Texas Department of Transportation

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DALLAS DISTRICT
MOHAMED K. BUR, P.E., DISTRICT ENGINEER

FM 1378
CONCEPT DESIGN SCHEMATIC

COLLIN COUNTY, TEXAS

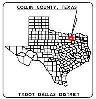
FROM FM 2514 (PARKER ROAD) TO FM 2786 (EAST STACY ROAD)
CSJ: 1392-01-047 & 1392-01-048
LENGTH: 6.4 MILES

DATED: DECEMBER 2021

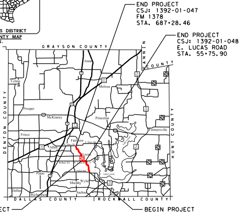
ROADWAY	DESIGN SPEED	FUNCTIONAL CLASSIFICATION
FM 1378	40 MPH	MINOR ARTERIAL
INTERSECTING STREETS	30 MPH	LOCAL

INDEX OF SHEETS

ROLL 1 OF 5:	FEASIBILITY STUDY SOUTH ALTERNATIVE A
ROLL 2 OF 5:	FEASIBILITY STUDY SOUTH ALTERNATIVE B
ROLL 3 OF 5:	SCHEMATIC AND ENVIRONMENTAL
ROLL 4 OF 5:	FEASIBILITY STUDY NORTH
ROLL 5 OF 5:	FEASIBILITY STUDY NORTH


COLLIN COUNTY, TEXAS
TXDOT DALLAS DISTRICT

TEXAS COUNTY MAP
N.T.S.


END PROJECT
CSJ: 1392-01-047
FM 1378
STA. 687+28.46
END PROJECT
CSJ: 1392-01-048
E. LUCAS ROAD
STA. 55+75.90
GRAYSON COUNTY
FANNIN COUNTY
DENTON COUNTY
HUNT COUNTY
DALLAS COUNTY
ROCKWALL COUNTY
Anna
Celina
Melissa
Prosper
McKinney
Princeton
Frisco
Farmersville
Fairview
Allen
Lucas
Plano
Murphy
Wylie
Lake Lavon
Dallas
Richardson
Sachse
BEGIN PROJECT
CSJ: 1392-01-048
W. LUCAS ROAD
STA. 11+32.46
BEGIN PROJECT
CSJ: 1392-01-047
FM 1378
STA. 105+24.95

LOCATION MAP
N.T.S.

LEGEND

—·—·—	EXISTING RIGHT OF WAY LINE	▨	EXISTING PAVEMENT REMOVAL
—·—·—	PROPOSED RIGHT OF WAY LINE	🟧	PROPOSED CONCRETE PAVEMENT
—·—·—	CENTERLINE	🟨	PROPOSED SIDEWALK
——	PARCEL LINE	🟪	PROPOSED DRIVEWAY
— — —	CITY/COUNTY BOUNDARY LINE	🟦	PROPOSED BRIDGE
— — —	EXISTING DRAINAGE	▭	ADJACENT PROJECT - BY OTHERS
—◄—	PROPOSED DITCH BOTTOM	▭	PROPOSED ROW ACQUISITION
▥	PROPOSED DRAINAGE STRUCTURE	←	PROPOSED LANES
- - - -	PROPOSED CULVERT	#	PARCEL IDENTIFYING NUMBER
◄∿	DIRECTION OF FLOW	▨	POTENTIAL IMPACT
▨	EXISTING 100-YEAR FLOODPLAIN	▨	DISPLACEMENT

SCALE: 1"=100' H, 1"=10' V

PRELIMINARY
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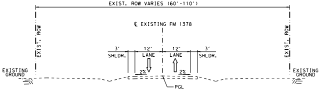
NAME	P.E. NO.	DATE
STEPHEN A JOHNSON, PE	103591	2/11/2022

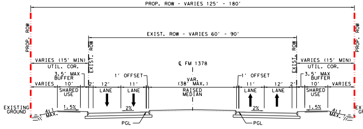
GARVER
3010 GAYLORD PARKWAY
SUITE 190
FRISCO, TX 75034

FIRM REGISTRATION NO. 5713


EXIST. ROW VARIES (60'-110')
℄ EXISTING FM 1378
EXIST. ROW
EXIST. ROW
3' SHLDR.
12' LANE
12' LANE
3' SHLDR.
2%
2%
EXISTING GROUND
EXISTING GROUND
PGL

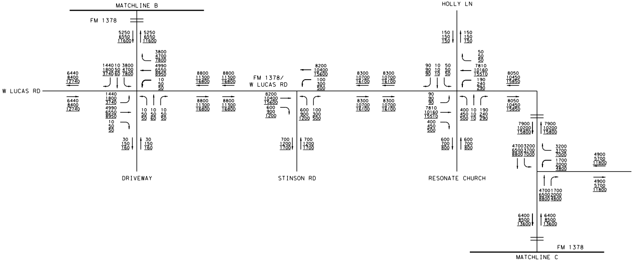
FM 1378

EXISTING TYPICAL SECTION


PROP. ROW - VARIES 125' - 180'
EXIST. ROW - VARIES 60' - 90'
PROP. ROW
PROP. ROW
EXIST. ROW
EXIST. ROW
VARIES (15' MIN)
UTIL. COR.
VARIES (15' MIN)
UTIL. COR.
℄ FM 1378
3.5' MAX BUFFER
3.5' MAX BUFFER
1' OFFSET
1' OFFSET
VARIES
10' SHARED USE
2'
12' LANE
11' LANE
VAR. (38' MAX.)
RAISED MEDIAN
11' LANE
12' LANE
2'
10' SHARED USE
VARIES
1.5%
2%
2%
1.5%
4:1 MAX.
4:1 MAX.
EXISTING GROUND
EXISTING GROUND
PGL
PGL

FM 1378
4 - LANE PROPOSED

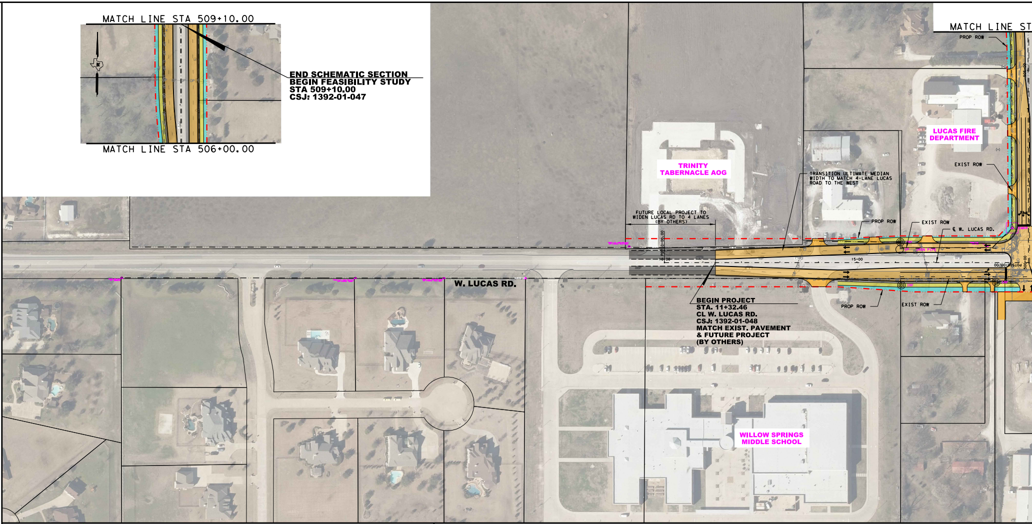
PROPOSED TYPICAL SECTION

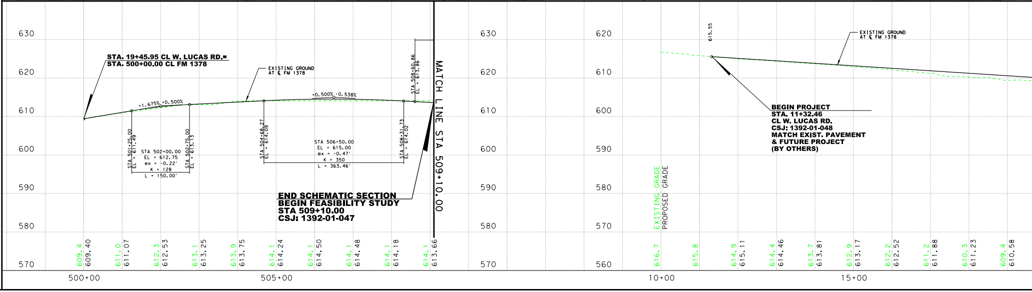

MATCHLINE B
FM 1378
W LUCAS RD
DRIVEWAY
5250 6550 11600
5250 6550 11600
3800 4700 7800
4990 6550 8950
10 50 50
1440 1800 3740
10 50 60
3800 4700 7800
6440 8400 12740
6440 8400 12740
1440 1800 3740
4990 6550 8950
10 50 50
10 50 50
10 50 60
10 50 50
30 150 160
30 150 160
8800 11300 16800
8800 11300 16800
8800 11300 16800
8800 11300 16800
FM 1378/
W LUCAS RD
8200 10400 15600
100 300 500
8200 10400 15600
600 900 1200
600 900 1200
100 300 500
700 1200 1700
700 1200 1700
STINSON RD
8300 10700 16100
8300 10700 16100
8300 10700 16100
8300 10700 16100
HOLLY LN
150 150 150
150 150 150
50 50 50
7810 10160 15510
190 240 290
90 90 90
10 10 10
50 50 50
90 90 90
7810 10160 15510
400 450 500
400 450 500
10 10 10
190 240 290
600 700 800
600 700 800
RESONATE CHURCH
8050 10450 15850
8050 10450 15850
7900 10200 15800
7900 10200 15800
4700 6500 8800
3200 3700 7000
3200 3700 7000
1700 2000 4800
4900 5700 11800
E LUCAS RD
4900 5700 11800
4700 6500 8800
1700 2000 4800
6400 8500 13600
6400 8500 13600
FM 1378
MATCHLINE C

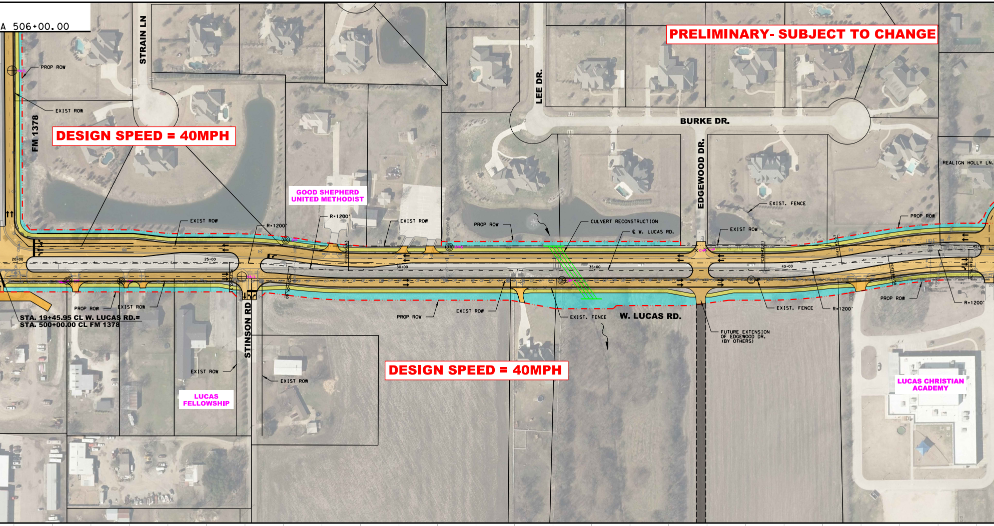
TRAFFIC LINE DIAGRAM [N.T.S.]

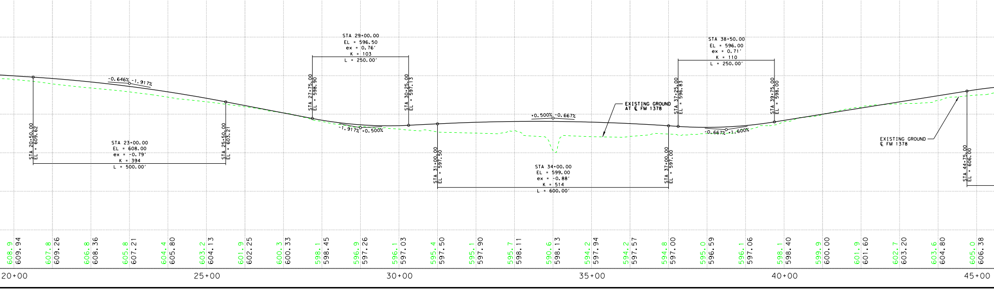
1. EXISTING ROW FOR FM 1378 IS APPARENT ROW PROVIDED BY TXDOT, NOT PER DEED RESEARCH.
2. AERIAL FLIGHT DATE - JUNE 2017. EXISTING TOPOGRAPHICAL INFORMATION AS PROVIDED BY TxDOT, FEB 2018.
3. TRAFFIC PROJECTIONS PENDING TRANSPORTATION PLANNING & PROGRAMMING (TPP) APPROVAL.
4. EXISTING CREEK CENTERLINE SOURCE: FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), WASHINGTON, D.C., PUBLISHED: 2017-09-27, NATIONAL FLOOD HAZARD LAYER (NFHL). THE NFHL DATA INCORPORATES ALL FLOOD INSURANCE RATE MAP (FIRM) DATABASES PUBLISHED BY THE FEMA, AND ANY LETTERS OF MAP REVISION (LOMRS) THAT HAVE BEEN ISSUED AGAINST THOSE DATABASES SINCE THEIR PUBLICATION DATE. IT IS UPDATED ON A MONTHLY BASIS. THE FIRM DATABASE ISTHE DIGITAL, GEOSPATIAL VERSION OF THE FLOOD HAZARD INFORMATION SHOWN ON THE PUBLISHED PAPER FIRMS. DUE TO NEW HIGH RESOLUTION TOPOGRAPHY THE STREAM CL WAS MODIFIED AS NEEDED.
5. FINAL LOCATION OF MEDIAN OPENINGS WILL BE DETERMINED IN THE PS&E DEVELOPMENT PHASE IN COORDINATION WITH THE CITY OF LUCAS.
6. DESIGN IS SUBJECT TO CHANGE.

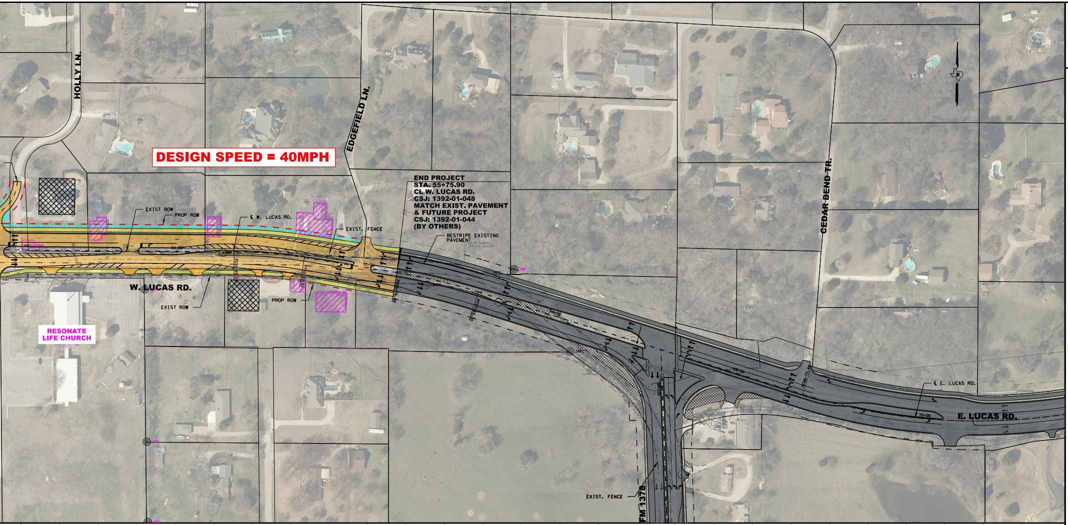
SCHEMATIC GENERAL NOTES

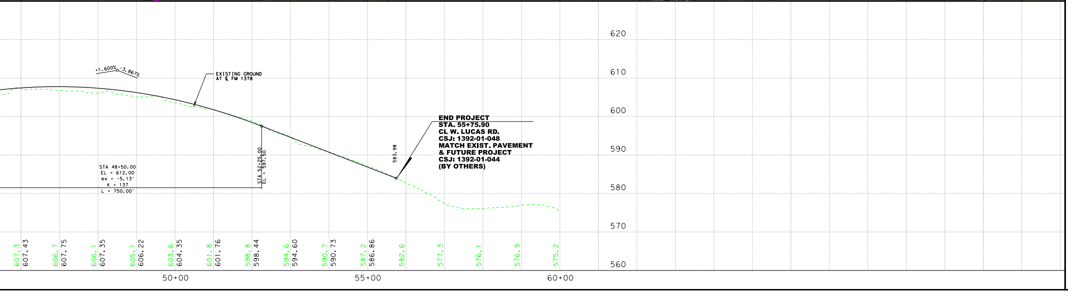

MATCH LINE STA 509+10.00
END SCHEMATIC SECTION
BEGIN FEASIBILITY STUDY
STA 509+10.00
CSJ: 1392-01-047
MATCH LINE STA 506+00.00
MATCH LINE ST
EXISTING
GROUND
PROP ROW
LUCAS FIRE DEPARTMENT
EXIST ROW
TRINITY TABERNACLE AOG
TRANSITION ULTIMATE MEDIAN WIDTH TO MATCH 4-LANE LUCAS ROAD TO THE WEST
FUTURE LOCAL PROJECT TO WIDEN LUCAS RD TO 4 LANES (BY OTHERS)
PROP ROW
EXIST ROW
℄ W. LUCAS RD.
10+00
15+00
POT 500+00.00
IRF
IP
IRON PIPE
W. LUCAS RD.
BEGIN PROJECT
STA. 11+32.46
CL W. LUCAS RD.
CSJ: 1392-01-048
MATCH EXIST. PAVEMENT
& FUTURE PROJECT
(BY OTHERS)
PROP ROW
EXIST ROW
WILLOW SPRINGS MIDDLE SCHOOL


630
620
610
600
590
580
570
STA. 19+45.95 CL W. LUCAS RD.=
STA. 500+00.00 CL FM 1378
EXISTING GROUND AT ℄ FM 1378
+1.675% +0.500%
+0.500% -0.538%
STA 508+60.86 EL = 613.86
STA 501+25.00 EL = 611.49
STA 502+00.00
EL = 612.75
ex = -0.22'
K = 128
L = 150.00'
STA 502+75.00 EL = 613.13
STA 504+68.27 EL = 614.09
STA 506+50.00
EL = 615.00
ex = -0.47'
K = 350
L = 363.46'
STA 508+31.73 EL = 614.02
END SCHEMATIC SECTION
BEGIN FEASIBILITY STUDY
STA 509+10.00
CSJ: 1392-01-047
MATCH LINE STA 509+10.00
609.4
609.40
611.0
611.07
612.3
612.53
613.1
613.25
613.9
613.75
614.1
614.24
614.1
614.50
614.1
614.48
614.1
614.18
614.1
613.66
500+00
505+00
630
620
610
600
590
580
570
620
610
600
590
580
570
560
615.55
EXISTING GROUND AT ℄ FM 1378
BEGIN PROJECT
STA. 11+32.46
CL W. LUCAS RD.
CSJ: 1392-01-048
MATCH EXIST. PAVEMENT
& FUTURE PROJECT
(BY OTHERS)
EXISTING GRADE
PROPOSED GRADE
616.7
615.8
614.9
615.11
614.4
614.46
613.7
613.81
612.9
613.17
612.2
612.52
611.2
611.88
610.3
611.23
609.4
610.58
10+00
15+00


A 506+00.00
PRELIMINARY- SUBJECT TO CHANGE
STRAIN LN
LEE DR.
BURKE DR.
EDGEWOOD DR.
REALIGN HOLLY LN.
FM 1378
PROP ROW
EXIST ROW
DESIGN SPEED = 40MPH
GOOD SHEPHERD UNITED METHODIST
R=1200'
EXIST ROW
R=1200'
EXIST ROW
PROP ROW
CULVERT RECONSTRUCTION
℄ W. LUCAS RD.
EXIST. FENCE
EXIST ROW
PROP ROW
20+00
25+00
30+00
35+00
40+00
45+00
PROP ROW
EXIST ROW
STA. 19+45.95 CL W. LUCAS RD.=
STA. 500+00.00 CL FM 1378
STINSON RD
PROP ROW
EXIST ROW
EXIST. FENCE
W. LUCAS RD.
EXIST. FENCE
R=1200'
PROP ROW
R=1200'
FUTURE EXTENSION OF EDGEWOOD DR. (BY OTHERS)
EXIST ROW
EXIST ROW
DESIGN SPEED = 40MPH
LUCAS FELLOWSHIP
LUCAS CHRISTIAN ACADEMY


STA 29+00.00
EL = 596.50
ex = 0.76'
K = 103
L = 250.00'
STA 38+50.00
EL = 596.00
ex = 0.71'
K = 110
L = 250.00'
-0.646% -1.917%
STA 27+75.00 EL = 598.90
STA 30+25.00 EL = 597.13
-1.917% +0.500%
+0.500% -0.667%
EXISTING GROUND AT ℄ FM 1378
STA 37+25.00 EL = 596.83
STA 39+75.00 EL = 598.00
-0.667% +1.600%
EXISTING GROUND ℄ FM 1378
STA 20+50.00 EL = 609.62
STA 23+00.00
EL = 608.00
ex = -0.79'
K = 394
L = 500.00'
STA 25+50.00 EL = 603.21
STA 31+00.00 EL = 597.50
STA 34+00.00
EL = 599.00
ex = -0.88'
K = 514
L = 600.00'
STA 37+00.00 EL = 597.00
STA 44+75.00 EL = 606.00
608.9 609.94
607.8 609.26
606.8 608.36
605.8 607.21
604.4 605.80
603.2 604.13
601.9 602.25
600.3 600.33
598.1 598.45
596.9 597.26
596.1 597.03
595.4 597.50
595.1 597.90
595.7 598.11
590.6 598.13
594.2 597.94
594.2 597.57
594.8 597.00
595.0 596.59
596.1 597.06
598.1 598.40
599.9 600.00
601.9 601.60
602.7 603.20
603.6 604.80
605.0 606.38
20+00
25+00
30+00
35+00
40+00
45+00


DESIGN SPEED = 40MPH
HOLLY LN.
EDGEFIELD LN.
CEDAR BEND TR.
EXIST ROW
PROP ROW
℄ W. LUCAS RD.
EXIST. FENCE
END PROJECT
STA. 55+75.90
CL W. LUCAS RD.
CSJ: 1392-01-048
MATCH EXIST. PAVEMENT
& FUTURE PROJECT
CSJ: 1392-01-044
(BY OTHERS)
RESTRIPE EXISTING PAVEMENT
SOLAR POWERED TRAFFIC SENSOR
W. LUCAS RD.
EXIST ROW
PROP ROW
RESONATE LIFE CHURCH
50+00
55+00
60+00
65+00
70+00
IRFC
IRF
℄ E. LUCAS RD.
E. LUCAS RD.
EXIST. FENCE
FM 1378



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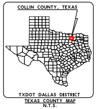
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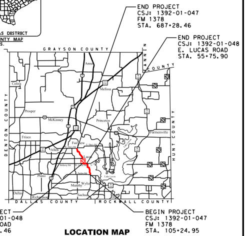
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FANNIN COUNTY
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DALLAS COUNTY
ROCKWALL COUNTY
Anna
Celina
Melissa
Prosper
McKinney
Princeton
Frisco
Farmersville
Fairview
Allen
Lucas
Plano
Murphy
Wylie
Lake Lavon
Dallas
Richardson
Sachse
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— — —	CITY/COUNTY BOUNDARY LINE	▬	PROPOSED BRIDGE
- - -	EXISTING DRAINAGE	▬	ADJACENT PROJECT - BY OTHERS
—◄—	PROPOSED DITCH BOTTOM	▬	PROPOSED ROW ACQUISITION
▦	PROPOSED DRAINAGE STRUCTURE	←	PROPOSED LANES
- - - -	PROPOSED CULVERT	(#)	PARCEL IDENTIFYING NUMBER
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