LAYOUT HISTORY

PURPOSE AND NEED

THE PURPOSE OF THE T.H. 60 RCUT PROJECT IS TO PROVIDE SAFETY IMPROVEMENTS AT THREE INTERSECTIONS ALONG T.H. 60 IN HERON LAKE, MN. THE THREE INTERSECTIONS INCLUDE C.S.A.H. 24, C.S.A.H. 9 AND C.S.A.H. 43. THE IMPROVEMENTS HAVE BEEN MOTIVATED BY THE OCCURRENCE OF MULTIPLE FATAL CRASHES IN RECENT YEARS AT THE T.H. 60 AND C.S.A.H. 9 INTERSECTION. THESE CRASHES HAVE BEEN CAUSED PRIMARILY BY DRIVERS ATTEMPTING TO CROSS T.H. 60 IN A SINGLE MOVEMENT. A RESTRICTED CROSSING U-TURN (RCUT) INTERSECTION WILL BE UTILIZED TO ELIMINATE THESE CROSSING ATTEMPTS AND PROVIDE A SAFER INTERSECTION. AN RCUT WILL ALSO BE IMPLEMENTED AT T.H. 60 AND C.S.A.H. 24, WHILE A 3/4 INTERSECTION WILL BE CONSTRUCTED AT T.H. 60 AND C.S.A.H. 43. IT IS BELIEVED THAT SAFETY IMPROVEMENTS AT THESE TWO INTERSECTIONS WILL PREVENT MOTORISTS FROM SIMPLY REROUTING TO AVOID THE C.S.A.H. 9 RCUT. ADDITIONALLY, LIGHTING WILL BE PROVIDED AT THE THREE MODIFIED INTERSECTIONS, AS WELL AS CONTINUOUSLY ALONG T.H. 60 BETWEEN C.S.A.H. 9 AND C.S.A.H. 43.

LAYOUT NOTES

1) THERE ARE NO DESIGN EXCEPTIONS ASSOCIATED WITH THIS PROJECT.
2) THE DESIGN VEHICLE FOR THE INTERSECTIONS OF C.S.A.H. 24 & C.S.A.H. 43 IS A WB-62.
3) THE DESIGN VEHICLE FOR THE INTERSECTION OF C.S.A.H. 9 IS A LOAD KING COMBINATION VEHICLE. C.S.A.H. 9 IS AN IMPORTANT REGIONAL NORTH-SOUTH ROUTE, WHICH REQUIRES ACCOMMODATION OF LARGER TRANSPORT VEHICLES.
4) THE PROPOSED OUTSIDE SHOULDER IMPROVEMENTS ADJACENT TO MEDIAN U-TURNS (MUT) WILL BE FULL DEPTH PAVEMENT TO ACCOMMODATE LARGE VEHICLE TURNING MOVEMENT TRACKING ONTO THE OUTSIDE SHOULDER.
5) THIS SECTION OF T.H. 60 IS NOT A DESIGNATED OSOW SUPER LOAD CORRIDOR. HOWEVER, IT CAN BE USED BY OSOW VEHICLES.
6) THIS SECTION OF T.H. 60 IS NOT A DESIGNATED HOUSE MOVING ROUTE.

FEBRUARY 27TH, 2018

LAYOUT NO.1 IS SUBMITTED SHOWING 600 FT FULL WIDTH RIGHT TURN LANES. ALLIANT RECEIVED COMMENTS FROM MNDOT DISTRICT 7 TO REVISE THE FULL WIDTH RIGHT TURN LANE LENGTH TO 450 FT. ADDITIONALLY, MNDOT GDSU COMMENTED TO USE A TRUCK APRON AT THE C.S.A.H. 9 MUTS TO PROVIDE THE TRACKING AREA FOR THE LOAD KING VEHICLE MOVEMENT. MNDOT GDSU ALSO COMMENTED TO MODIFY THE GEOMETRY AT THE C.S.A.H. 9 RCUT TO REDUCE THE WIDTH. MNDOT CO ADA GROUP COMMENTED TO MODIFY THE GEOMETRY OF THE SIDEWALK WITHIN THE MEDIAN AT C.S.A.H. 9.

APRIL 5TH, 2018

LAYOUT NO. 1A IS SUBMITTED SHOWING 450 FT FULL WIDTH RIGHT TURN LANES. ALSO, ALL MUT LOCATIONS ARE ADJUSTED DUE TO REVISED RIGHT TURN LANE LENGTH TO BE LOCATED AS CLOSE TO THE INTERSECTION AS POSSIBLE WHILE STILL MAINTAINING 50 FT FROM THE NEAREST TURN LANE. TRUCK APRONS WERE ADDED TO THE C.S.A.H. 9 MUTS. ALSO THE GEOMETRY AT THE C.S.A.H. 9 RCUT WAS UPDATED TO REDUCE THE WIDTH AND PROVIDE A MOUNTABLE C&G FOR THE LOAD KING VEHICLE TO TRACK ONTO. THE SIDEWALK GEOMETRY IN THE MEDIAN AT C.S.A.H. 9 WAS ALSO MODIFIED TO PROVIDE A PERPENDICULAR CROSSING OF T.H. 60 W.B.

LAYOUT No. 1A COPY No.

T.H. 60 VICINITY OF CITY OF HERON LAKE

FROM 0.2 MILES WEST OF C.S.A.H. 24 TO 0.1 MILES EAST OF C.S.A.H. 43

Prepared APRIL 2018 Scale: Hor. 1 inch = 100 ft.

By ALLIANT ENGINEERING, INC.

The alignment and grades shown on this map are tentative and subject to change without notice.	Staff Approval Date: 5/4/2018 🟥	The traffic volumes shown are estimated for year 2039 Prepared JANUARY 2018

S.P. 3204-72 T.H. 60 A.J. T7C366 PPMS Activity 1140
S.P. ___ T.H. ___ A.J. ___ PPMS Activity ___
S.P. ___ T.H. ___ A.J. ___ PPMS Activity ___

Copy To: ___ For: ___

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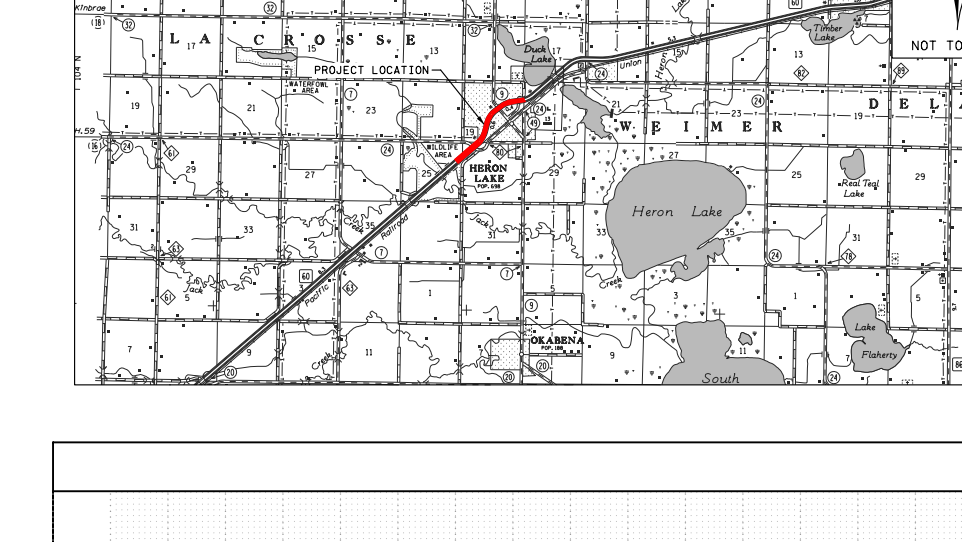
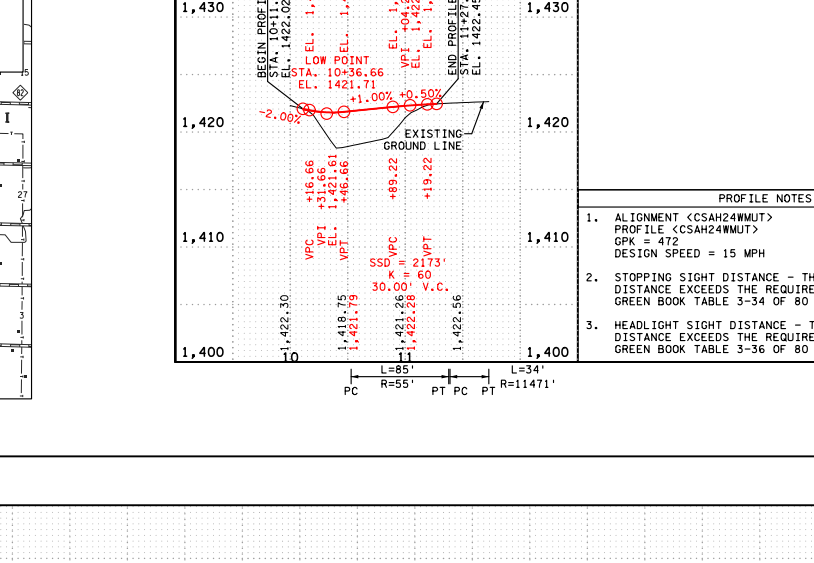
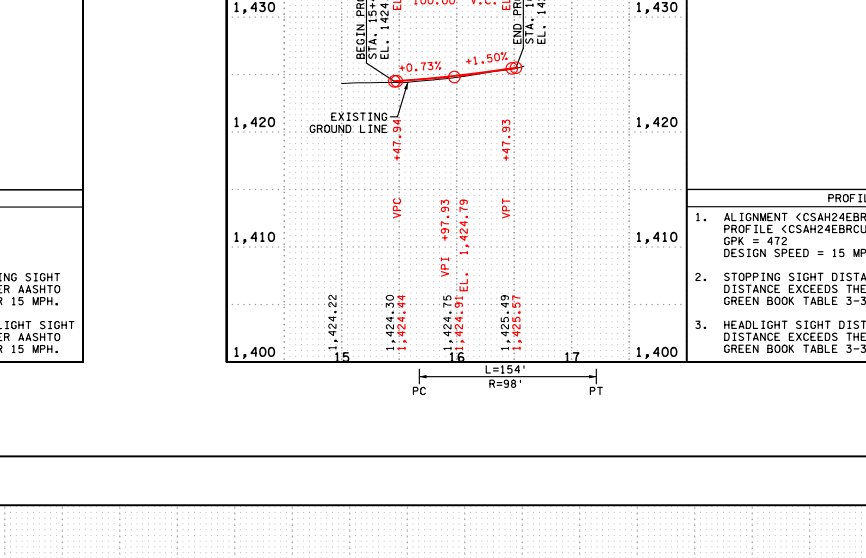
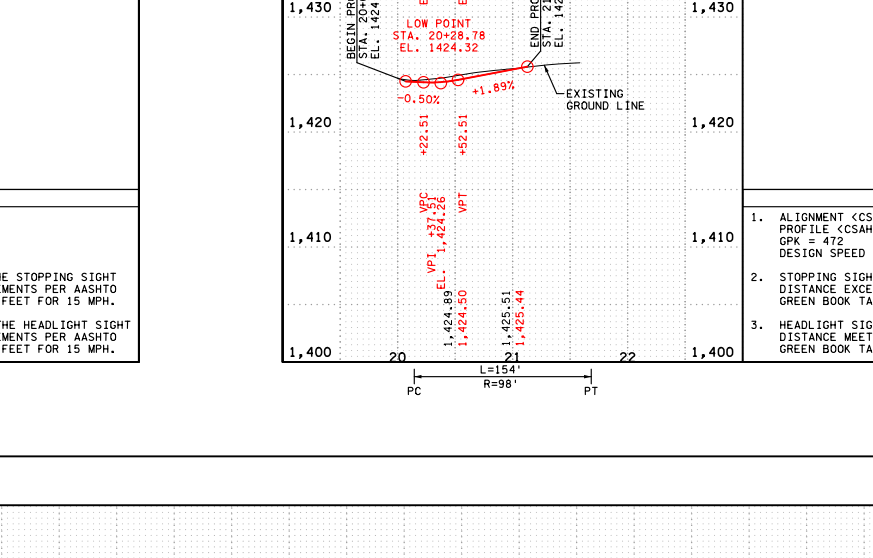
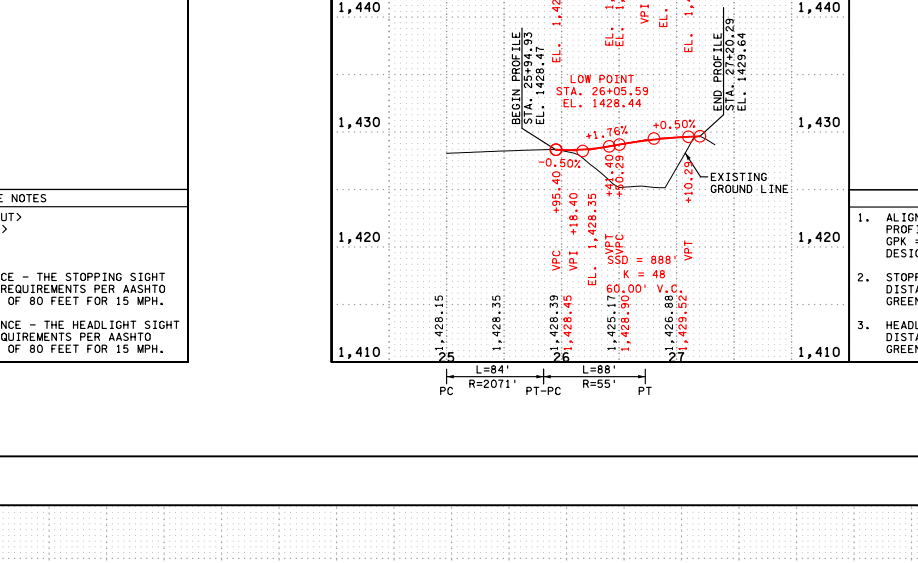
T.H. 60 RCUT PROJECT
JACKSON COUNTY
CITY OF HERON LAKE
HERON LAKE CITY LIMITS
UNION PACIFIC RAILROAD
℄ T.H. 60 W.B.
℄ T.H. 60 E.B.
℄ C.S.A.H. 24
℄ C.S.A.H. 9
℄ C.S.A.H. 43
℄ CHAPMAN AVE.
FEST TRUCKING
EXPRESSWAY HERON LAKE
HERON LAKE MEMORIAL FIELD
AREA OF ENVIRONMENTAL SENSITIVITY
SCALE IN FEET 100
SAWCUT AND REMOVE A PORTION OF THE EXISTING LEFT TURN LANE. REMAINING PAVEMENT TO SERVE AS INSIDE SHOULDER.
LEGEND
ROADWAY
SHOULDERS
AGGREGATE SURFACING
CURB AND GUTTER AND CONCRETE MEDIAN
CONCRETE SIDEWALK
TURF SHOULDER
CONSTRUCTION LIMITS
EXISTING R/W
ACCESS CONTROL
EXISTING/PROPOSED TRAFFIC DIRECTION
DELINEATED WETLAND
DELINEATED WET DITCH
T.H. 60: POSTED SPEED 65, DESIGN SPEED 70, 2019 AADT = 6450, 2039 AADT = 8030, HCAADT% = 29%
T.H. 60: POSTED SPEED 65, DESIGN SPEED 70, 2019 AADT = 6300, 2039 AADT = 7840, HCAADT% = 29%
C.S.A.H. 24: POSTED SPEED 55, DESIGN SPEED 55, 2019 AADT = 215, 2039 AADT = 240, HCAADT% = 22%
C.S.A.H. 24: POSTED SPEED 30, DESIGN SPEED 30, 2019 AADT = 365, 2039 AADT = 405, HCAADT% = 22%
C.S.A.H. 9: POSTED SPEED 30, DESIGN SPEED 30, 2019 AADT = 1300, 2039 AADT = 1450, HCAADT% = 22%
T.H. 60: POSTED SPEED 65, DESIGN SPEED 70, 2019 AADT = 6200, 2039 AADT = 7905, HCAADT% = 29%
C.S.A.H. 9: POSTED SPEED 30, DESIGN SPEED 30, 2019 AADT = 1500, 2039 AADT = 1840, HCAADT% = 22%
C.S.A.H. 43: POSTED SPEED 30, DESIGN SPEED 30, 2019 AADT = 270, 2039 AADT = 235, HCAADT% = 22%
CHAPMAN AVE.: POSTED SPEED 30, DESIGN SPEED 30, 2019 AADT = 230, 2039 AADT = 255, HCAADT% = 22%
T.H. 60: POSTED SPEED 65, DESIGN SPEED 70, 2019 AADT = 6400, 2039 AADT = 7965, HCAADT% = 29%

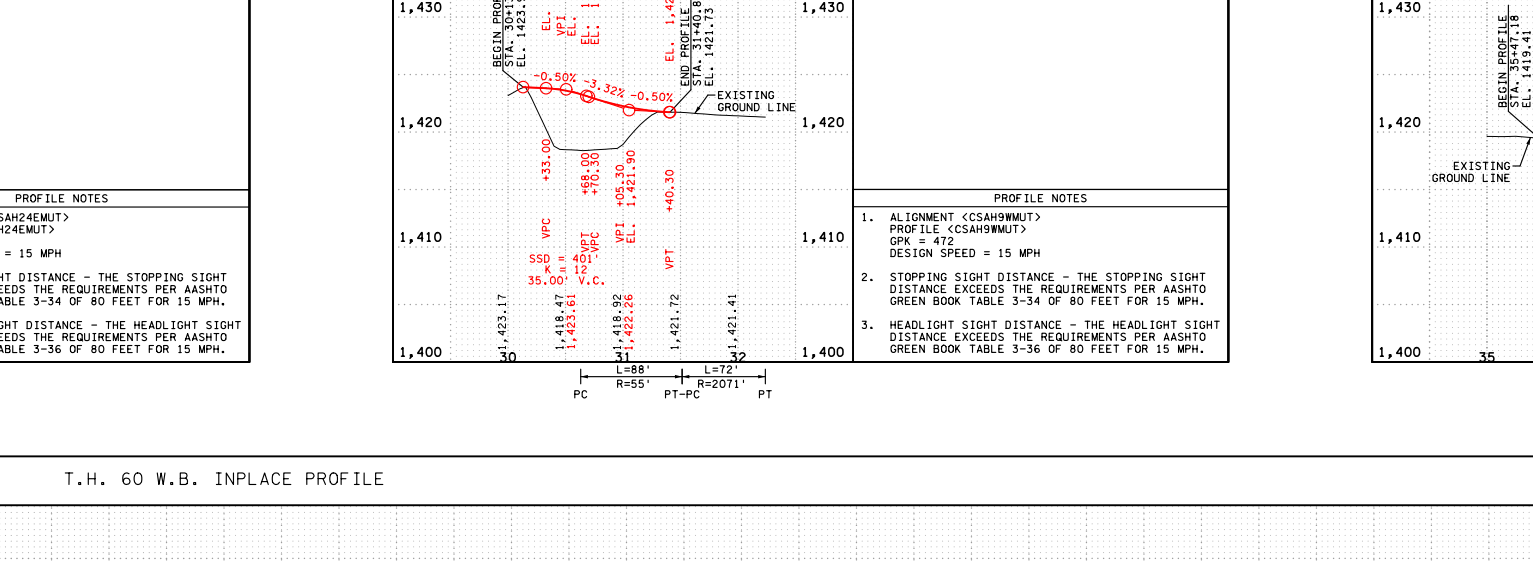

INDEX MAP
NOT TO SCALE
PROJECT LOCATION
Heron Lake

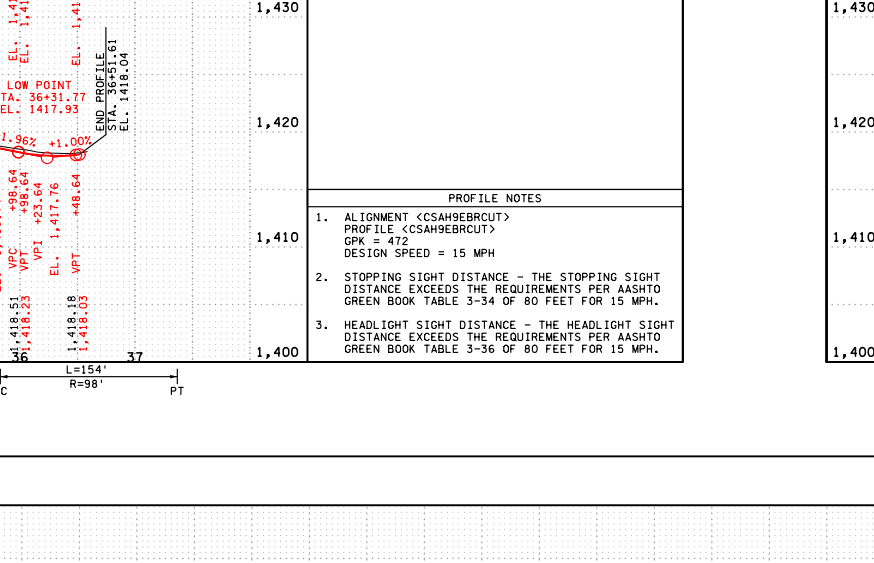


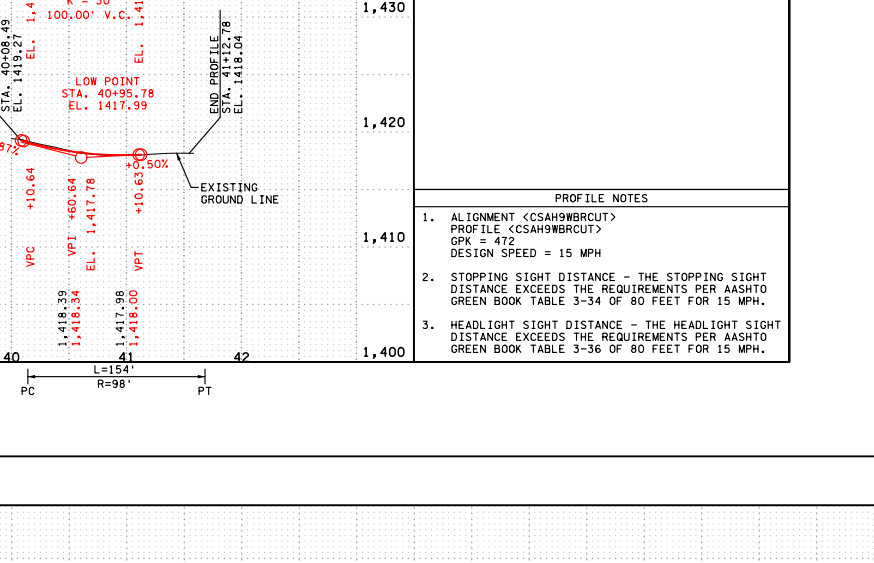


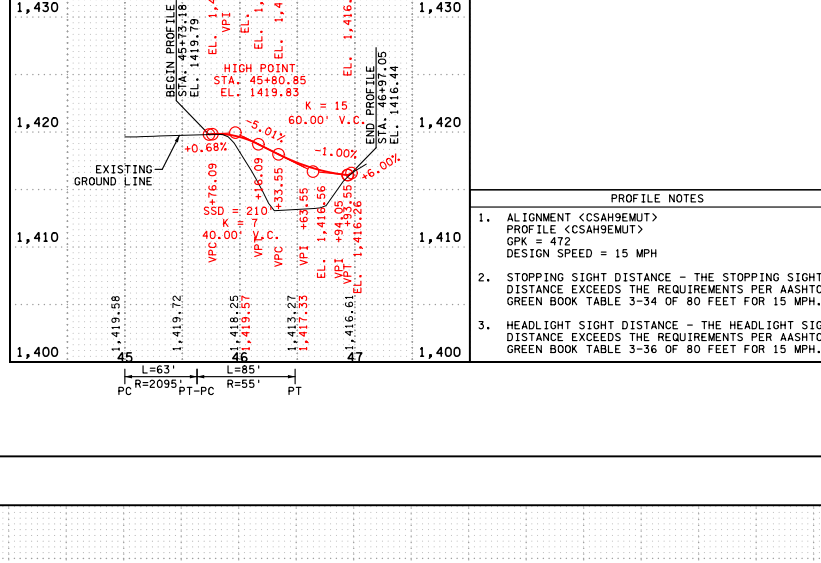


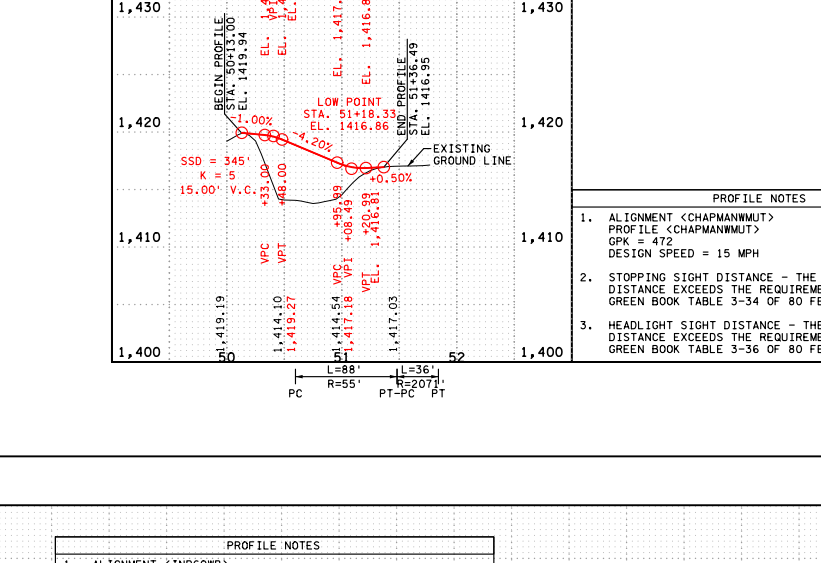


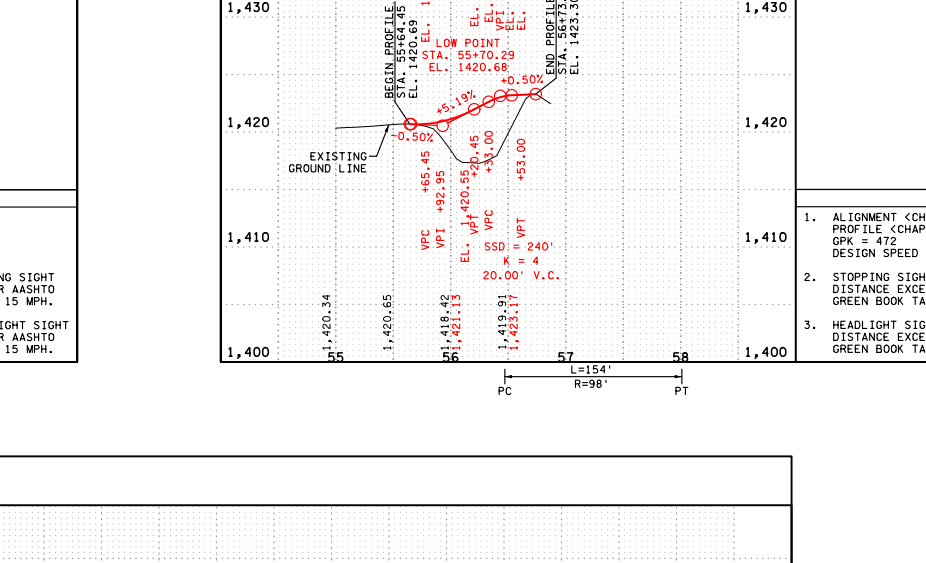










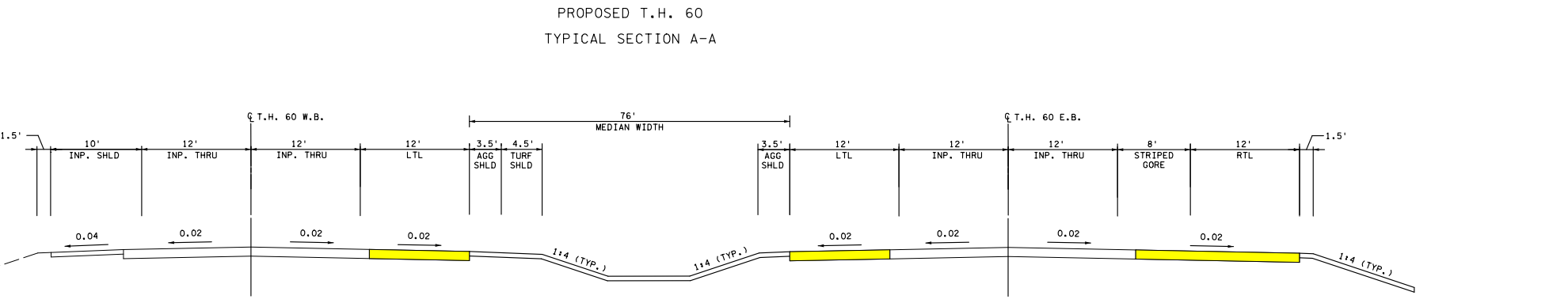


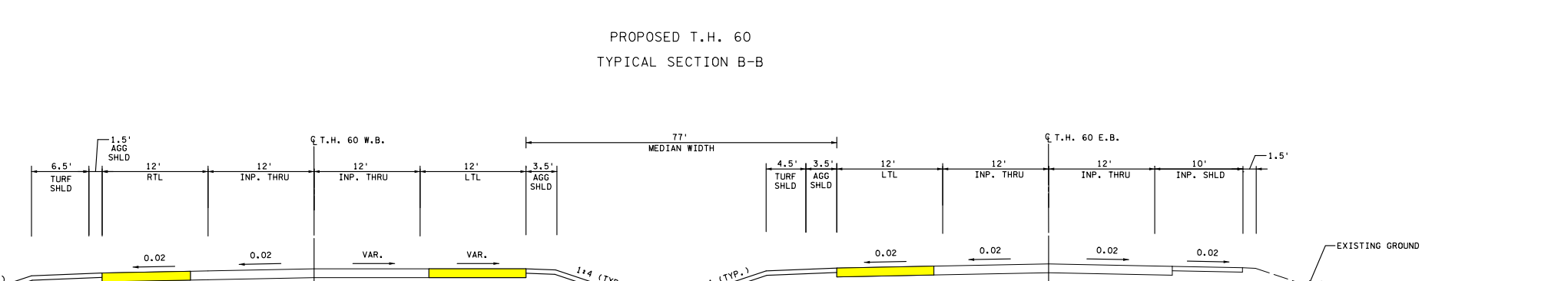
T.H. 60 W.B. INPLACE PROFILE
T.H. 60 W.B. TRAFFIC
REQUIRED INTERSECTION SIGHT DISTANCE 670'
REQUIRED INTERSECTION SIGHT DISTANCE 620'
INTERSECTION SIGHT DISTANCE LINE
DRIVER EYE HEIGHT (3.5')
EXISTING GROUND LINE
℄ C.S.A.H. 24 NB RCUT
℄ C.S.A.H. 24 EAST MUT
℄ C.S.A.H. 9 NB RCUT
℄ C.S.A.H. 9 EAST MUT
℄ CHAPMAN AVE NB RCUT
EQUATION: BK 183+15.016 = AH 182+48.829
PROFILE NOTES
1. ALIGNMENT <INP60WB> PROFILE <INP60WB> GPK = 472 DESIGN SPEED = 70 MPH
2. STOPPING SIGHT DISTANCE – THE STOPPING SIGHT DISTANCE EXCEEDS THE REQUIREMENTS PER MNDOT ROAD DESIGN MANUAL FIGURE 3-4.04A OF 730 FEET FOR 70 MPH.
3. HEADLIGHT SIGHT DISTANCE – THE HEADLIGHT SIGHT DISTANCE EXCEEDS THE REQUIREMENTS PER MNDOT ROAD DESIGN MANUAL FIGURE 3-4.04C OF 730 FEET FOR 70 MPH.

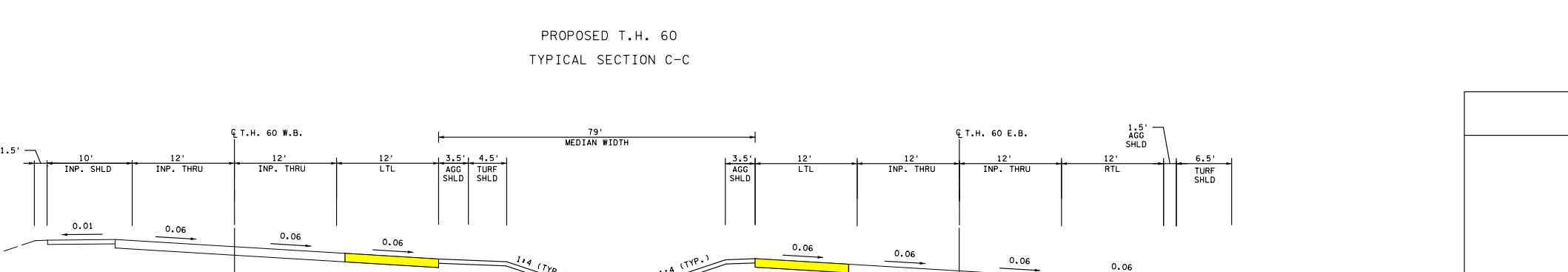
PROJECT LOCATION
COUNTY : JACKSON
DISTRICT : 7

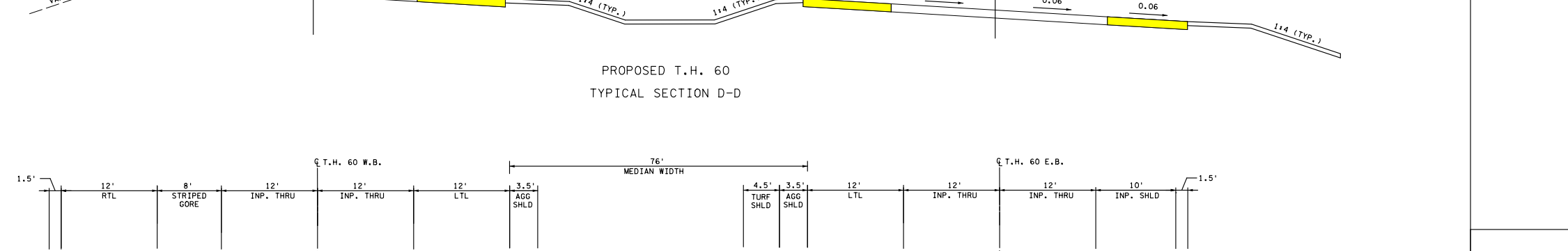
DEPARTMENT OF TRANSPORTATION

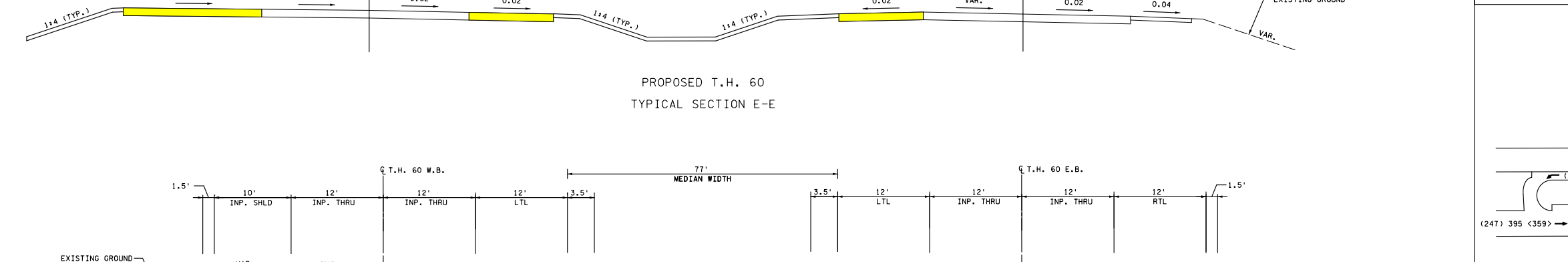
ALLIANT ENGINEERING

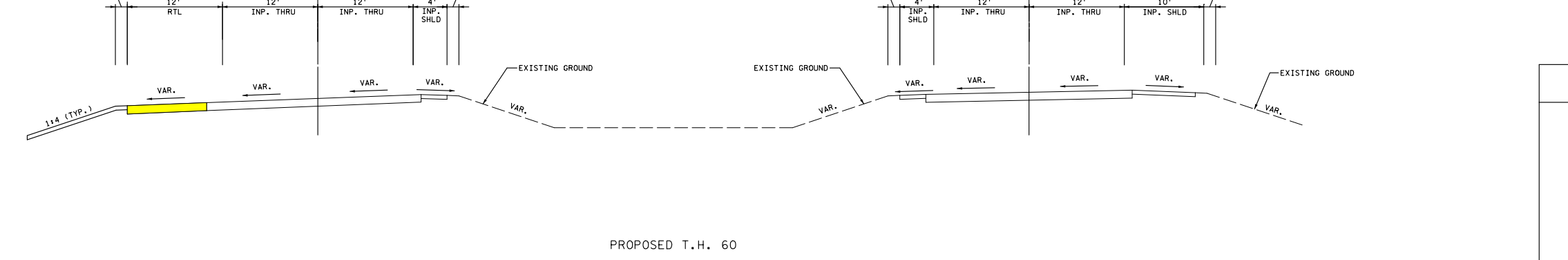

PROPOSED T.H. 60
TYPICAL SECTION A-A
℄ T.H. 60 W.B.
℄ T.H. 60 E.B.
76' MEDIAN WIDTH
INP. SHLD
INP. THRU
LTL
AGG SHLD
TURF SHLD
RTL
STRIPED GORE
EXISTING GROUND

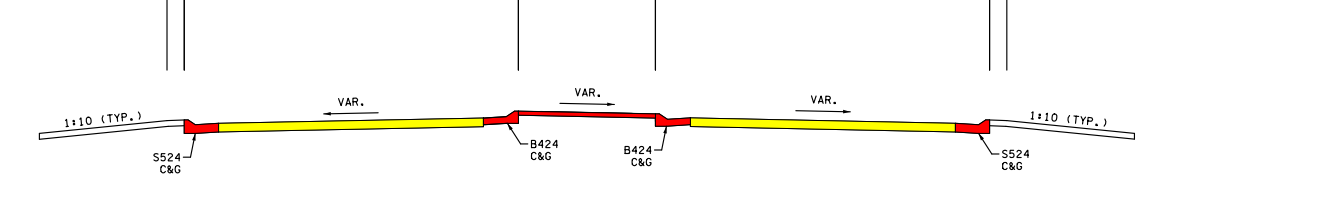

PROPOSED T.H. 60
TYPICAL SECTION B-B
77' MEDIAN WIDTH
EXISTING GROUND

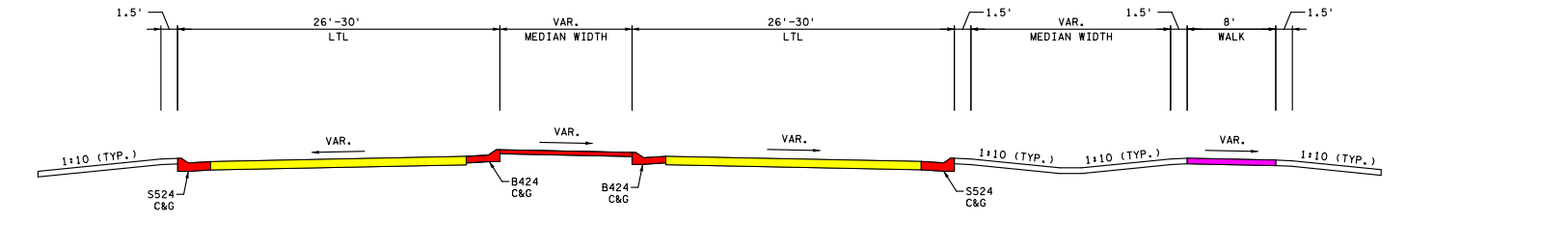

PROPOSED T.H. 60
TYPICAL SECTION C-C
79' MEDIAN WIDTH
EXISTING GROUND

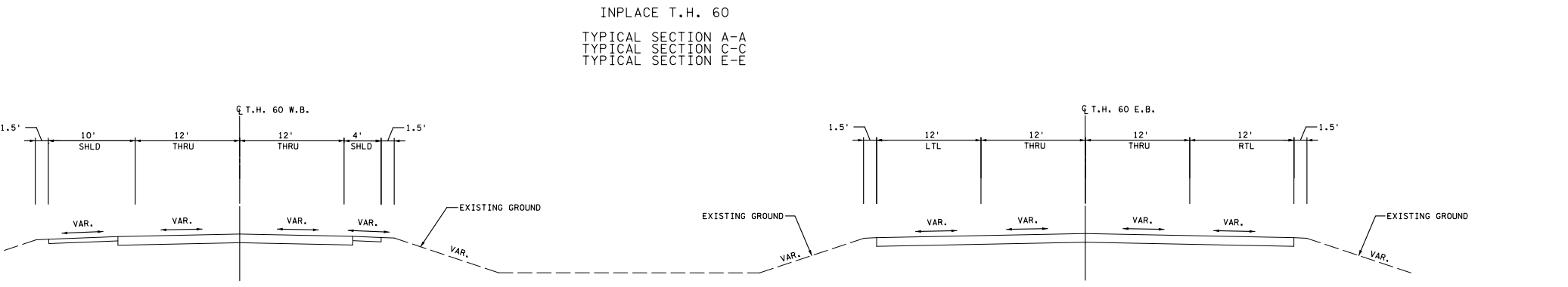

PROPOSED T.H. 60
TYPICAL SECTION D-D
76' MEDIAN WIDTH
EXISTING GROUND

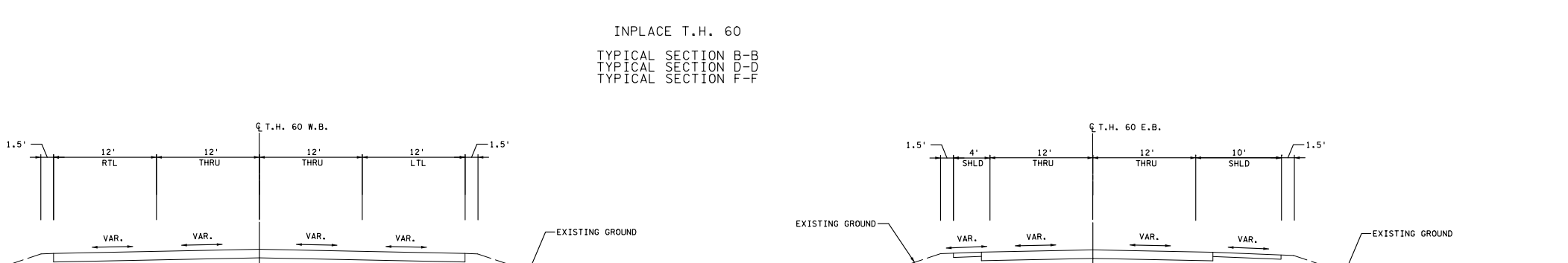

PROPOSED T.H. 60
TYPICAL SECTION E-E
77' MEDIAN WIDTH
EXISTING GROUND

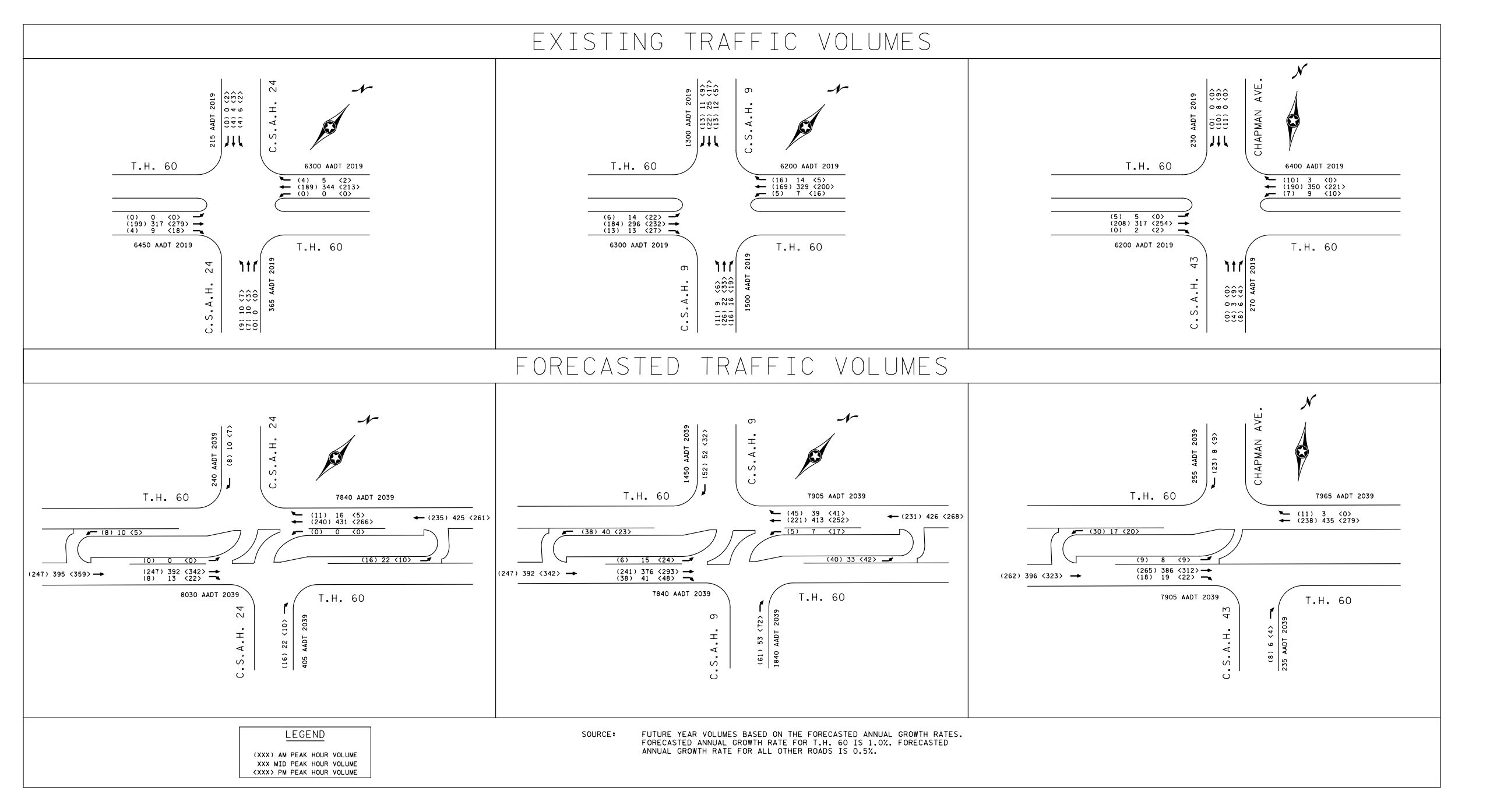

PROPOSED T.H. 60
TYPICAL SECTION F-F
91' MEDIAN WIDTH
EXISTING GROUND


PROPOSED T.H. 60
TYPICAL SECTION G-G
27'-28' LTL
VAR. MEDIAN WIDTH
S524 C&G
B424 C&G


PROPOSED T.H. 60
TYPICAL SECTION H-H
26'-30' LTL
VAR. MEDIAN WIDTH
8' WALK
S524 C&G
B424 C&G

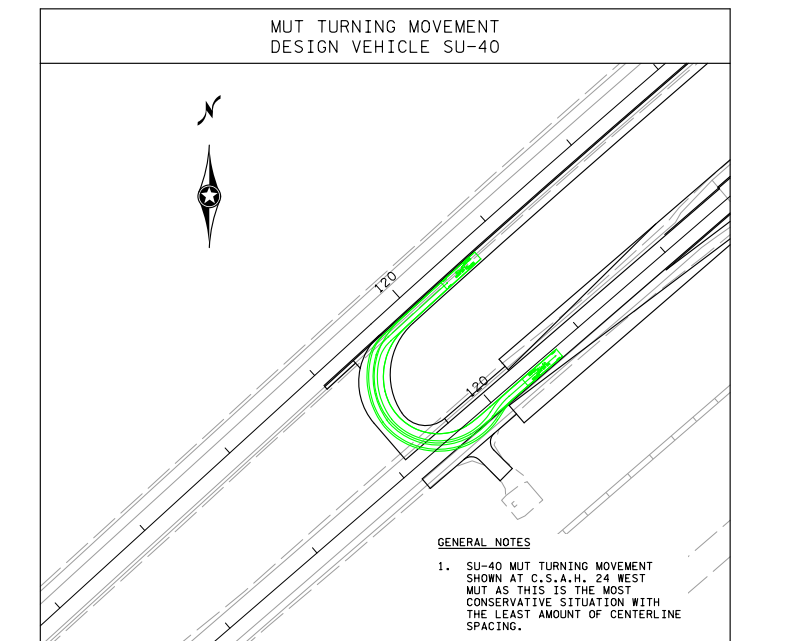

INPLACE T.H. 60
TYPICAL SECTION A-A
TYPICAL SECTION C-C
TYPICAL SECTION E-E
EXISTING GROUND

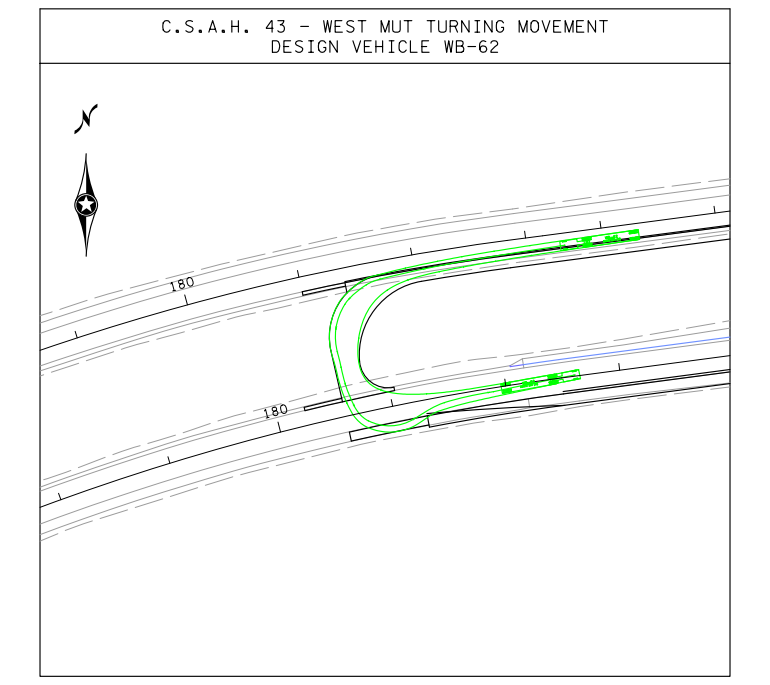

INPLACE T.H. 60
TYPICAL SECTION B-B
TYPICAL SECTION D-D
TYPICAL SECTION F-F
EXISTING GROUND

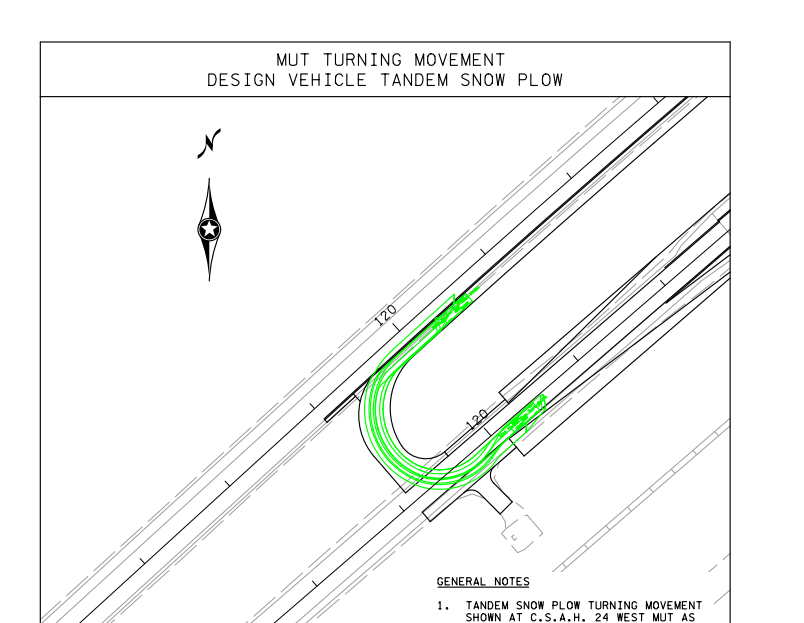

EXISTING TRAFFIC VOLUMES
FORECASTED TRAFFIC VOLUMES
T.H. 60
C.S.A.H. 24
C.S.A.H. 9
C.S.A.H. 43
CHAPMAN AVE.
6450 AADT 2019
6300 AADT 2019
6200 AADT 2019
6400 AADT 2019
8030 AADT 2039
7840 AADT 2039
7905 AADT 2039
7965 AADT 2039

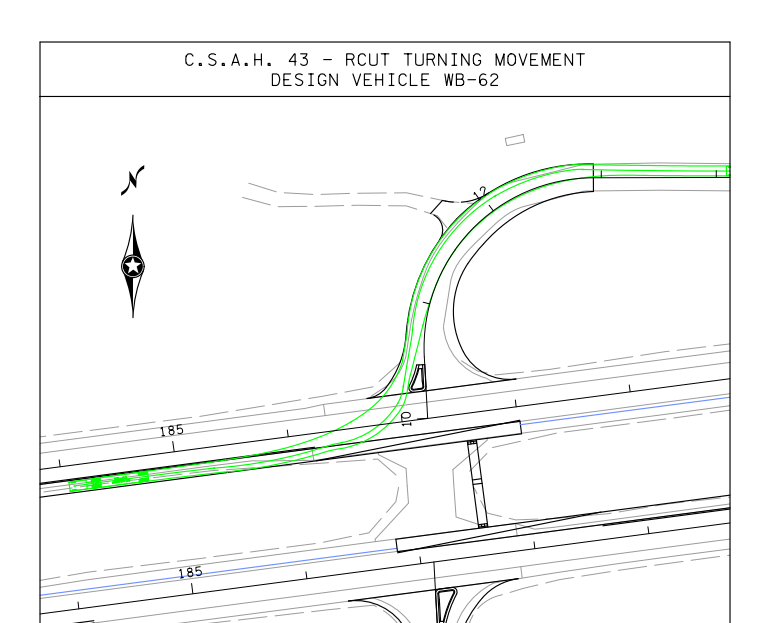
LEGEND
(XXX) AM PEAK HOUR VOLUME
XXX MID PEAK HOUR VOLUME
<XXX> PM PEAK HOUR VOLUME

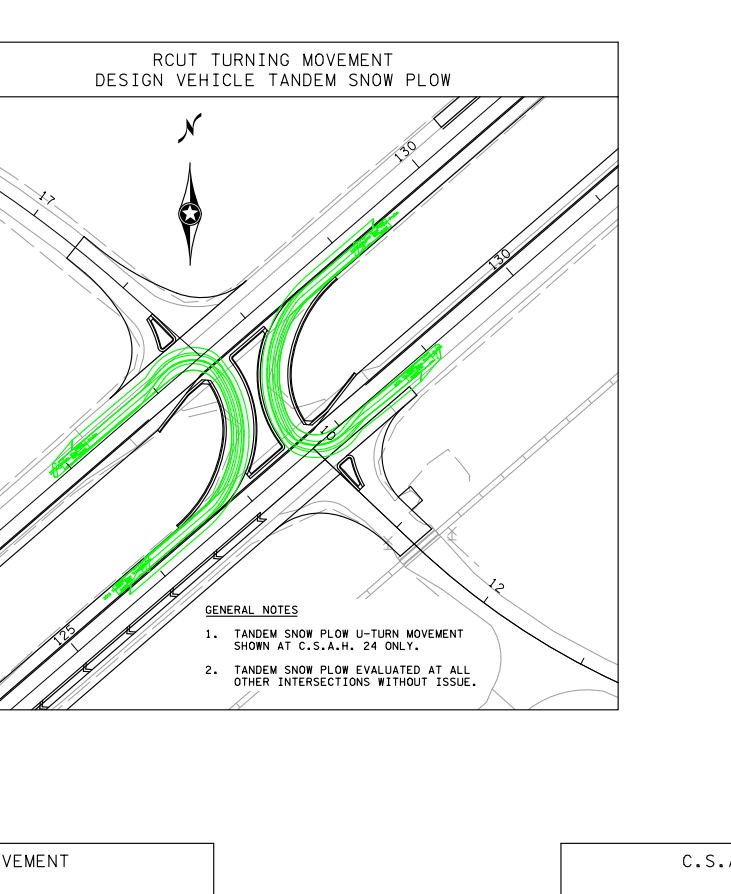
SOURCE: FUTURE YEAR VOLUMES BASED ON THE FORECASTED ANNUAL GROWTH RATES. FORECASTED ANNUAL GROWTH RATE FOR T.H. 60 IS 1.0%. FORECASTED ANNUAL GROWTH RATE FOR ALL OTHER ROADS IS 0.5%.

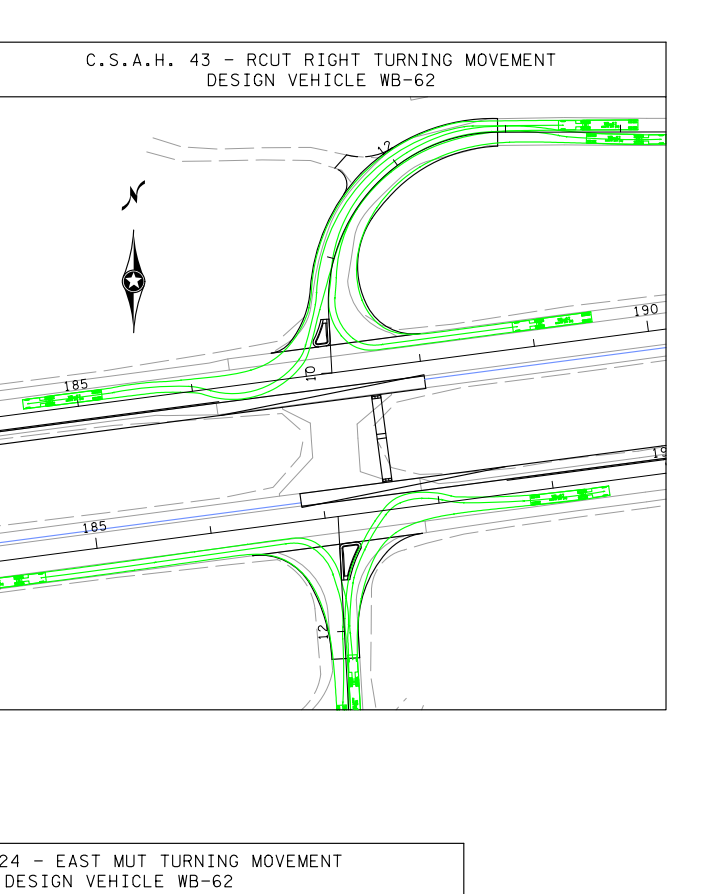

MUT TURNING MOVEMENT
DESIGN VEHICLE SU-40
GENERAL NOTES
1. SU-40 MUT TURNING MOVEMENT SHOWN AT C.S.A.H. 24 WEST MUT AS THIS IS THE MOST CONSERVATIVE SITUATION WITH THE LEAST AMOUNT OF CENTERLINE SPACING.
2. SU-40 EVALUATED AT ALL MUT LOCATIONS WITHOUT ISSUE.

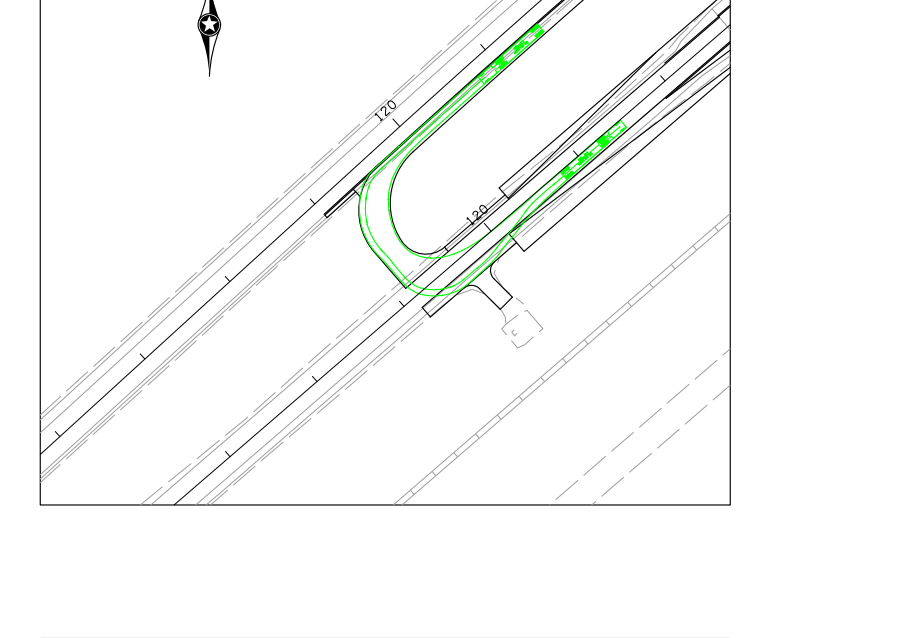

C.S.A.H. 43 – WEST MUT TURNING MOVEMENT
DESIGN VEHICLE WB-62

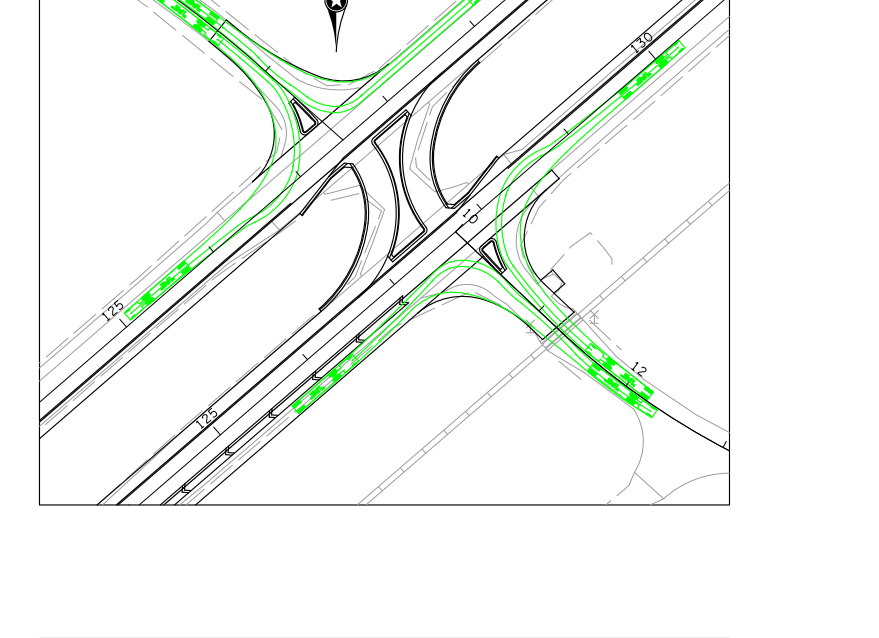

MUT TURNING MOVEMENT
DESIGN VEHICLE TANDEM SNOW PLOW
GENERAL NOTES
1. TANDEM SNOW PLOW TURNING MOVEMENT SHOWN AT C.S.A.H. 24 WEST MUT AS THIS IS THE MOST CONSERVATIVE SITUATION WITH THE LEAST AMOUNT OF CENTERLINE SPACING.
2. TANDEM SNOW PLOW EVALUATED AT ALL MUT LOCATIONS WITHOUT ISSUE.

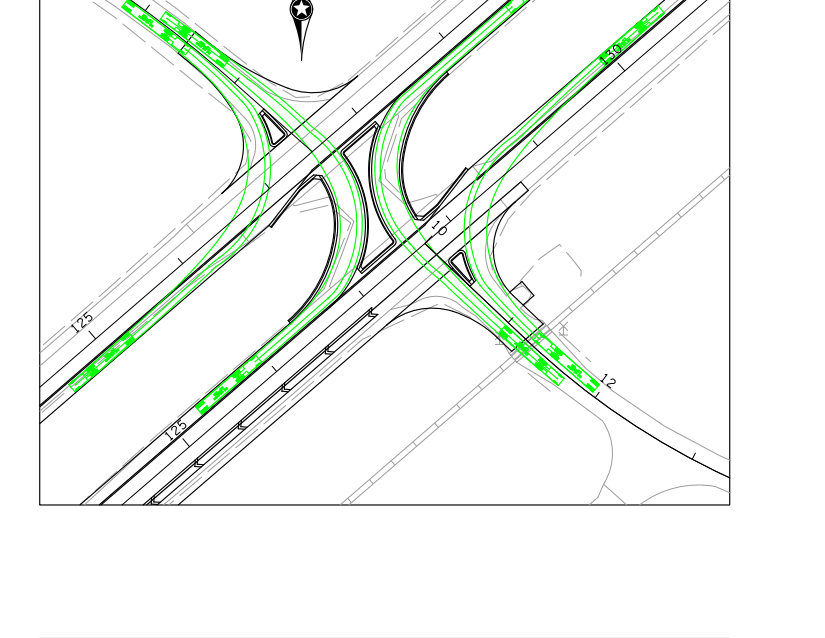

C.S.A.H. 43 – RCUT TURNING MOVEMENT
DESIGN VEHICLE WB-62

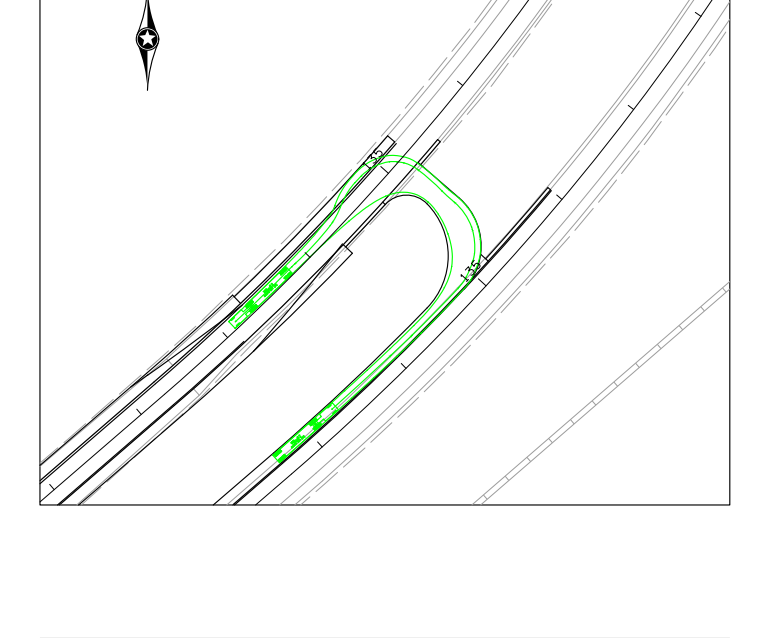

RCUT TURNING MOVEMENT
DESIGN VEHICLE TANDEM SNOW PLOW
GENERAL NOTES
1. TANDEM SNOW PLOW U-TURN MOVEMENT SHOWN AT C.S.A.H. 24 ONLY.
2. TANDEM SNOW PLOW EVALUATED AT ALL OTHER INTERSECTIONS WITHOUT ISSUE.

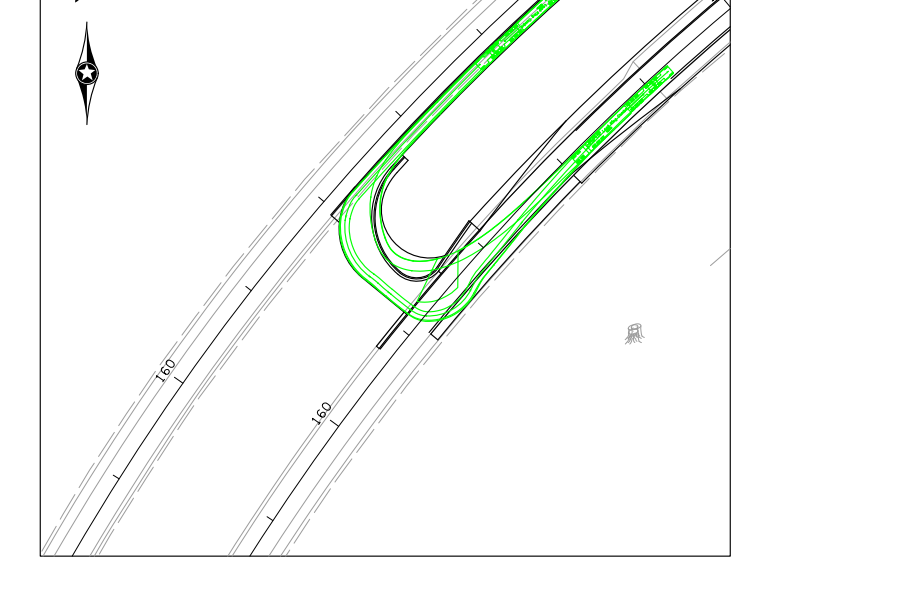

C.S.A.H. 43 – RCUT RIGHT TURNING MOVEMENT
DESIGN VEHICLE WB-62

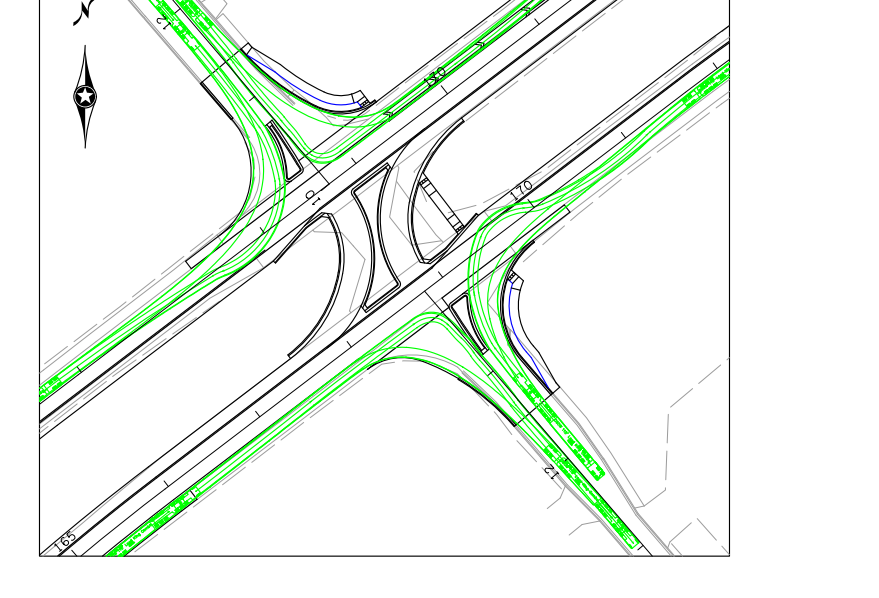

C.S.A.H. 24 – WEST MUT TURNING MOVEMENT
DESIGN VEHICLE WB-62

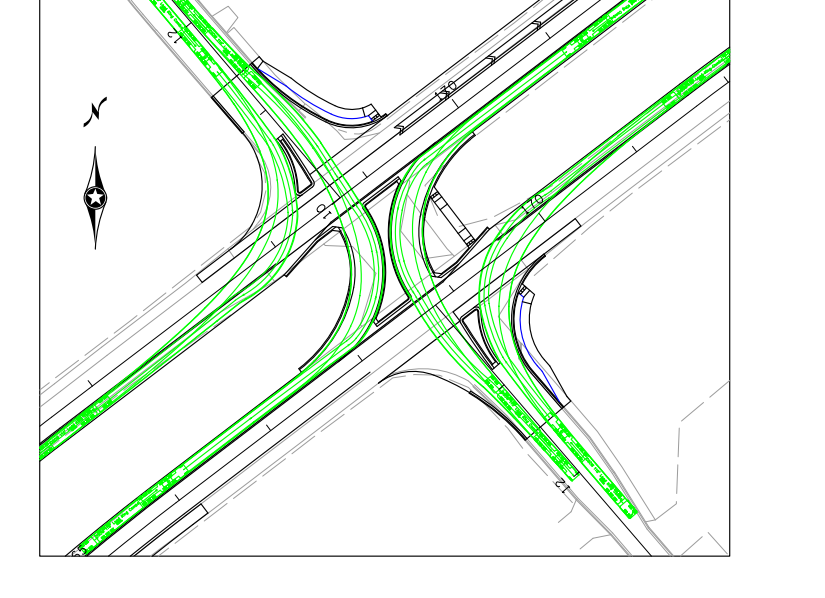

C.S.A.H. 24 – RCUT RIGHT TURNING MOVEMENT
DESIGN VEHICLE WB-62

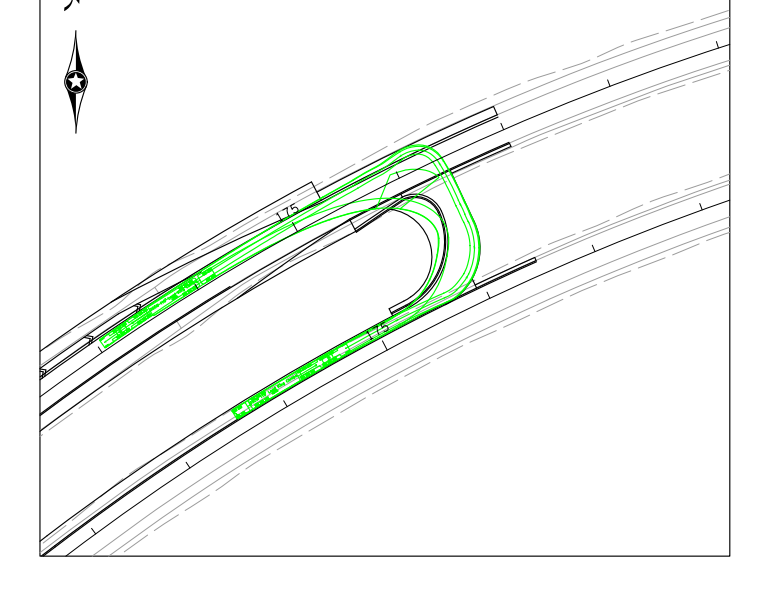

C.S.A.H. 24 – RCUT TURNING MOVEMENT
DESIGN VEHICLE WB-62


C.S.A.H. 24 – EAST MUT TURNING MOVEMENT
DESIGN VEHICLE WB-62


C.S.A.H. 9 – WEST MUT TURNING MOVEMENT
DESIGN VEHICLE LOAD KING COMBO


C.S.A.H. 9 – RCUT RIGHT TURNING MOVEMENT
DESIGN VEHICLE LOAD KING COMBO


C.S.A.H. 9 – RCUT TURNING MOVEMENT
DESIGN VEHICLE LOAD KING COMBO


C.S.A.H. 9 – EAST MUT TURNING MOVEMENT
DESIGN VEHICLE LOAD KING COMBO