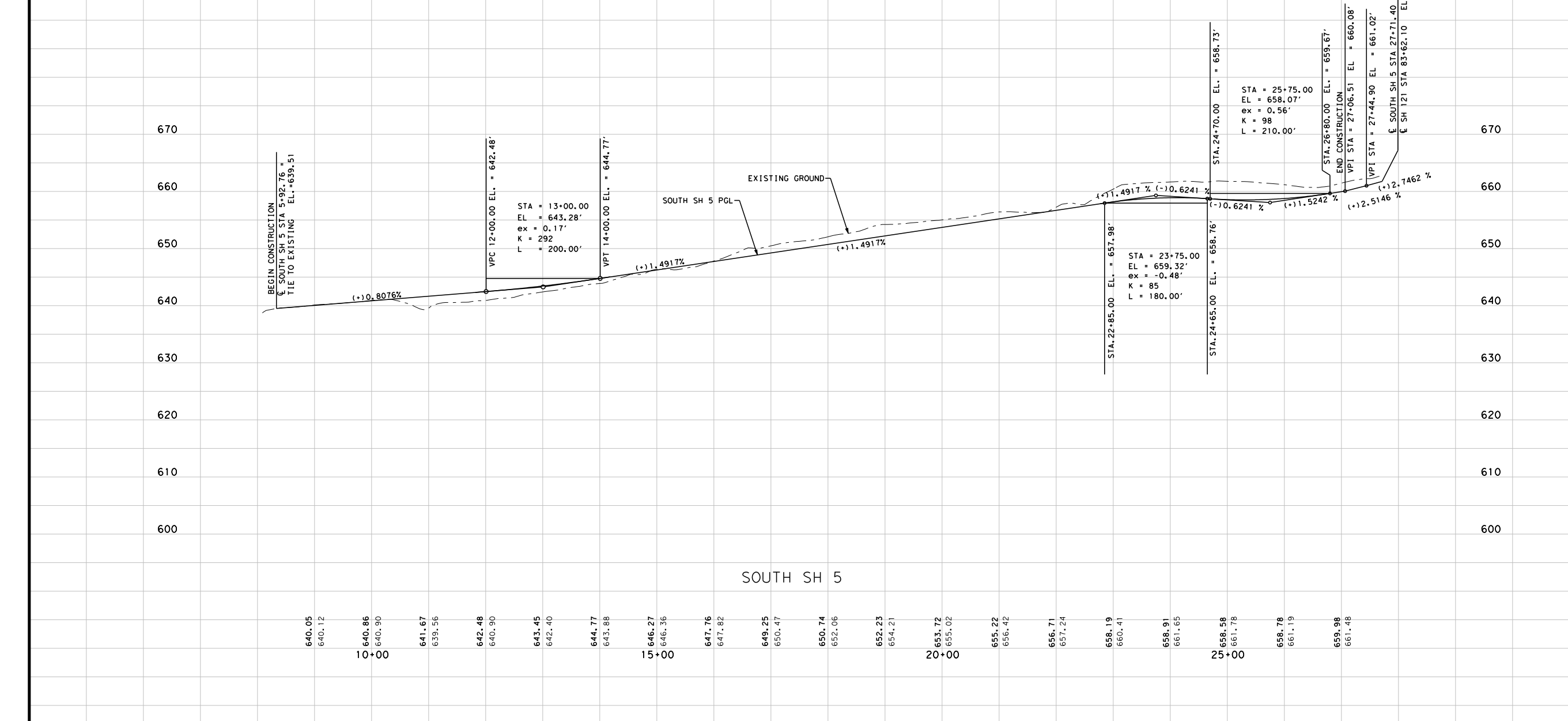
CLSSH5-2
PI STATION = 20+81.30
DELTA = 71° 05′ 29.96" (LT)
DEGREE OF CURVE = 8° 09′ 00.66"
TANGENT = 502.29
LENGTH = 872.27
RADIUS = 703.00
PC STATION = 15+79.00
PT STATION = 24+51.28


N
MELISSA RETAIL LTD
MELISSA CITY OF
TEXAS 121
65+00
KAMDHENU INVESTMENTS
CITY OF MELISSA
BEGIN CONSTRUCTION
℄ SOUTH SH 5 STA. 5+92.76
MATCH EXIST PAVEMENT
369' MEDIAN TAPER
510' TAPER
15+00
LANE TAPER
SH 5/McDONALD ROAD
TEXAS 5
℄ SH 121
℄ SOUTH SH 5
℄ SH 121 STA 83+62.15 =
℄ SOUTH SH 5 STA 27+72.21
℄ SOUTH SH 5 STA 20+26.20 =
℄ CR 338 STA 10+00.00
℄ CR 338
BEGIN CONSTRUCTION
℄ CR 338 STA 7+45.43
MATCH EXIST PAVEMENT
MILLER TOMMY LYNDE
345' TURN LANE
100' TAPER

SOUTH SH5



CR 338

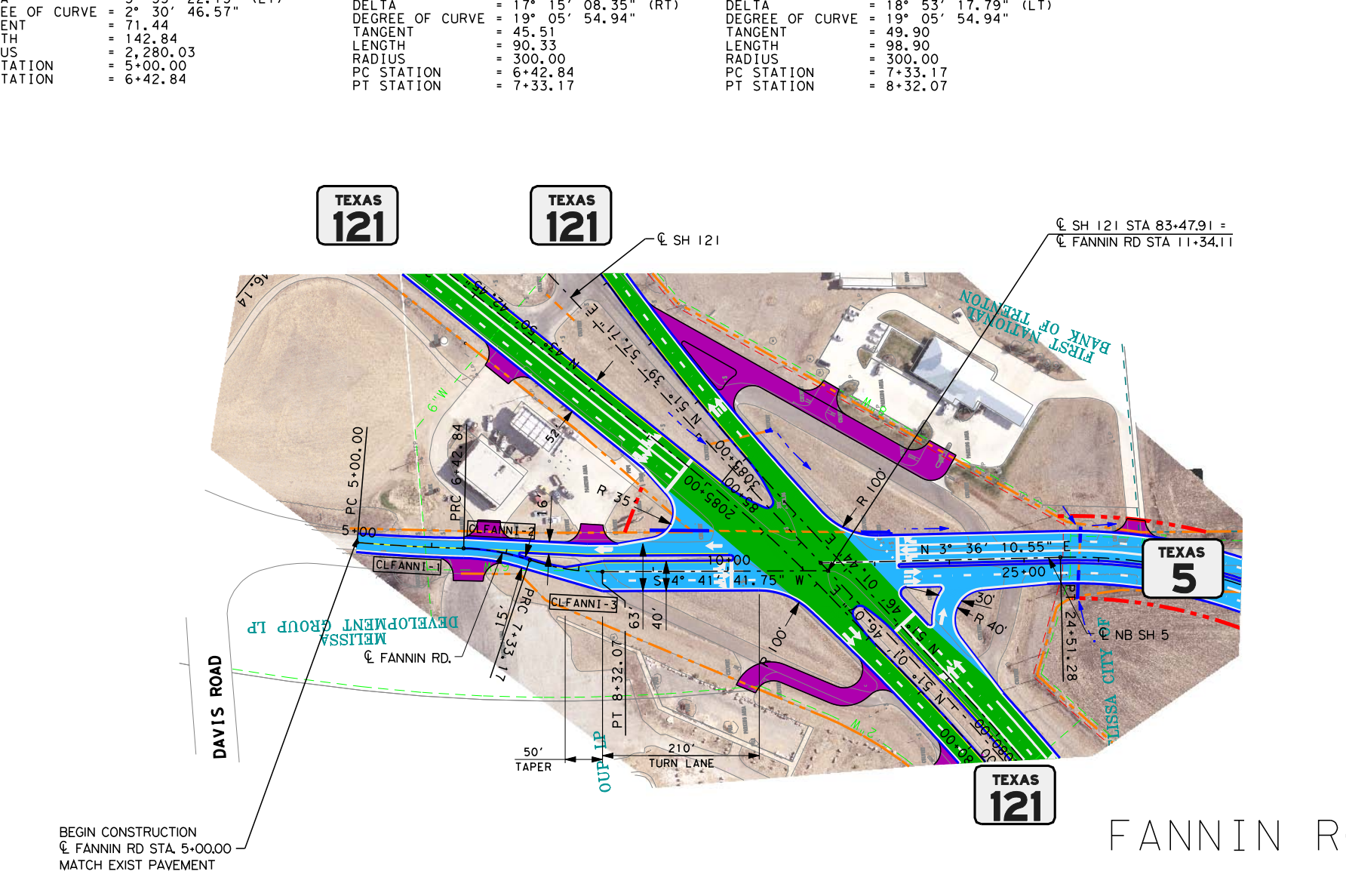


SOUTH SH 5

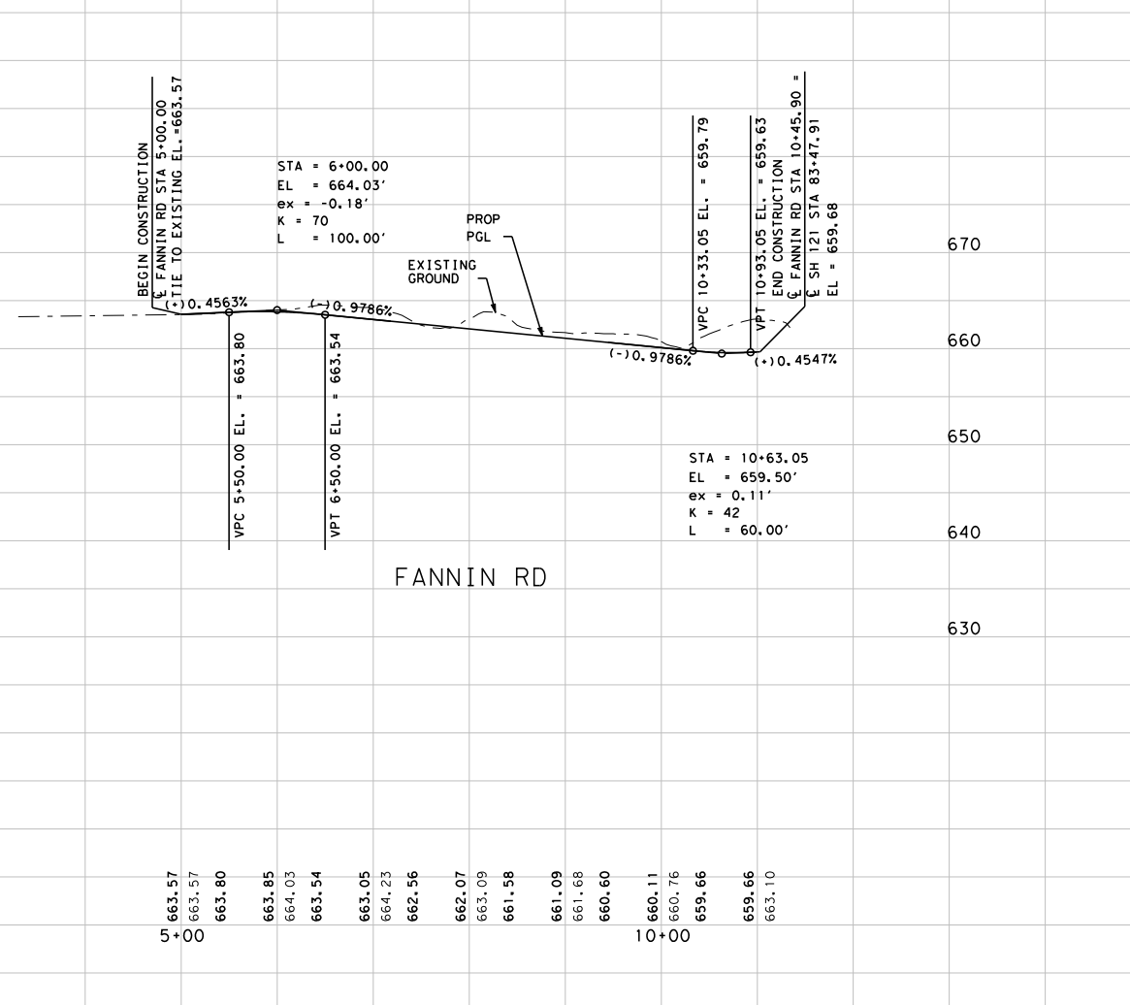
CLFANNI-1
PI STATION = 5+71.44
DELTA = 3° 35′ 22.13" (LT)
DEGREE OF CURVE = 2° 30′ 46.57"
TANGENT = 71.44
LENGTH = 142.84
RADIUS = 2,280.03
PC STATION = 5+00.00
PT STATION = 6+42.84

CLFANNI-2
PI STATION = 6+88.35
DELTA = 17° 15′ 08.35" (RT)
DEGREE OF CURVE = 19° 05′ 54.94"
TANGENT = 45.51
LENGTH = 90.33
RADIUS = 300.00
PC STATION = 6+42.84
PT STATION = 7+33.17

CLFANNI-3
PI STATION = 7+83.08
DELTA = 18° 53′ 17.79" (LT)
DEGREE OF CURVE = 19° 05′ 54.94"
TANGENT = 49.90
LENGTH = 98.90
RADIUS = 300.00
PC STATION = 7+33.17
PT STATION = 8+32.07

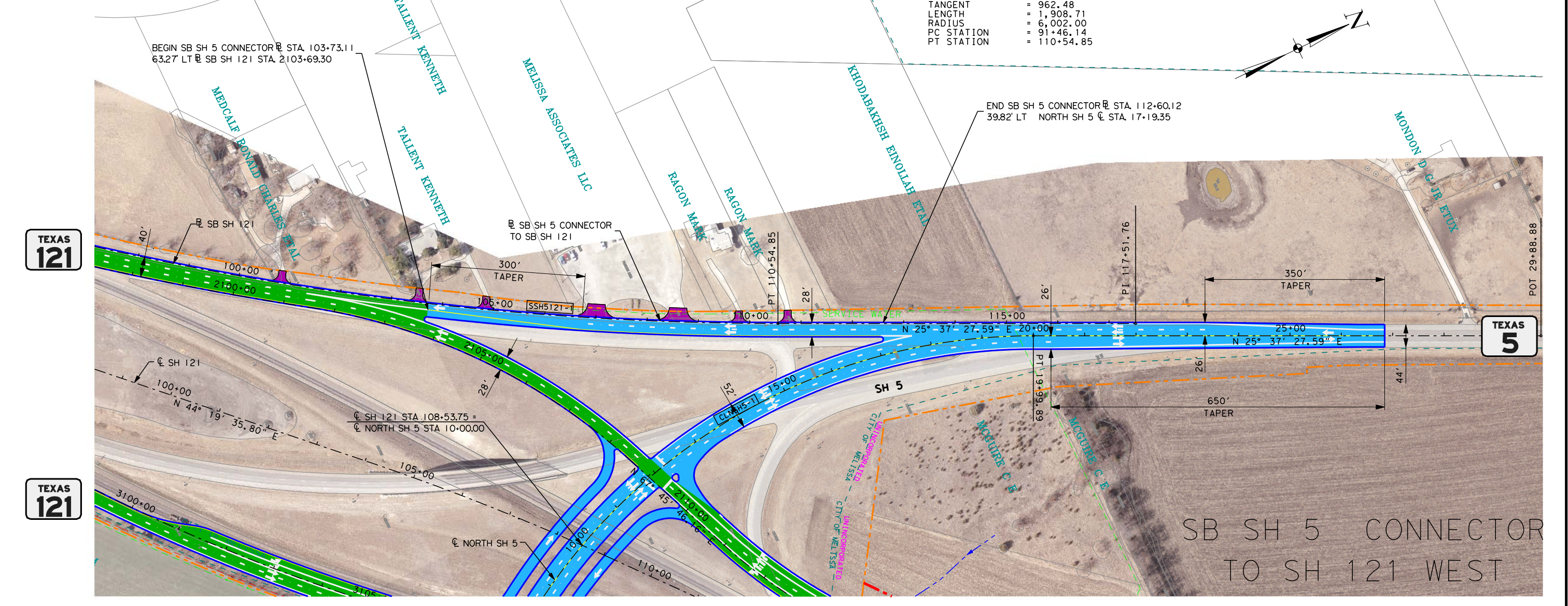

N
TEXAS 121
TEXAS 121
℄ SH 121
℄ SH 121 STA 83+47.91 =
℄ FANNIN RD STA 11+34.11
TEXAS 5
℄ NB SH 5
MELISSA DEVELOPMENT GROUP LP
DAVIS ROAD
℄ FANNIN RD.
50' TAPER
210' TURN LANE
BEGIN CONSTRUCTION
℄ FANNIN RD STA. 5+00.00
MATCH EXIST PAVEMENT
TEXAS 121

FANNIN ROAD

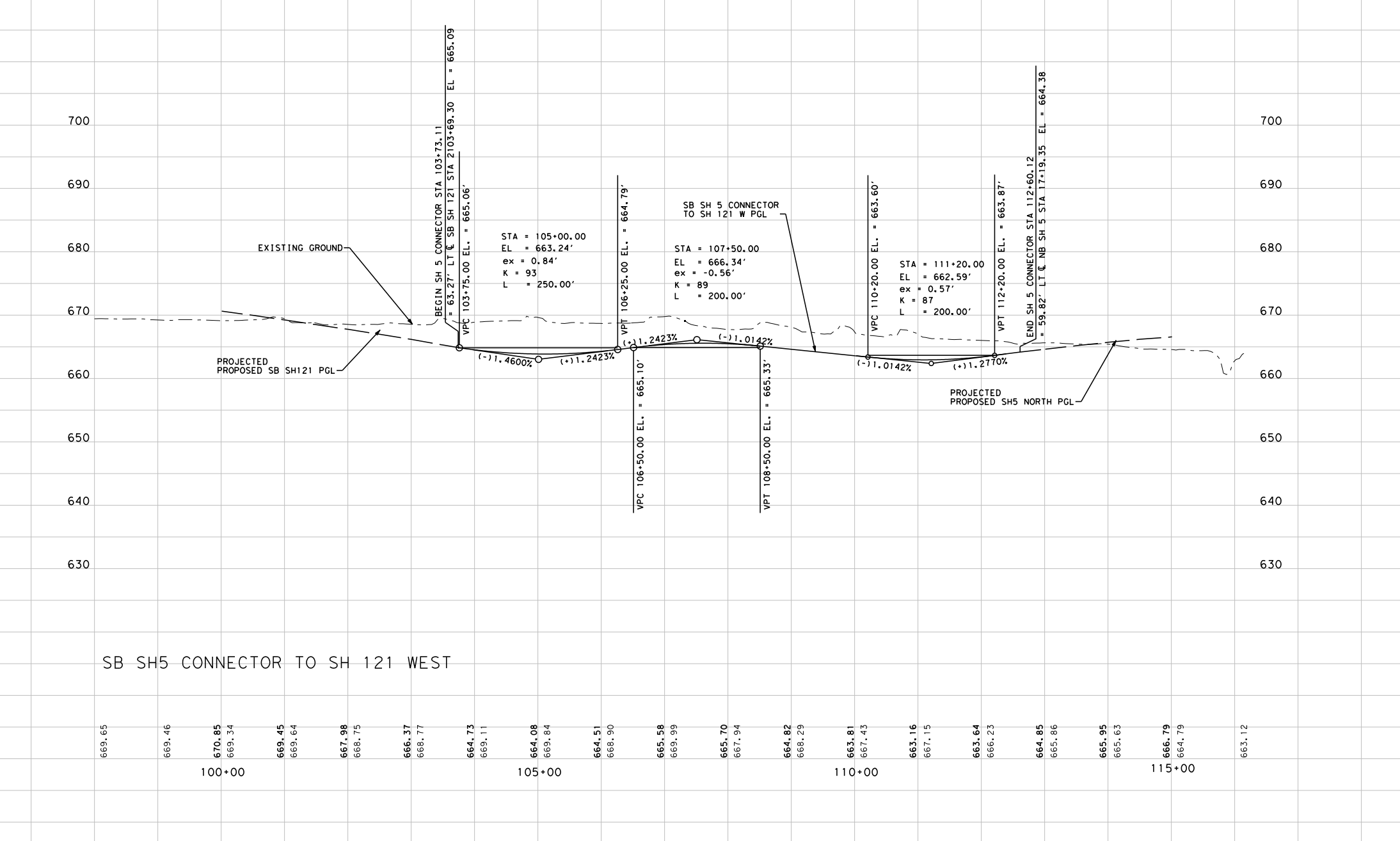


FANNIN RD

SSH5121-1
PI STATION = 101+08.62
DELTA = 18° 13′ 14.86" (LT)
DEGREE OF CURVE = 0° 57′ 16.60"
TANGENT = 962.48
LENGTH = 1,908.71
RADIUS = 6,002.00
PC STATION = 91+46.14
PT STATION = 110+54.85

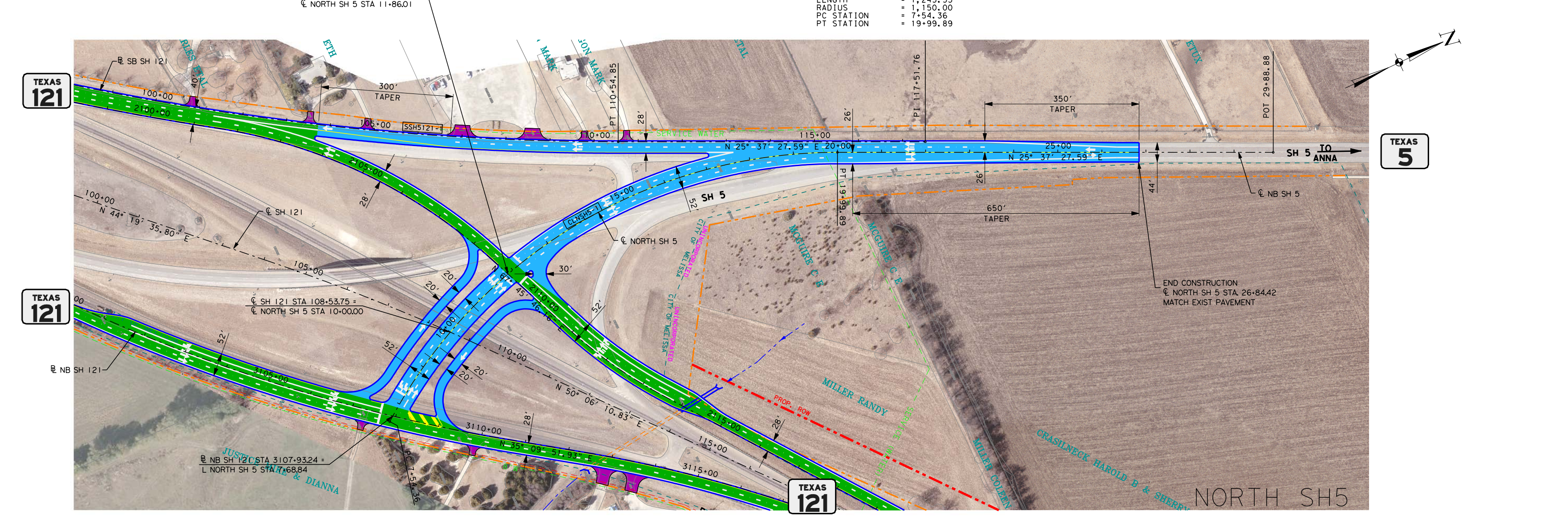

N
BEGIN SB SH 5 CONNECTOR ℄ STA. 103+73.11
65.27' LT ℄ SB SH 121 STA. 2103+69.50
END SB SH 5 CONNECTOR ℄ STA. 112+60.12
39.82' LT NORTH SH 5 ℄ STA. 17+19.35
TEXAS 121
TEXAS 121
℄ SB SH 121
℄ SB SH 5 CONNECTOR TO SB SH 121
300' TAPER
℄ SH 121
℄ SH 121 STA 108+53.75 =
℄ NORTH SH 5 STA 10+00.00
℄ NORTH SH 5
SH 5
350' TAPER
650' TAPER
115+00
TALLENT KENNETH
MELISSA ASSOCIATES LLC
KHODABAKHSH
TEXAS 5

SB SH 5 CONNECTOR TO SH 121 WEST

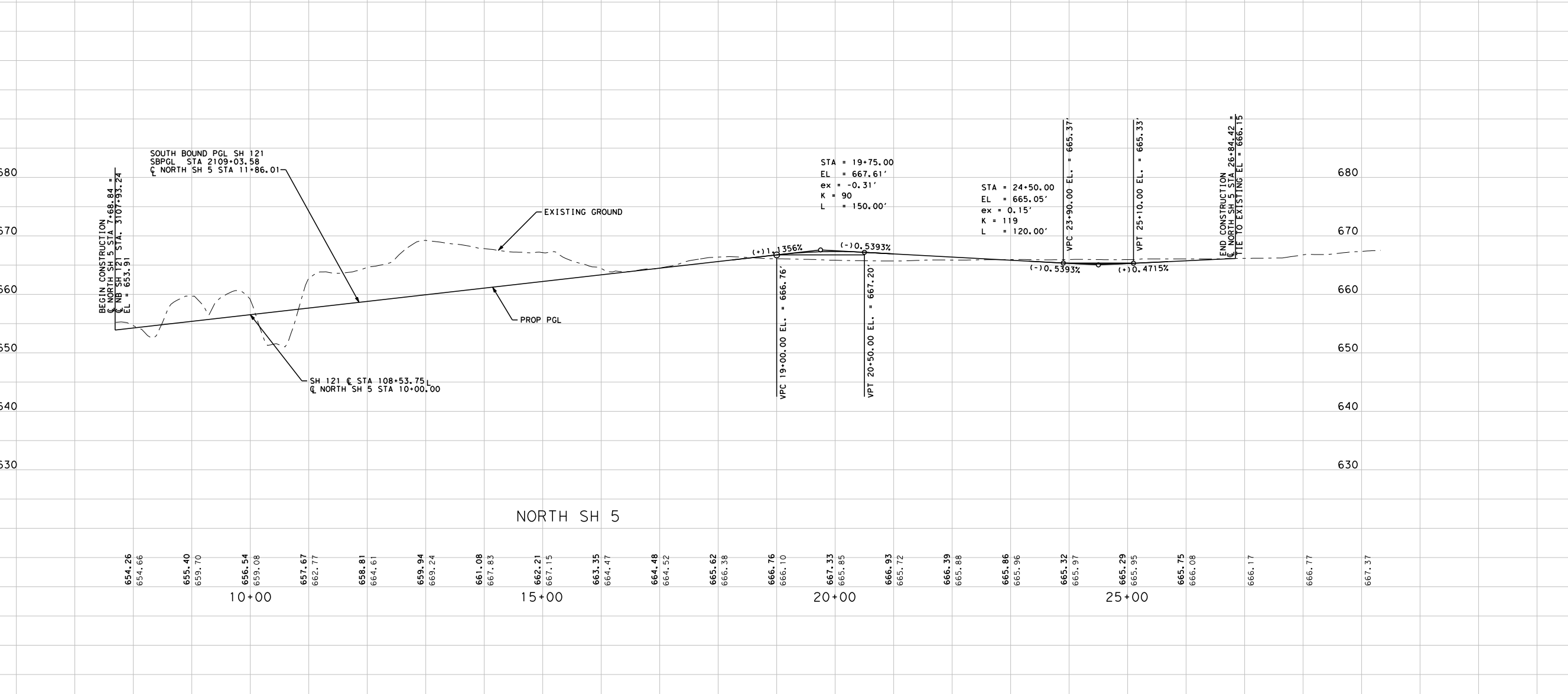


SB SH5 CONNECTOR TO SH 121 WEST

CLNSH5-1
PI STATION = 14+46.11
DELTA = 62° 03′ 19.02" (RT)
DEGREE OF CURVE = 4° 58′ 56.07"
TANGENT = 691.75
LENGTH = 1,245.53
RADIUS = 1,150.00
PC STATION = 7+54.36
PT STATION = 19+99.89


N
℄ SB SH 121 STA 2109+03.58 =
℄ NORTH SH 5 STA 11+86.01
TEXAS 121
TEXAS 121
℄ SB SH 121
℄ SH 121
℄ NORTH SH 5
℄ NB SH 121
SH 5
TO ANNA
TEXAS 5
℄ NB SH 5
℄ SH 121 STA 108+53.75 =
℄ NORTH SH 5 STA 10+00.00
℄ NB SH 121 STA 5107+95.24 =
℄ NORTH SH 5 STA 11+86.84
300' TAPER
350' TAPER
650' TAPER
PI 117+51.76
POT 29+88.88
END CONSTRUCTION
℄ NORTH SH 5 STA. 26+84.42
MATCH EXIST PAVEMENT
MILLER RANDY
TEXAS 121

NORTH SH5



NORTH SH 5

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Texas Department of Transportation

DALLAS DISTRICT
WILLIAM HALE, P.E. DISTRICT ENGINEER
SH 121
COLLIN COUNTY
DESIGN SCHEMATIC
JANUARY 2010

ROLL 8 of 11

FROM: SH 5 IN MELISSA TO: EASTLINE ROAD
BRIDGE REPLACEMENT AND HIGHWAY RECONSTRUCTION
PROJECT LENGTH: 15.11 MILES (79765')
BRIDGE: 0.30 MILES (1560')
ROADWAY: 14.81 MILES (78205')

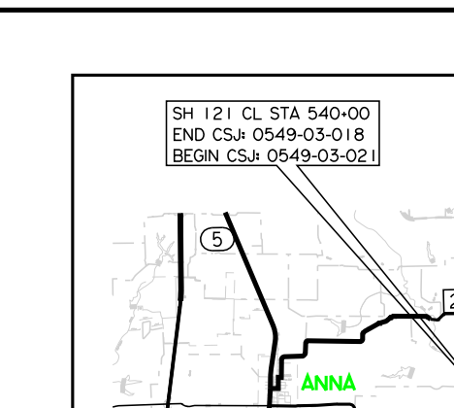
CSJ: 0549-03-018 (SH 5 to FM 455)
CSJ: 0549-03-021 (FM 455 to CR635/FANNIN COUNTY LINE)

LOCATION MAP

LEGEND

INDEX OF ROLLS

NOTES:

1. MEDIAN OPENINGS ARE PRELIMINARY AND SUBJECT TO CHANGE. FINAL MEDIAN OPENING LOCATIONS TO BE DETERMINED DURING PS&E AND IN COORDINATION WITH THE CITIES OF MELISSA AND ANNA.
2. SOURCE OF TRAFFIC DATA: TEXAS DEPARTMENT OF TRANSPORTATION TRANSPORTATION, PROGRAMING AND PLANNING DIVISION MARCH 27, 2007
3. ALL URBAN SECTIONS WILL HAVE CONCRETE CURB AND GUTTER WITH BARRIER CURBS.