State Highway 7
Planning and Environmental Linkages (PEL) Study
Conceptual Design Plan Set

COLORADO DOT
DEPARTMENT OF TRANSPORTATION

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February 2014

Recommended Alternative

The Colorado Department of Transportation (CDOT) has prepared the State Highway 7 (SH 7) Planning and Environmental Linkages (PEL) Study to establish existing conditions, to identify future transportation challenges (using the year 2035 as a planning horizon), and to create a vision that will serve as a blueprint for future multimodal transportation improvements in this approximately 16-mile corridor. This study developed a Recommended Alternative for multimodal transportation improvements along the entire length of the corridor and presents an approach to the prioritization and funding of those improvements. **Appendix D** describes and presents the conceptual engineering plans and preliminary cost estimates for the Recommended Alternative resulting from the extensive alternatives development and evaluation process conducted in this PEL study.

Cross- Sections

A recommended cross-section has been identified for each segment of the corridor, as described below.

Corridor-wide Elements

The following elements are included, as appropriate, in each segment of the corridor:

- Transit amenities (bus stops, shelters, pull outs, etc.)
- Transit priority treatments (queue jumps, signal priority)
- Bicycle intersection treatments (signing, striping, bike activated signals)
- Pedestrian at-grade crossing treatments (crosswalks, pedestrian activated signals, signing, etc.)
- Intersection improvements
- Transportation System Management (signal timing, coordination, etc.)
- Travel Demand Management (alternative modes, rideshare programs, etc.)

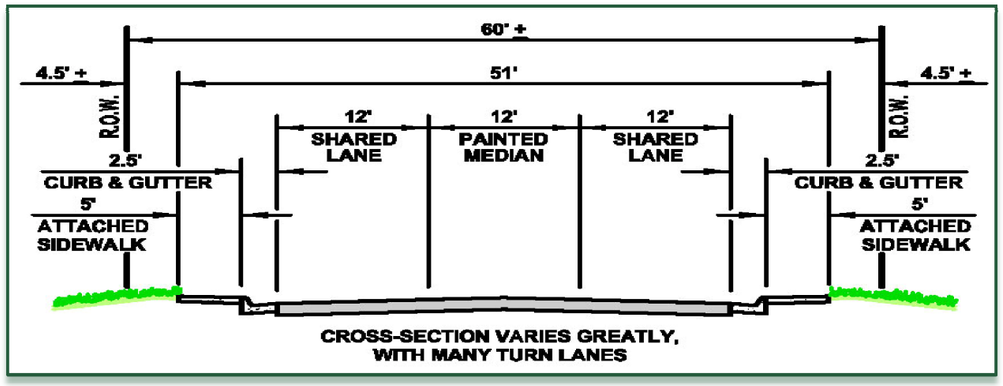
Segment 1 - US 287 to 119th Street

Because of the wide range of conditions in Segment 1, there are two typical cross-sections for two different stretches of this segment.

US 287 to Public Road (Figure D.1):

- Roadway: 2 lanes (2 general purpose travel lanes, a center left turn lane/painted median, and curb and gutter)
- Bicycle: shared lanes (optional “sharrow” markings)
- Pedestrian: attached sidewalks
- Access Category Recommendation: NR-C

Figure D.1 Segment 1 - US 287 to Public Road Cross-Section



Public Road to 119th Street (Figures D. 2 and D.3):

- Roadway: 2 lanes (2 general purpose travel lanes and curb and gutter)
- Bicycle: bicycle lanes
- Pedestrian: attached sidewalks
- Access Category Recommendation: NR-C

Figure D.2 Segment 1 - Public Road to 119th Street Cross-Section

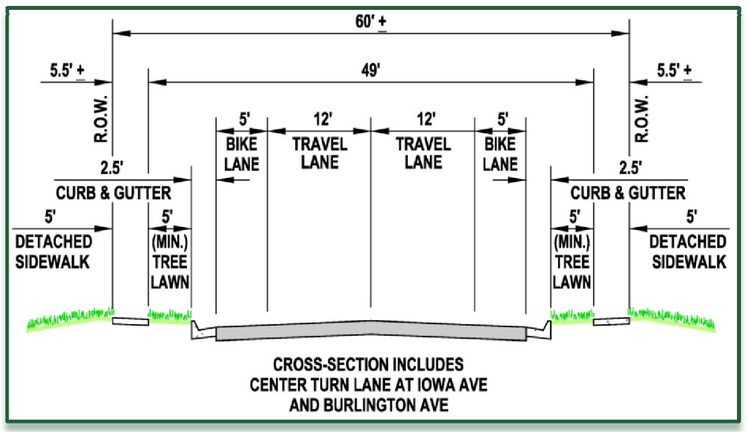


Figure D.3 Illustrative View To East, Just East of Iowa Avenue

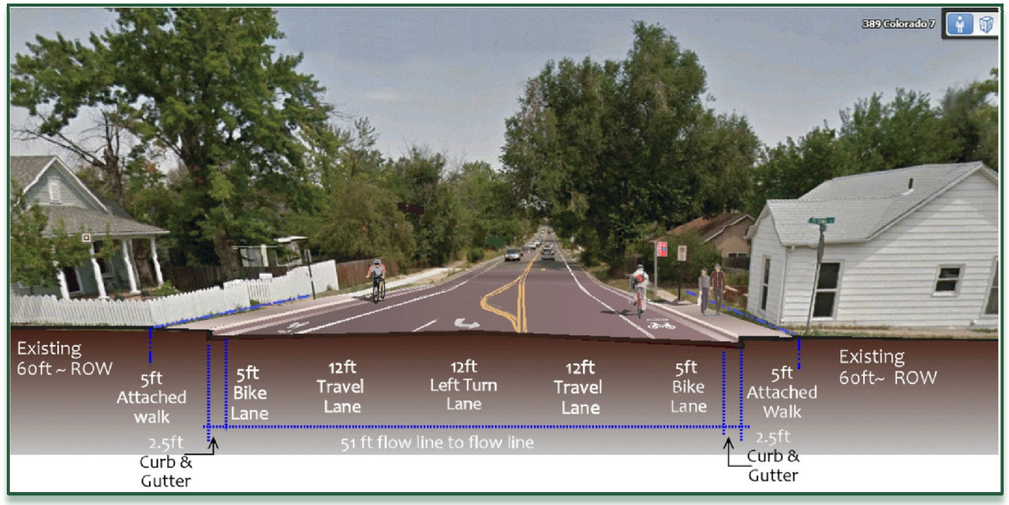
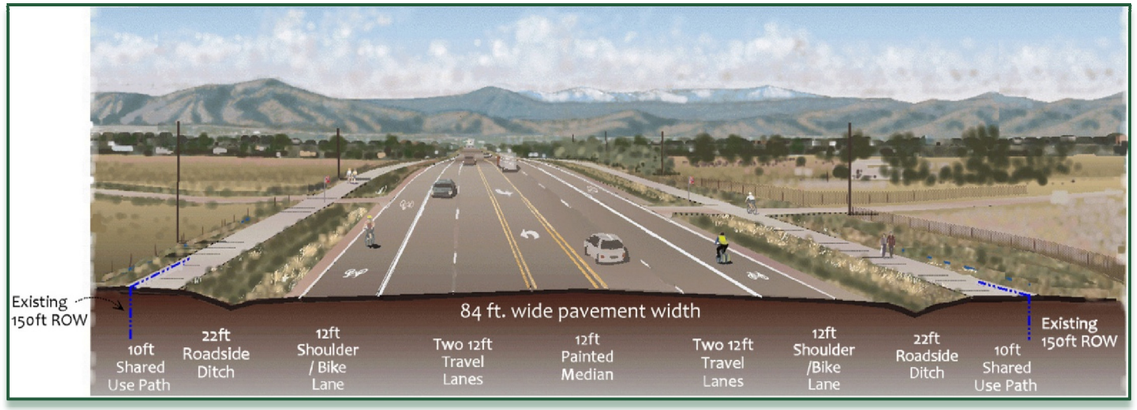


Figure D.5 Illustrative View To West, West of Existing County Line Road



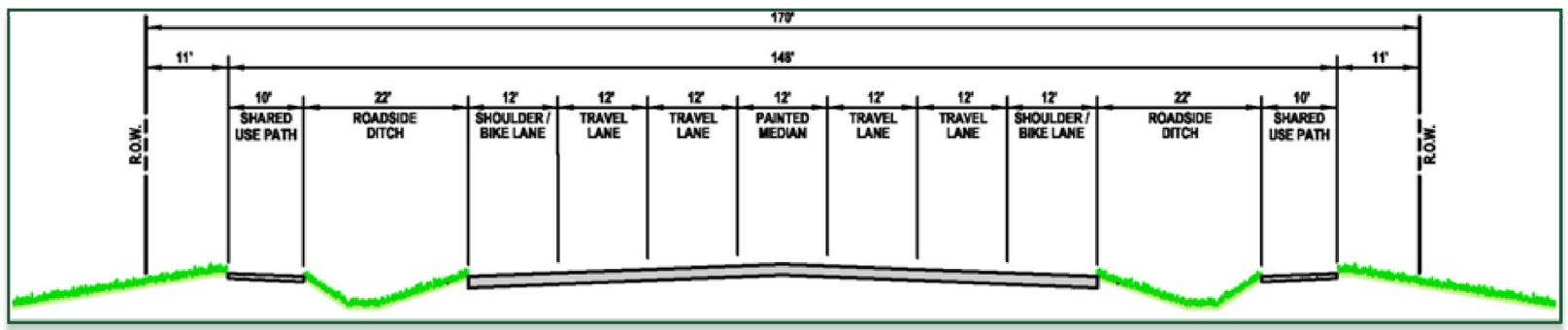
Segment 2 – 119th Street to Sheridan Parkway

Segment 2 also has two different recommended cross-sections to fit the varying characteristics in the segment.

119th Street to Relocated County Line Road (Figures D.4 and D.5)

- Roadway: 4 lanes (4 travel lanes, center left turn lane/median, auxiliary lanes, and 12-ft shoulders)
- Bicycle: bike lanes on shoulders, shared use paths
- Pedestrian: shared use paths
- Grade separated bicycle/pedestrian crossing (underpass) at Coal Creek (existing)
- Drainage: drainage ditch
- Median: painted median
- Access Category Recommendation: NR-A

Figure D.4 Segment 2 - 119th Street to Relocated County Line Road Cross-Section



Relocated County Line Road to Sheridan Parkway (Figures D.6 and D.7)

- Roadway: 4 lanes (4 travel lanes, raised median, auxiliary lanes, and 12-ft shoulders)
- Bicycle: bike lanes on shoulders, shared use paths
- Pedestrian: shared use paths
- Drainage: curb and gutter
- Median: raised median
- Access Category Recommendation: NR-A

Figure D.6 Segment 2 – Relocated County Line Road to Sheridan Parkway Cross-Section

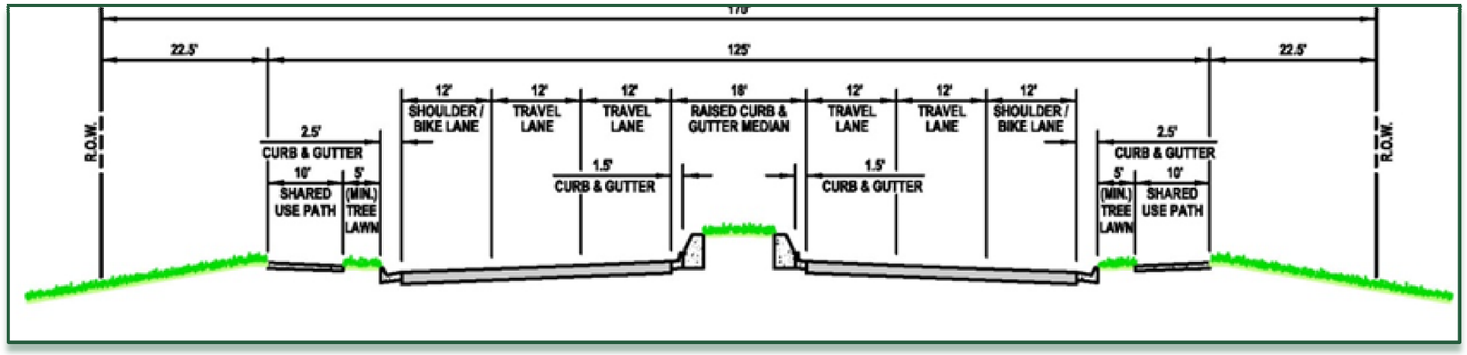
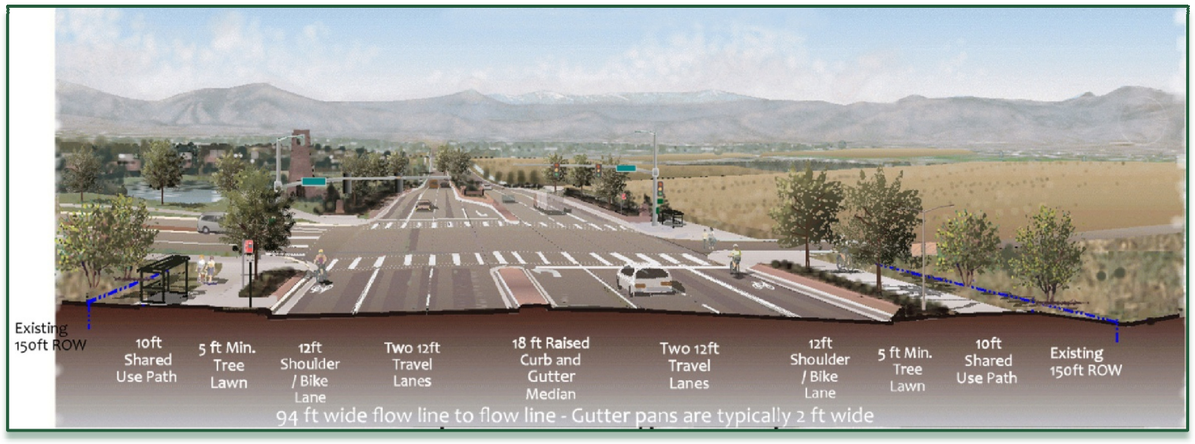


Figure D.7 Illustrative View To West, At Lowell Boulevard



Segment 3 - Sheridan Parkway to York Street (Figures D.8, D.9, and D.10)

- Roadway: 6 lanes (6 travel lanes, raised median, auxiliary lanes, and 12-ft shoulders)
- Bicycle: bike lanes on shoulders, shared use paths
- Pedestrian: shared use path, or detached sidewalks (only in commercial areas)
- Accommodation for grade separated bicycle/pedestrian crossing (underpass) in the vicinity of Huron Street
- Drainage: Curb and gutter
- Median: Raised median
- Access Category Recommendation: NR-A

Figure D.8 Segment 3 - Sheridan Parkway to York Street Cross-Section

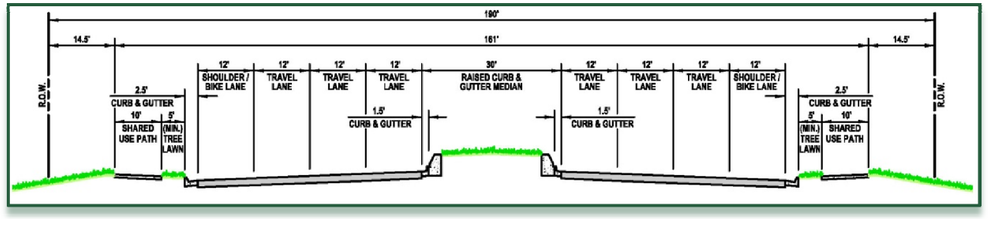


Figure D.9 Illustrative View To West, Near Huron Street

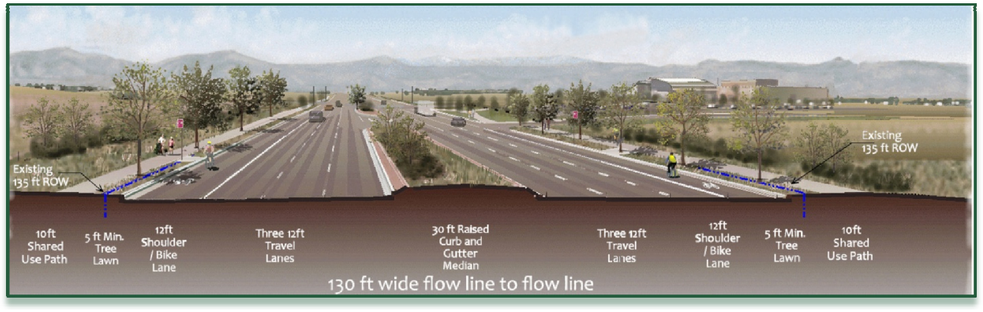
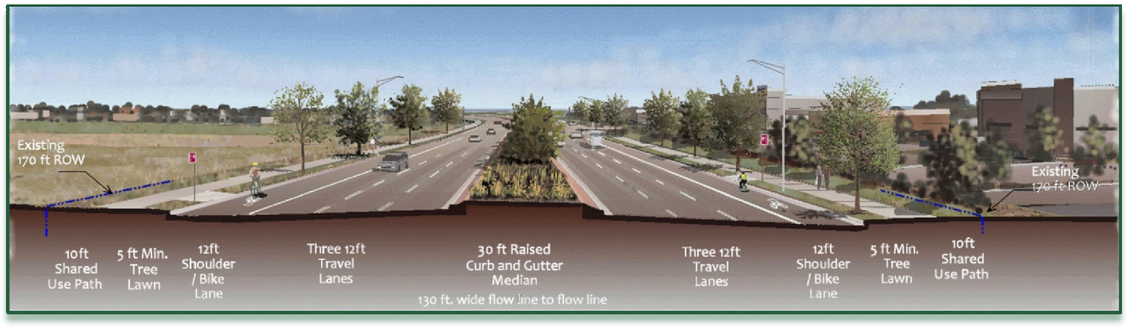


Figure D.10 Illustrative View To East, East of I-25



Segment 4 - York Street to Holly Street (Figures D.11 and D.12)

- Roadway: 4 lanes (4 travel lanes, raised median, auxiliary lanes, and 12-ft shoulders)
- Bicycle: bike lanes on shoulders, shared use paths
- Pedestrian: shared use paths
- Accommodation for grade separated bicycle/pedestrian crossing (underpass) west of Jackson Street
- Drainage: curb and gutter
- Median: raised median
- Access Category Recommendation: NR-A

Figure D.11 Segment 4 - York Street to Holly Street Cross-Section

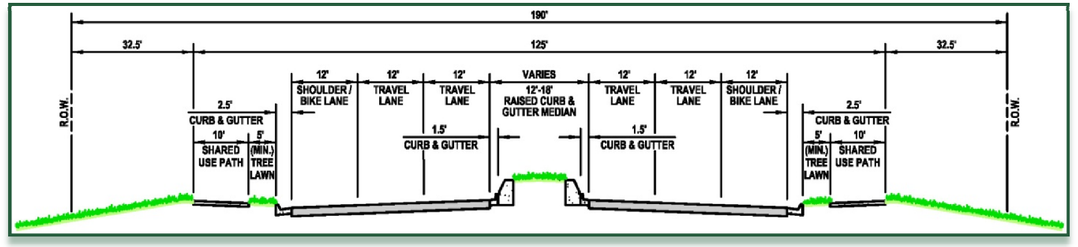
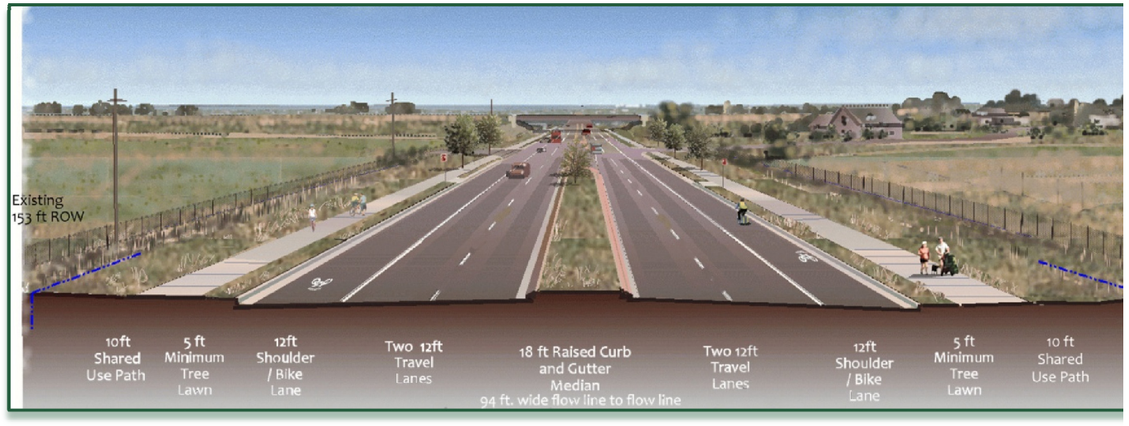


Figure D.12 Illustrative View To East , Just West of Colorado Boulevard



Segment 5 – Holly Street to US 85

On the east end of Segment 5, existing development restricts right-of-way opportunities. Thus, there are two recommended cross-sections in this segment.

Holly Street to Riverdale Road (Figures D.13 and D.14)

- Roadway: 4 lanes (4 travel lanes, center left turn lane/median, auxiliary lanes, and 12-ft shoulders)
- Bicycle: bike lanes on shoulders, shared use paths
- Pedestrian: shared use paths
- Accommodation for grade separated bicycle/pedestrian crossing (underpass) west of Quebec Street
- Drainage: drainage ditch
- Median: painted median
- Access Category Recommendation: R-A

Figure D.13 Segment 5 - Holly Street to Riverdale Road Cross-Section

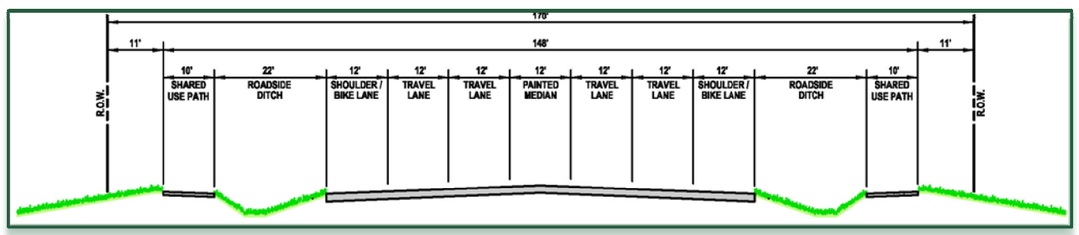
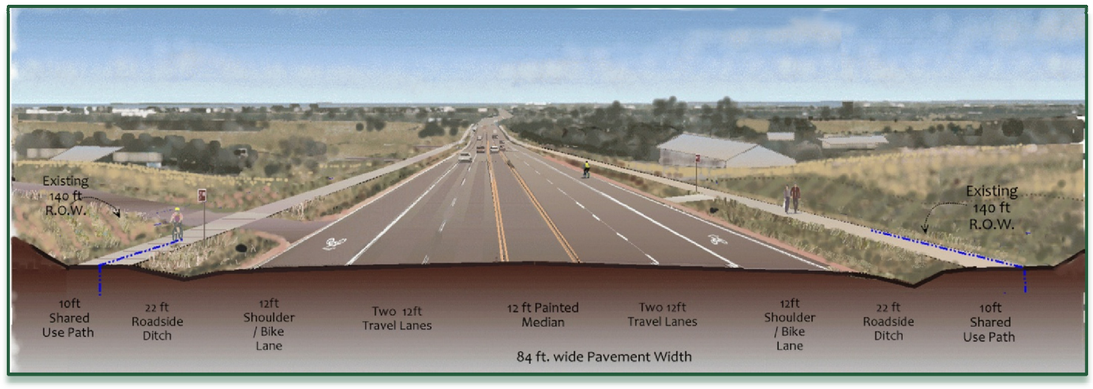


Figure D.14 Illustrative View To East, Just West of the South Platte River

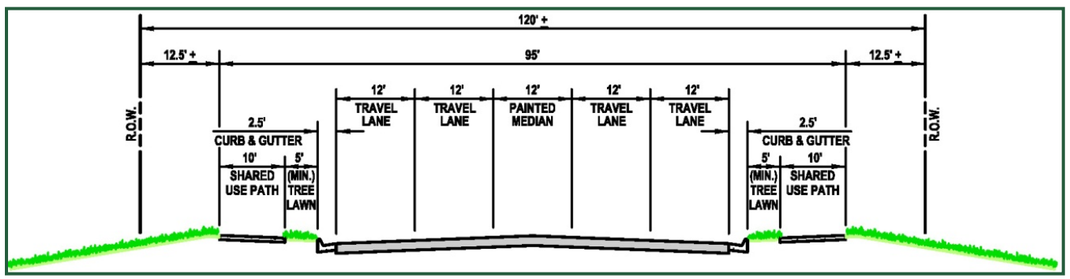


Riverdale Road to US 85 (Figure D.15)

At Riverdale Road the cross-section transitions to an urban section with the following characteristics:

- Roadway: 4 lanes (4 travel lanes, center left turn lane/median, auxiliary lanes, and 12-ft shoulders)
- Bicycle: bike lanes on shoulders, shared use paths
- Pedestrian: shared use paths
- Grade separated bicycle/pedestrian crossing (underpass) at South Platte River (existing)
- Drainage: curb and gutter
- Median: painted median
- Access Category Recommendation: R-A from Riverdale Road to McCann Ditch; NR-B from McCann Ditch to US 85

Figure D.15 Segment 5 - Riverdale Road to US 85 Cross-Section



The cross-section transitions between Riverdale Road and the South Platte River bridge to a more narrow cross-section that does not include a median across the bridge. From Miller Avenue east to US 85, the cross-section narrows to an urban section without shoulders to reflect the restricted ROW in this area.

Alternative Travel Modes

Transit

RTD, as the regional transit agency, is charged with planning, developing, and operating transit systems within the Denver metropolitan area. With the exception of a short segment of SH 7 in Lafayette, no transit service currently operates along the SH 7 study corridor. RTD bus routes serve each terminus of the corridor, as both Lafayette and Brighton have park-n-Ride facilities close to their respective ends of the study corridor.

Bus service along SH 7 is anticipated to be implemented in the short term, before the completion of the North Metro Corridor project. RTD will be working with the communities over the next year or two to define the actual service need, to conduct origin/destination studies, to collect data for determining population density, and to address infrastructure needs responsive to near-term development. Once RTD collects those data, service planners will assess what type of service would make most sense, such as an express route during AM/PM peak times only, a one-directional route, or a bi-directional route. In association with this type of service, they will also identify locations for stops. Once RTD has made these decisions, it will most likely be another year or two before a route and improvements along SH 7 are actually implemented.

The installation of transit amenities along the corridor (bus stops, shelters, pull outs, etc.) shall be coordinated with RTD to best accommodate near-term and long-term transit service along the corridor. In addition, the installation of the sidewalk or shared use paths should accommodate and connect directly to transit amenities along the corridor.

The Recommended Alternative includes queue jump lanes at major signalized intersections to allow buses to bypass queued vehicles at the intersection approach. For the purpose of right-of-way preservation, it is assumed that queue jumps could be implemented at any major signalized intersection along the corridor; the best and most effective locations for the queue jumps should be determined during the design phase. **Figures D.16 and D.17** provide an example intersection configuration with queue jump lanes. The configuration of each intersection will need to be individually designed to consider and address elements such as:

- Surrounding land uses
- Bus stop location: near side versus far side of the intersection (RTD's preference is for far side stops)
- Interaction with the bike lane
- Need for right turn acceleration lane
- Pedestrian connections to bus stops

In addition to the transit amenities and treatments to enhance future transit service along the SH 7 corridor, there is also a need to provide strong connections between SH 7 and the future regional transit service along the North Metro commuter rail line and the future commuter bus service along I-25. The I-25/SH 7 interchange and the area in the vicinity of the North Metro station (near Colorado Boulevard) shall be designed to maximize pedestrian access to these regional transit facilities and to best facilitate connections between local service along SH 7 and the regional transit services.

Figure D.16 Example Intersection with Queue Jump Lanes

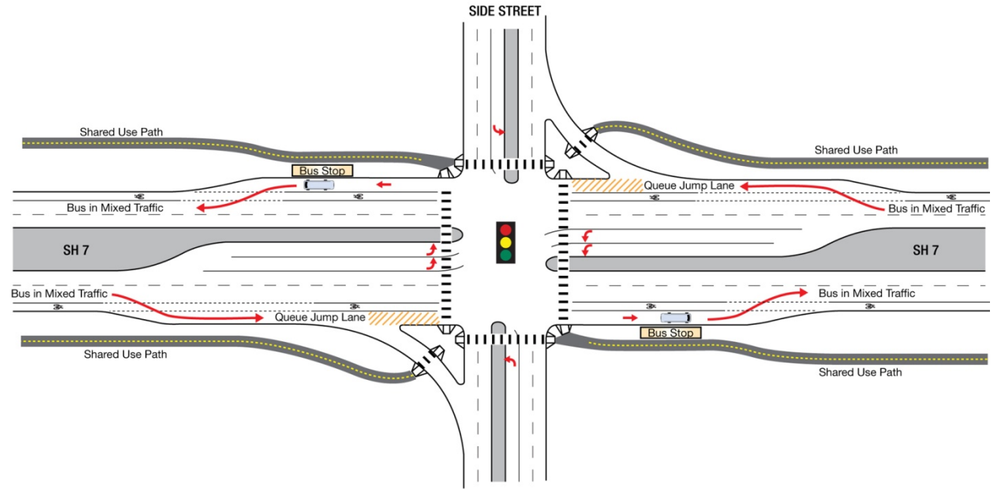
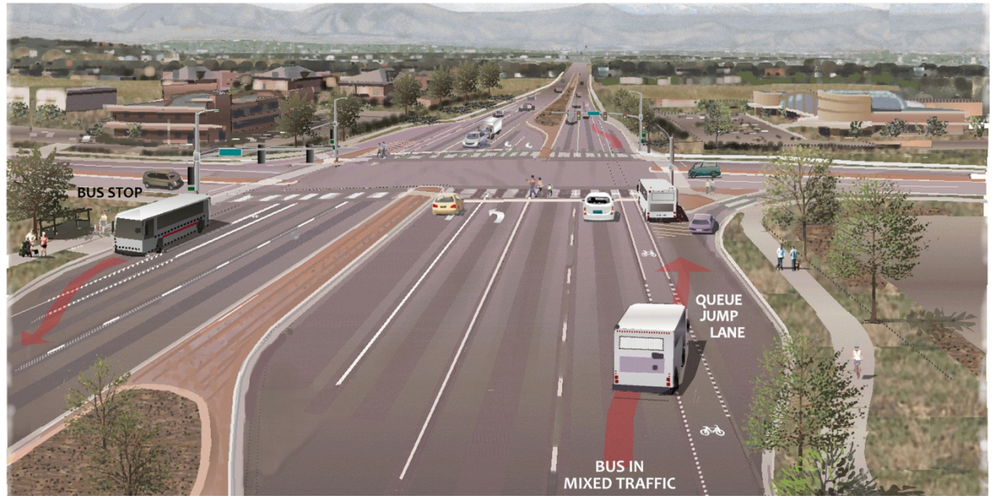


Figure D.17 Illustrative of Intersection with Queue Jump Lanes



Bicycle and Pedestrian Accommodations

The Recommended Alternative includes bicycle and pedestrian facilities along the full length of the SH 7 corridor to accommodate different types of bicyclists and pedestrians. Most of the corridor includes a wide 12-ft shoulder that bicyclists who are comfortable riding adjacent to motorized traffic can use. There are three optional striping configurations for the shoulders:

- Stripe as a shoulder only; no specific bike lane signing or striping.
- Stripe the shoulder as a full width (12-ft) bike lane with pavement markings and signing per CDOT Road Design Guide and Manual on Uniform Traffic Control Devices (MUTCD) standards.
- Stripe the shoulder as a buffered bike lane per CDOT Road Design Guide specifications.

Recreational and less confident bicyclists, including children, are less comfortable riding immediately adjacent to motorized travel lanes. The Recommended Alternative includes 10-ft shared use paths along most of the corridor to accommodate these less confident bicyclists, as well as pedestrians.

Crossing of SH 7 for bicyclists and pedestrians will become more difficult when the roadway is widened. All signalized intersections along the corridor should include at-grade crossing treatments to enhance the safety and convenience for bicyclists and pedestrians. As shown on **Figure D.18**, these treatments could include:

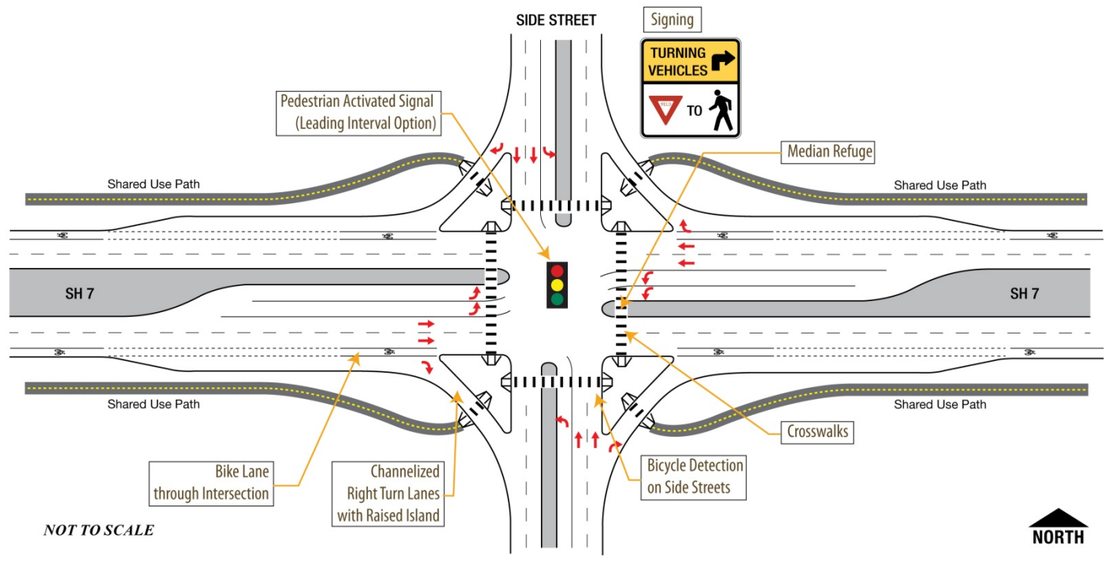
- Pedestrian crosswalks;
- Use of TURNING VEHICLES YIELD TO PEDESTRIANS signs (MUTCD R10-15) to remind right-on-green and permissive left-turn movements of their obligation to yield to pedestrians in the crosswalk;
- Pedestrian activated signals (with the option of a leading pedestrian interval;
- Channelized right turn lanes with raised islands to allow pedestrians to cross the right turning traffic independently of the rest of the intersection; the design should encourage low vehicle turning speeds and should provide unobstructed sight lines between pedestrians and motorists;
- Proper bike lane striping to avoid the right lane conflict with right turning vehicles; and
- Bicycle detection (particularly on the side street approaches).

In addition to the at-grade intersection crossing enhancements, the local agencies have identified five potential locations for bicycle/pedestrian underpasses:

- Coal Creek (existing)
- Near Huron Street
- West of Jackson Street
- West of Quebec Street
- South Platte River (existing)

The Recommended Alternative includes accommodation for these underpasses, which local agencies would initiate and construct.

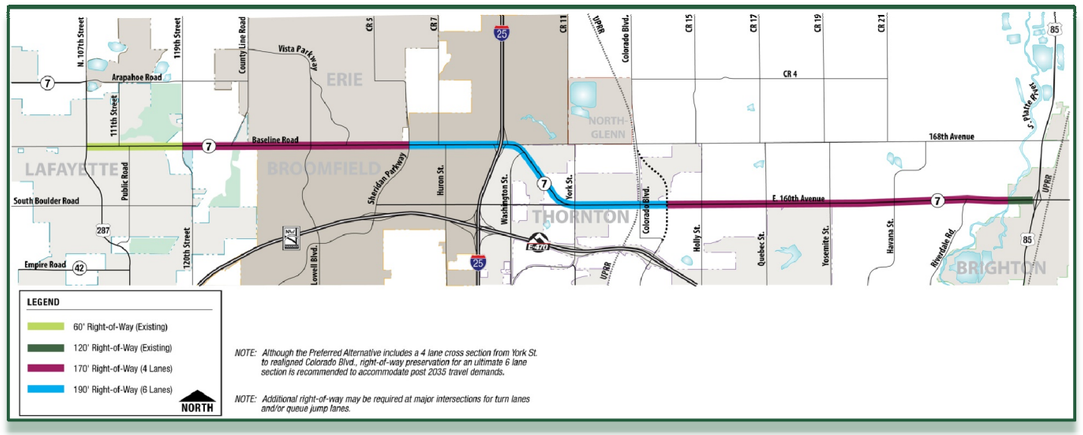
Figure D.18 Example Intersection with Enhanced Bicycle and Pedestrian Crossing Treatments



Right-of-Way Preservation

Figure D.19 depicts recommended right-of-way widths for preservation along the SH 7 corridor.

Figure D.19 Recommended Right-of-Way Preservation



Access Recommendations

CDOT has assigned access categories for all segments of each state highway in Colorado. These categories relate to the requirements and thresholds for access spacing and auxiliary lane requirements documented in the *State Highway Access Code*. This study recommends one change to the assigned access categories for SH 7. As illustrated by **Figure D.20**, it is recommended that the category change from R-A to NR-A on the segment from I-25 east to Holly Street.

As also shown on **Figure D.20**, an update to the existing Access Control Plan among the Town of Erie, City and County of Broomfield, and CDOT is recommended from County Line Road to I-25 to address the communities' current development plans. In addition, development of an Access Control Plan is recommended among the City and County of Broomfield, City of Thornton, Adams County, and CDOT from I-25 to York Street.

Further, as part of this study, a thorough inventory of all accesses in the corridor was conducted, as illustrated by **Figures D.21, D.22** and **D.23**. These graphics include all existing and approved accesses, as well as those that the local municipalities have proposed along SH 7. These locally proposed access locations are also shown on the SH 7 PEL Conceptual Design Plan Set. However, these locally proposed accesses are not expressly recommended as part of the Recommended Alternative, nor have they been accepted by CDOT at this time. An access permit in accordance with the State Highway Access Code would be necessary before implementation. It is recommended that CDOT and the local entities review and evaluate these proposed accesses through the access control planning processes recommended above.

Figure D.20 Recommended Access Categories

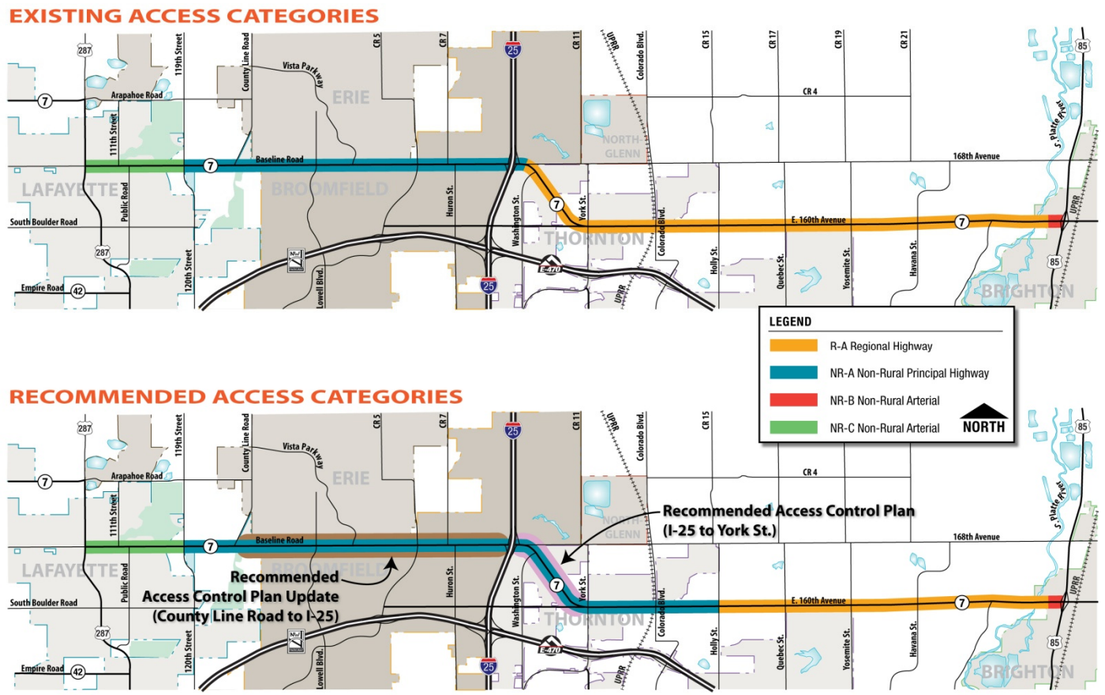
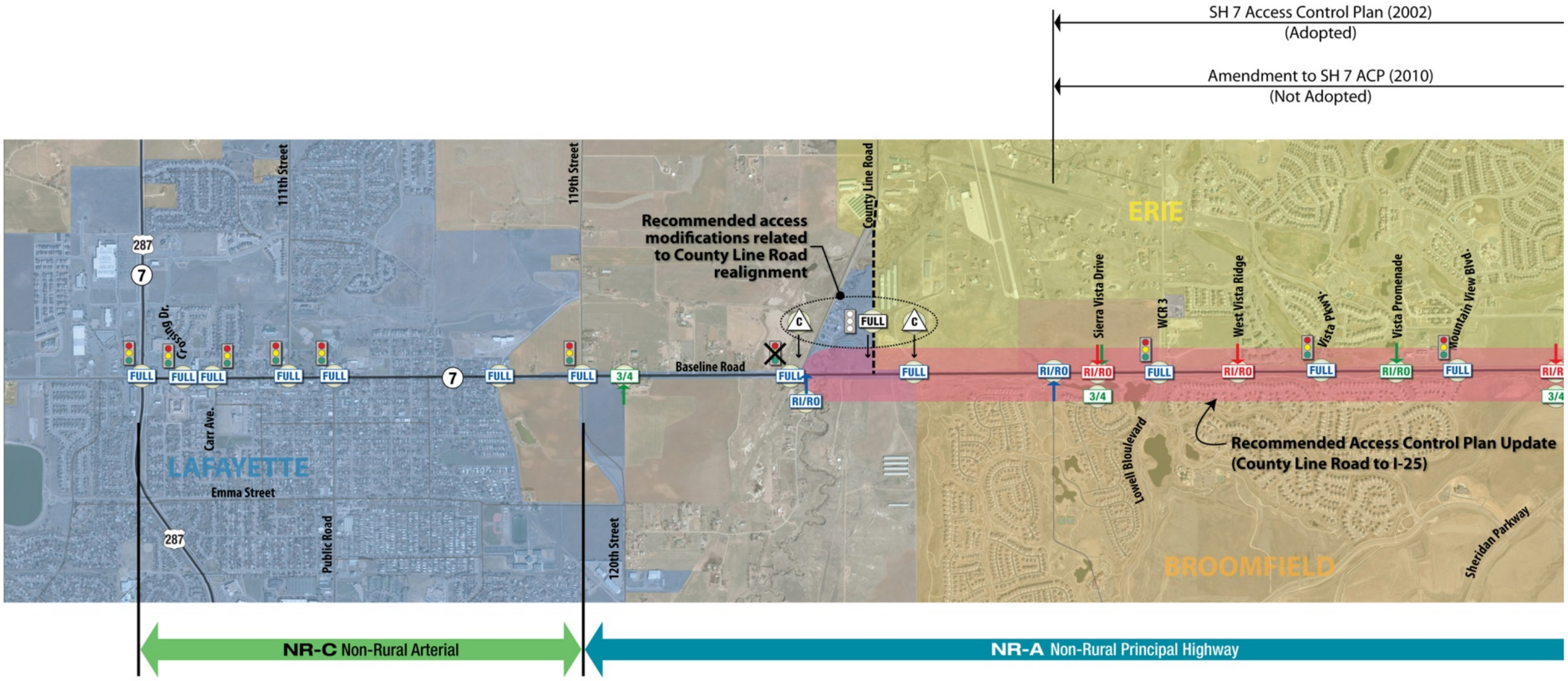


Figure D.21 West Corridor Access

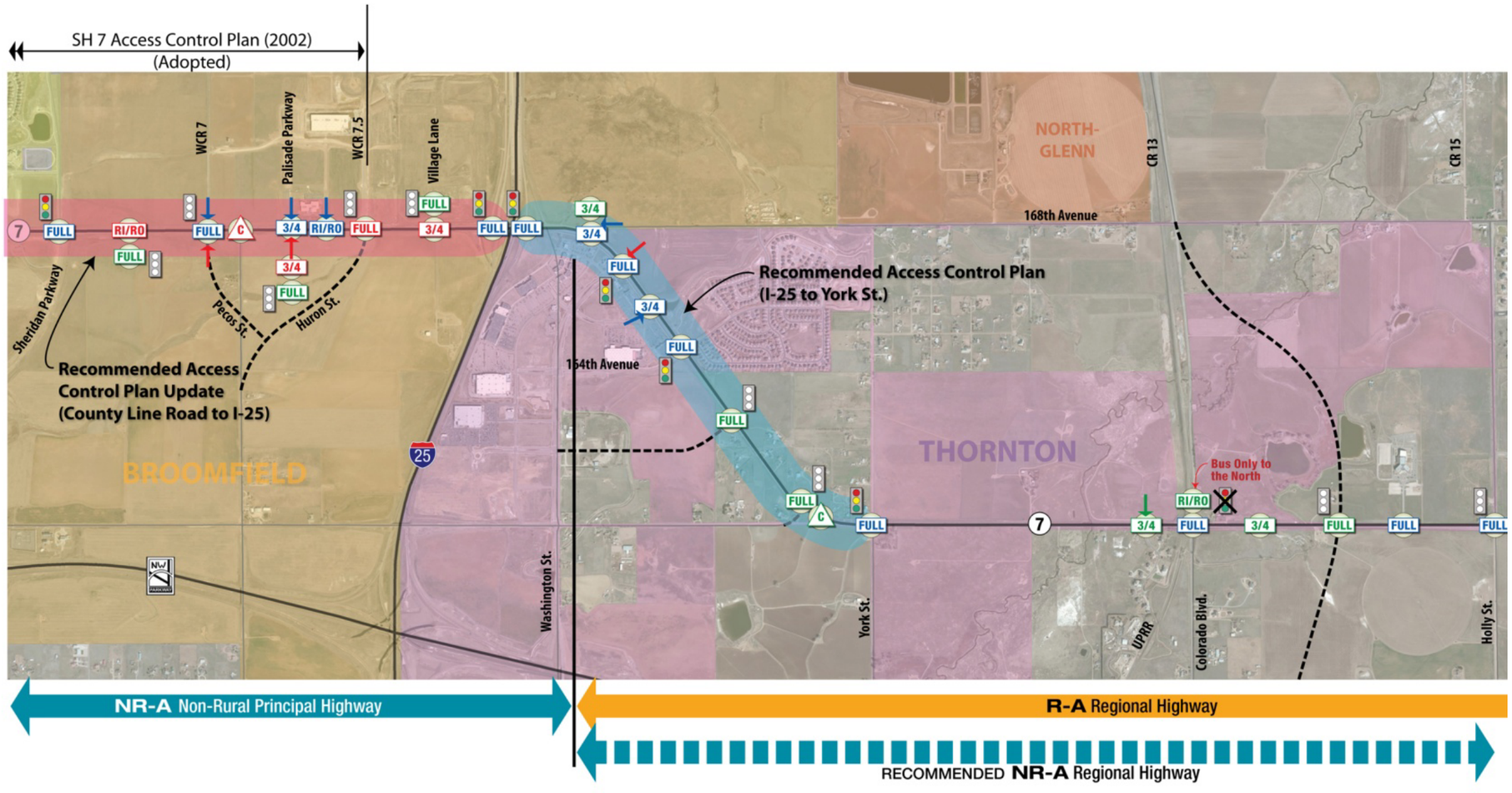


LEGEND

ACCESS CONFIGURATION	SIGNALIZATION	ACCESS STATUS
FULL Full Movement Access	Existing Traffic Signal	**Existing Access:** *(current access configuration at major intersections; not all existing accesses are shown)*
3/4 3/4 Movement Access	Future Traffic Signal	**Approved Access:** *(access configuration has CDOT approval through an IGA or access permit)*
RI/RO Right-In/Right-Out Only Access	Remove Traffic Signal	**Locally Proposed Access:** *(local agency's desired access configuration; CDOT has not approved, nor is this configuration expressly recommended in the Preferred Alternative)*
C Closure		

NORTH

Figure D.22 Central Corridor Access



LEGEND

ACCESS CONFIGURATION	SIGNALIZATION	ACCESS STATUS
FULL Full Movement Access	Existing Traffic Signal	**Existing Access:** *(current access configuration at major intersections; not all existing accesses are shown)*
3/4 3/4 Movement Access	Future Traffic Signal	**Approved Access:** *(access configuration has CDOT approval through an IGA or access permit)*
RI/RO Right-In/Right-Out Only Access	Remove Traffic Signal	**Locally Proposed Access:** *(local agency's desired access configuration; CDOT has not approved, nor is this configuration expressly recommended in the Preferred Alternative)*
C Closure		

NORTH

Figure D.23 East Corridor Access

R-A Regional Highway

NR-B Non-Rural Arterial

LEGEND

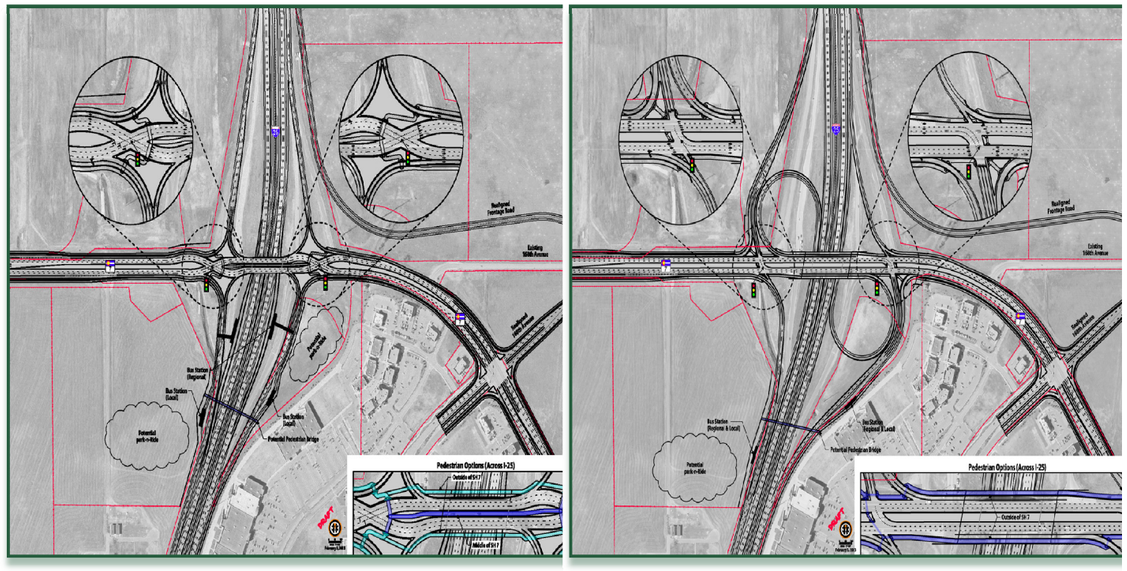
ACCESS CONFIGURATION	SIGNALIZATION	ACCESS STATUS
FULL Full Movement Access	Existing Traffic Signal	**Existing Access:** *(current access configuration at major intersections; not all existing accesses are shown)*
3/4 3/4 Movement Access	Future Traffic Signal	**Approved Access:** *(access configuration has CDOT approval through an IGA or access permit)*
RI/RO Right-In/Right-Out Only Access	Remove Traffic Signal	**Locally Proposed Access:** *(local agency's desired access configuration; CDOT has not approved, nor is this configuration expressly recommended in the Preferred Alternative)*
C Closure		

NORTH

I-25/SH 7 Interchange

It is recommended that the DDI alternative move forward as a viable option in addition to the partial cloverleaf (**Figure D.24**) when the I-25/SH 7 interchange is funded and ready to move ahead with final engineering design.

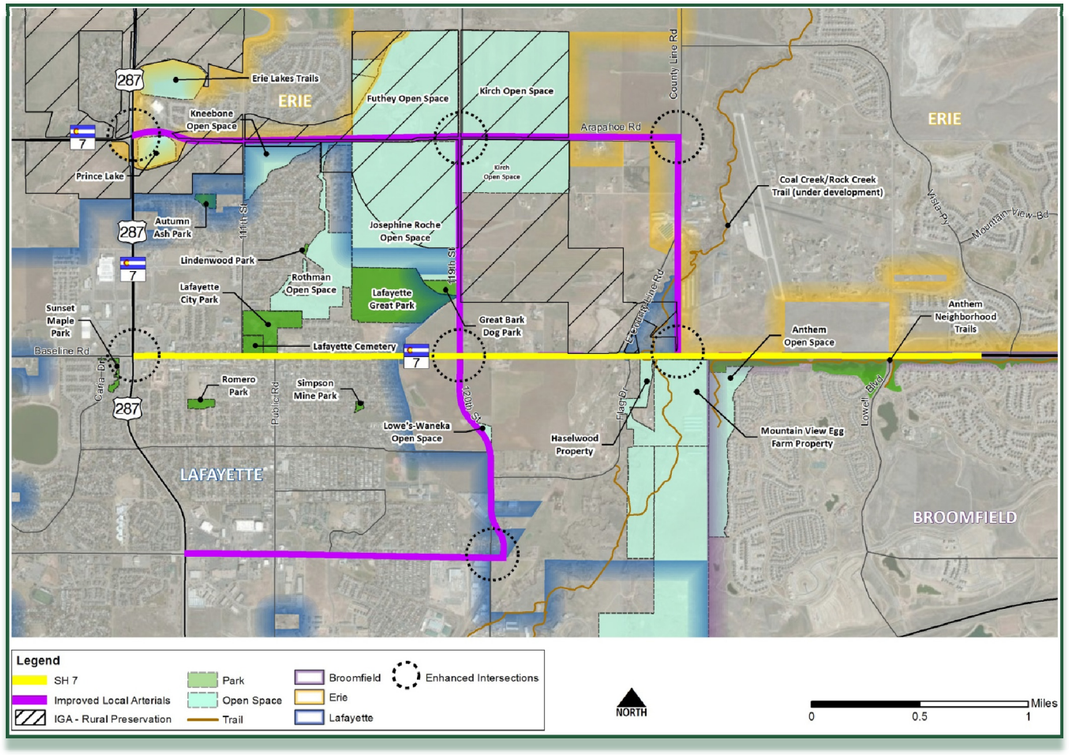
Figure D.24 I-25/SH 7 Interchange Options (Diverging Diamond and Partial Cloverleaf interchanges)



West End Concept Plan

Through this study the Town of Erie, the City of Lafayette, Boulder County, and CDOT worked collaboratively to develop and agree upon a conceptual plan for improvements in the west end of the SH 7 project corridor (**Figure D.25**). This conceptual plan keeps SH 7 on its current alignment and improves a series of intersections and local arterial roads to create a supporting network that provides alternate routes for traffic to disperse through this area. The plan includes a relocated SH 7/County Line Road intersection and County Line Road roadway in a due north-south direction and improvements, as necessary to existing County Line Road, 119th Street, 120th Street, and Arapahoe Road. Priority would be given to intersection improvements at the junctures of these roadways. Transit, bicycle, and pedestrian accommodations also would receive priority. CDOT would support the local entities in seeking funding for the improvements along the local arterials.

Figure D.25 Recommended West End Conceptual Plan



Complementary Improvements

Improvements on roadway facilities that parallel SH 7 (South Boulder Road and East 168th Avenue) are recommended to complement the Recommended Alternative and to help provide alternative travel routes for east-west travel in the area.

South Boulder Road

South Boulder Road is a parallel route to SH 7 from US 36 to its current eastern terminus at 120th Street. It reemerges as West 160th Avenue just to the west of Sheridan Parkway and continues eastward, eventually becoming SH 7 east of I-25. An extension to connect the two segments has been agreed upon by the City and County of Broomfield, the City of Lafayette, the City of Louisville, and Boulder County through an intergovernmental agreement (IGA) effective February 18, 1999. The extension of South Boulder Road would provide some relief to the travel demand on SH 7.

East 168th Avenue

East 168th Avenue (Weld County Road 2) travels along the Weld and Adams County Line, paralleling SH 7 from just east of I-25 to US 85 (and farther to the east). East 168th Avenue is currently a two-lane arterial road, but due to survey correction lines, many of the north-south roadways that intersect East 168th Avenue are offset. Weld County, Adams County, the City of Brighton, and the City of Thornton jointly completed the *Weld/Adams County Line Crossroads Alignment Study* in October 2008, which identifies preferred north-south alignments to consolidate the offset intersections. Implementation of the recommendations along 168th Avenue could not only improve north-south travel between Weld and Adams Counties, but it could also improve mobility and safety along East 168th Avenue and could help alleviate travel demand along SH 7.

Long Term Recommended Alternative Considerations

The following are further considerations for the Recommended Alternative in the long term.

Roadway

A land use sensitivity analysis was conducted based on planned build-out of the corridor. The buildout forecasts (beyond 2035) for the section of SH 7 from York Street to realigned Colorado Boulevard are expected to exceed the planning level capacity of a four-lane roadway cross-section (estimated to be 32,000 vpd). A six-lane roadway cross-section may be needed for this segment of the corridor after 2035; therefore, the Recommended Alternative includes right-of-way preservation for an ultimate six-lane roadway cross-section from York Street to realigned Colorado Boulevard.

Transit

Although managed lanes (Bus-only lanes and Bus/HOV/HOT lanes) were not recommended as reasonable alternatives for the SH 7 PEL corridor within the 2035 planning horizon, the standard shoulder for the roadway cross-section was extended from 10 feet to 12 feet to allow for peak period shoulder lanes (sometimes referred to as hard shoulder running) for bus/HOV/HOT use at a later date.

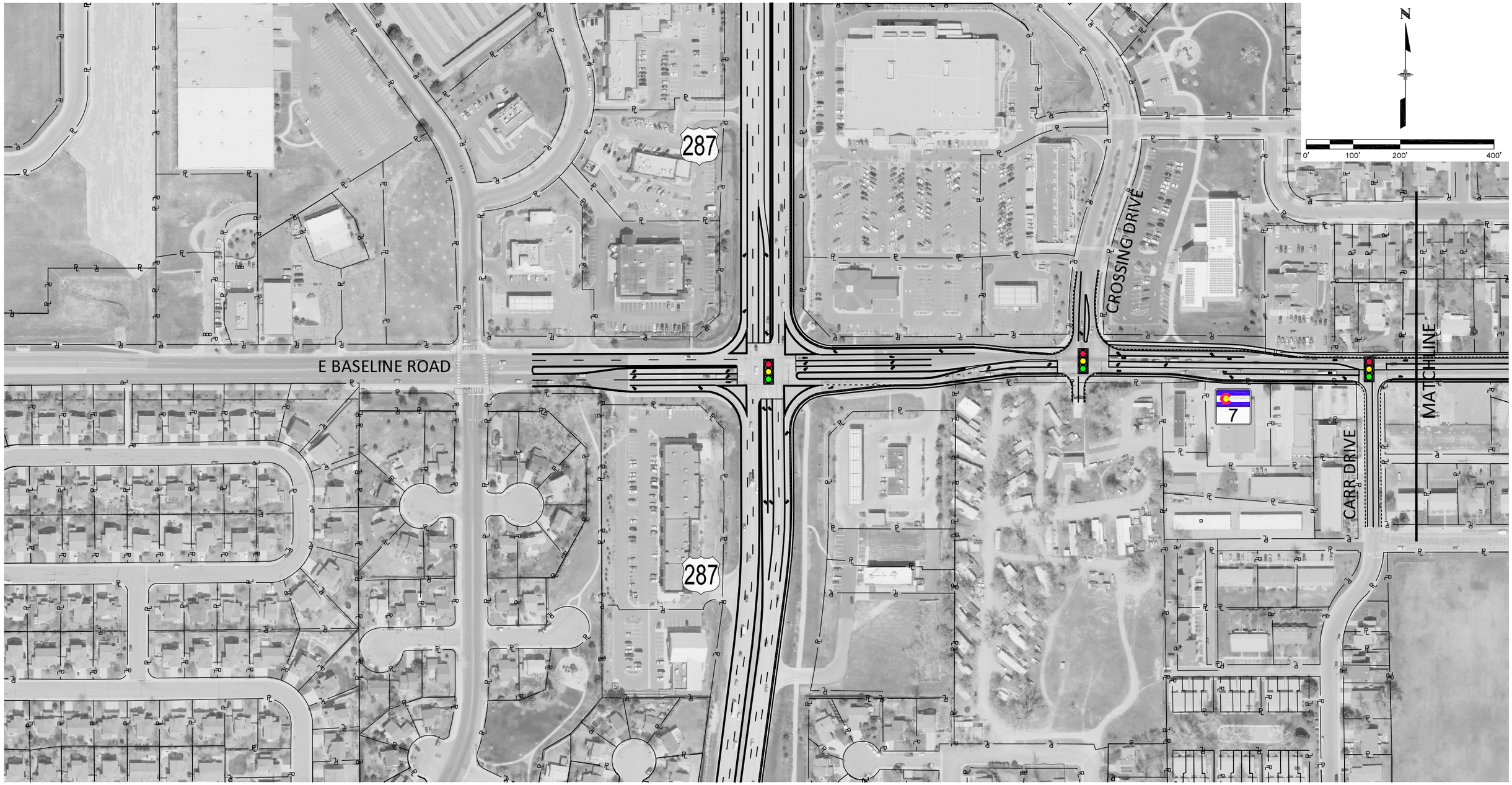
Bicycle Accommodation

If the shoulders are converted to peak period hard shoulder running lanes at a later date, the use of the shoulder for bicycle accommodation would not be feasible. To accommodate bicycle lanes, the travel lanes and shoulder lane could be restriped from 12-ft lanes to 11-ft lanes. On the four-lane section of the corridor, this would result in 3 additional feet (two travel lanes in each direction and the shoulder lane) which, along with the 2-ft gutter pan, could be used for the bike lane within the proposed cross-section (bike lane should be 5 ft minimum from face of curb). On the six-lane section of the corridor, the 11-ft travel lanes and shoulder plus the gutter pan would result in 6 feet for the bicycle lane.

Eastern Realignment

The City of Brighton envisions a possible realignment of SH 7 on the east end of the corridor as a longer term improvement. A consensus was not reached as to the location of this realignment; however, the city would like to recognize this option so that landowners and developers can be informed of potential future right-of-way requirements as they create development plans.

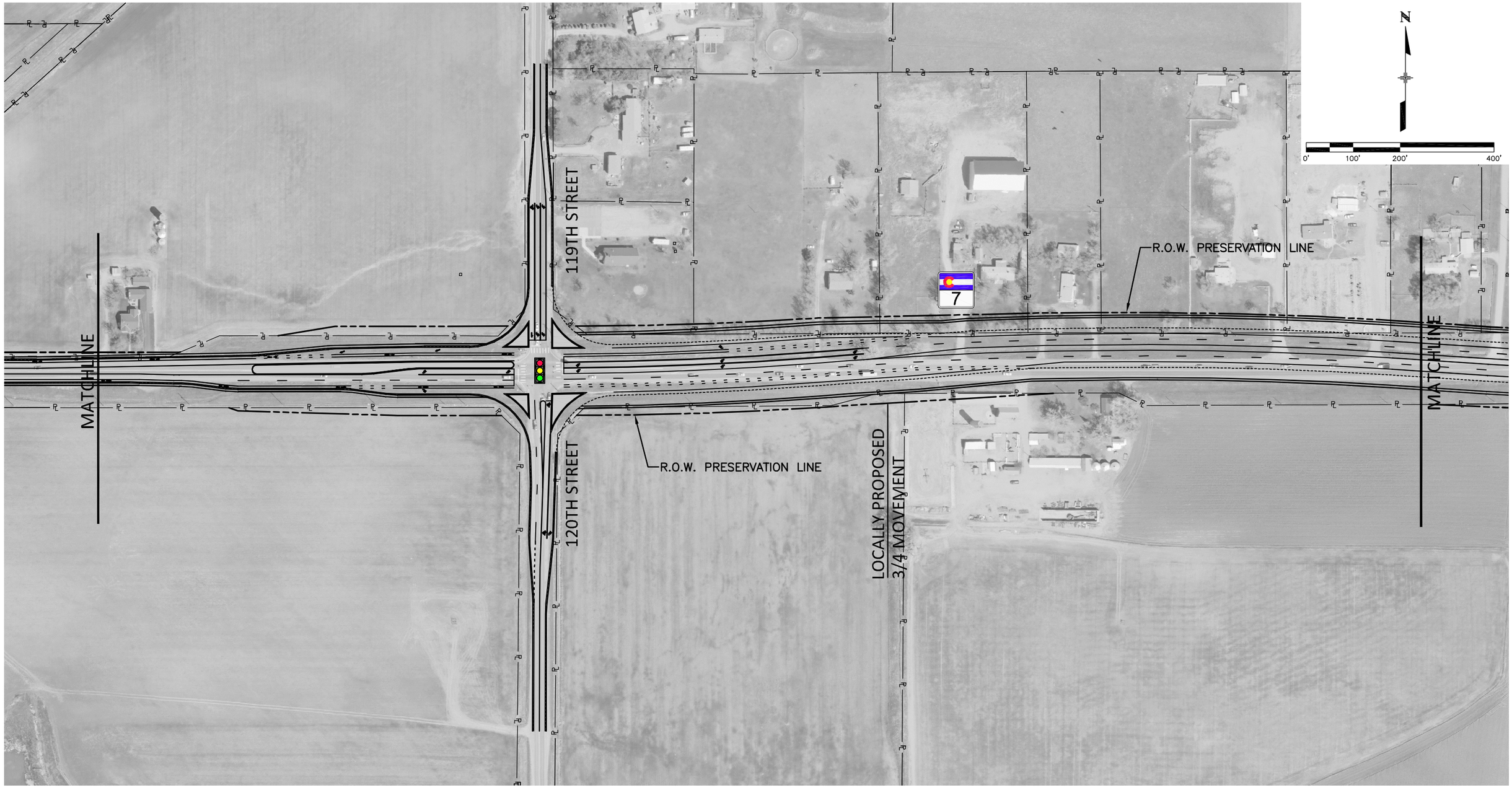
SH 7 Conceptual Design Plans



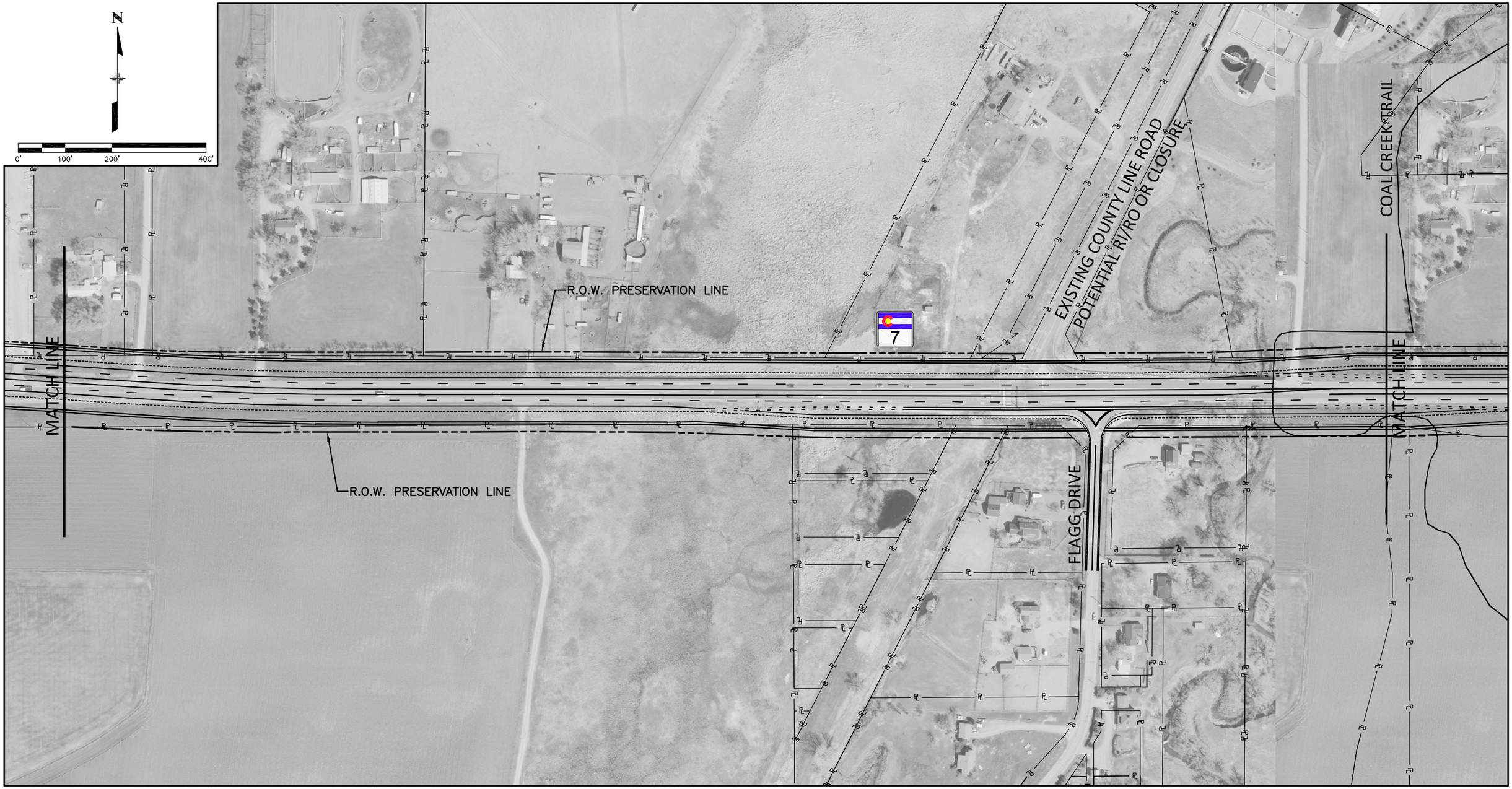
SH 7 Conceptual Design Plans

SH 7 Conceptual Design Plans

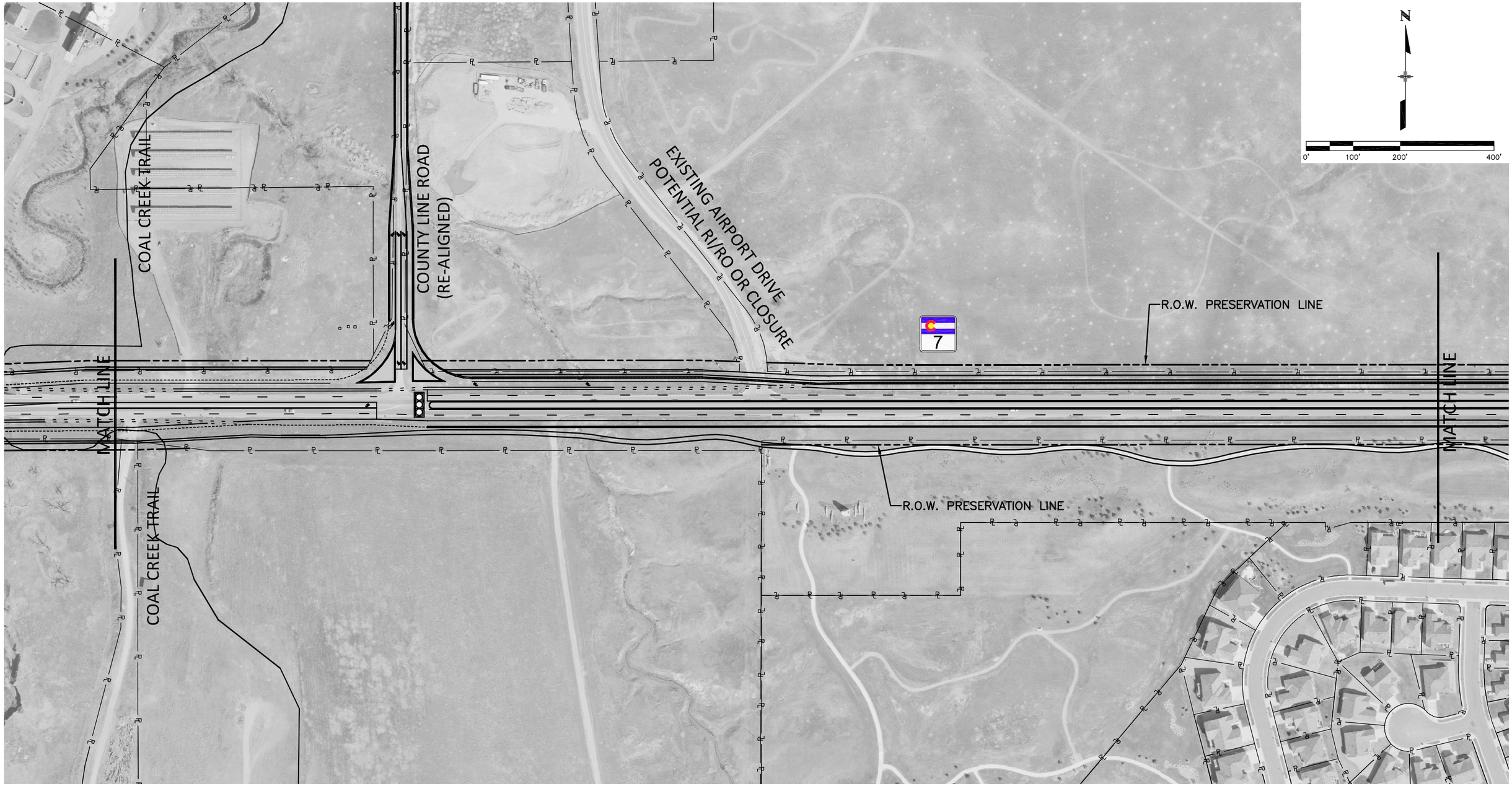
SH 7 Conceptual Design Plans

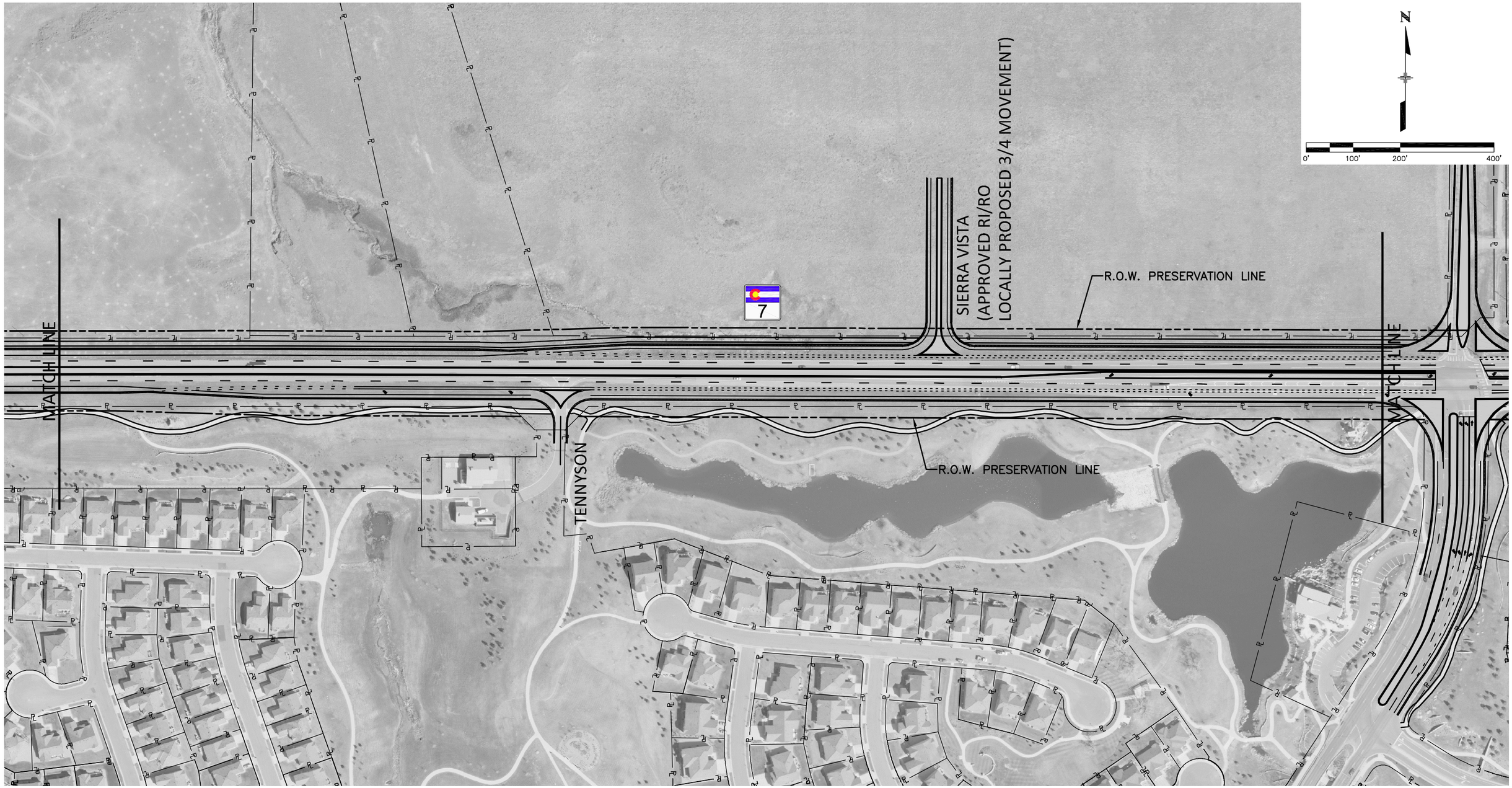


SH 7 Conceptual Design Plans



SH 7 Conceptual Design Plans



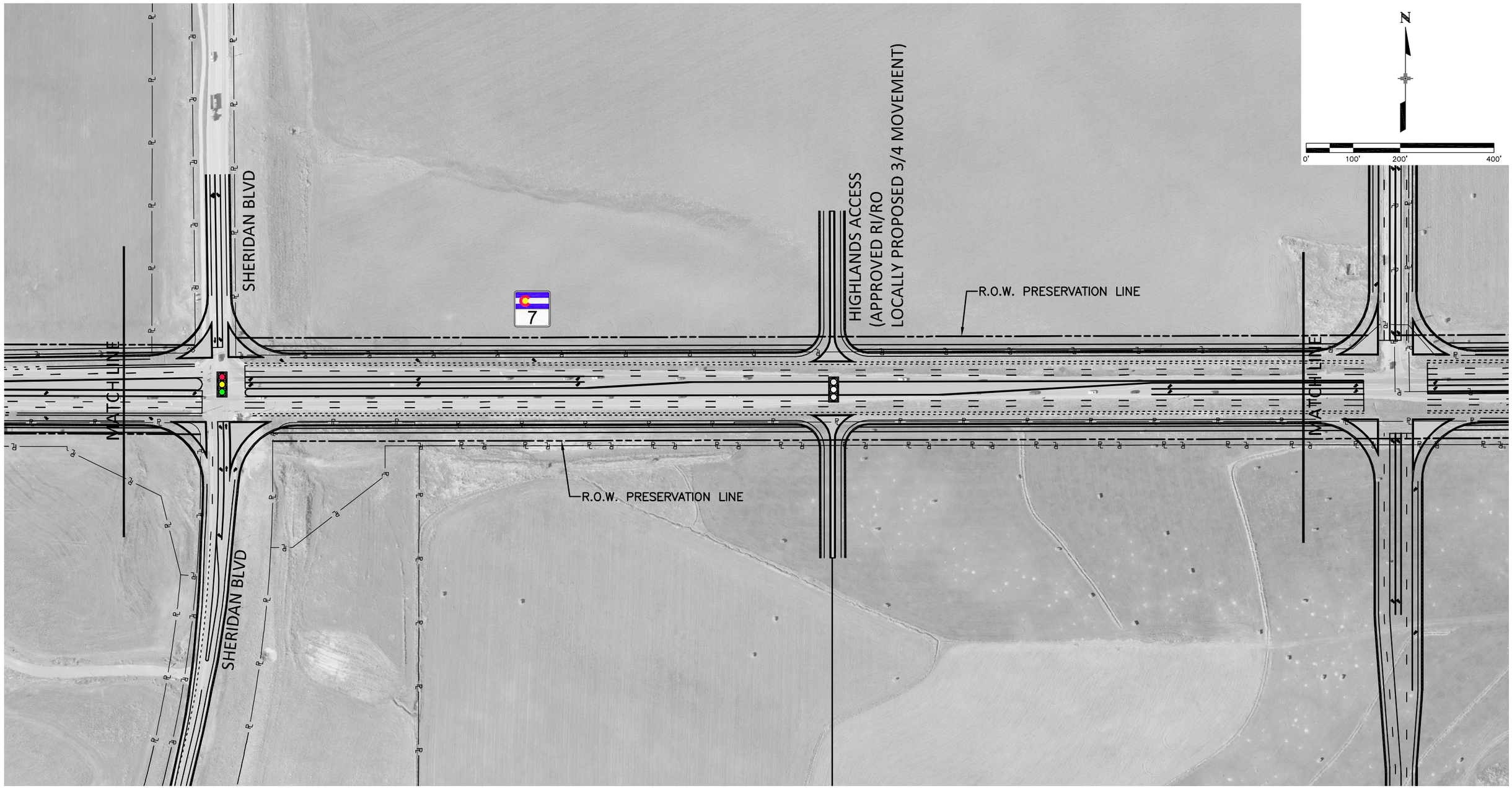

N
0'
100'
200'
400'
7
SIERRA VISTA
(APPROVED RI/RO
LOCALLY PROPOSED 3/4 MOVEMENT)
R.O.W. PRESERVATION LINE
MATCH LINE
MATCH LINE
TENNYSON
R.O.W. PRESERVATION LINE

SH 7 Conceptual Design Plans

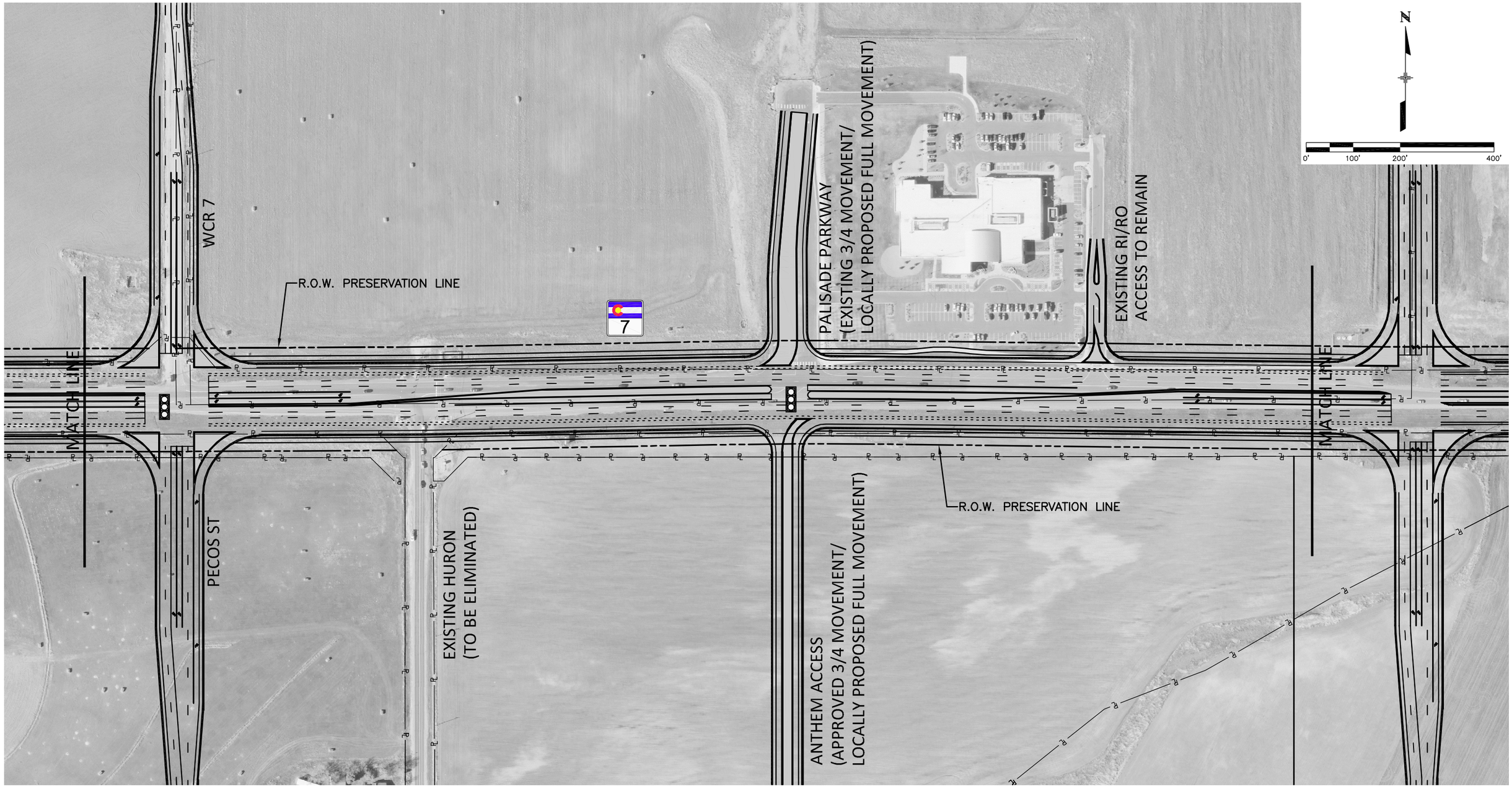
SH 7 Conceptual Design Plans

SH 7 Conceptual Design Plans

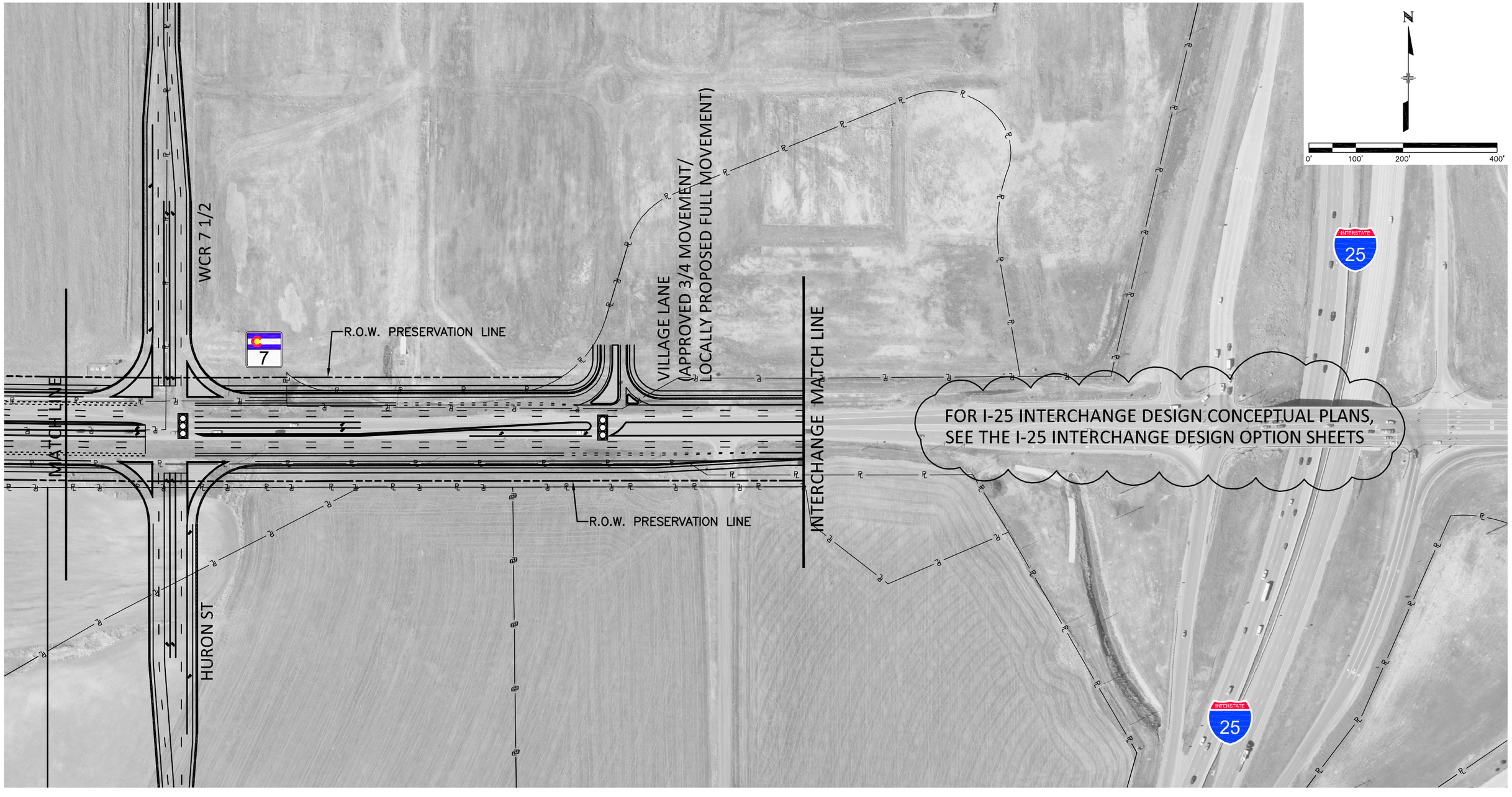
SH 7 Conceptual Design Plans



SH 7 Conceptual Design Plans

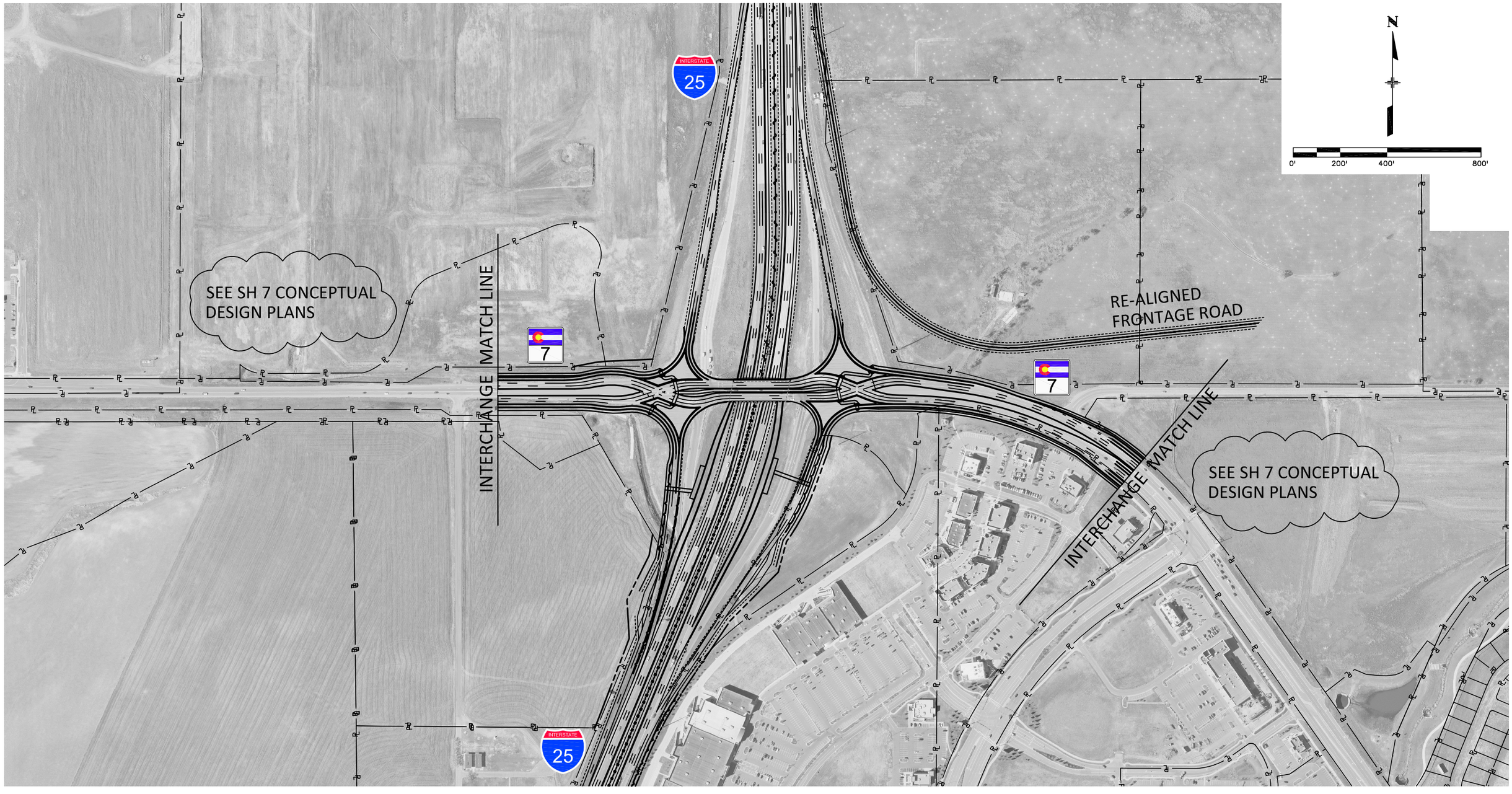


SH 7 Conceptual Design Plans



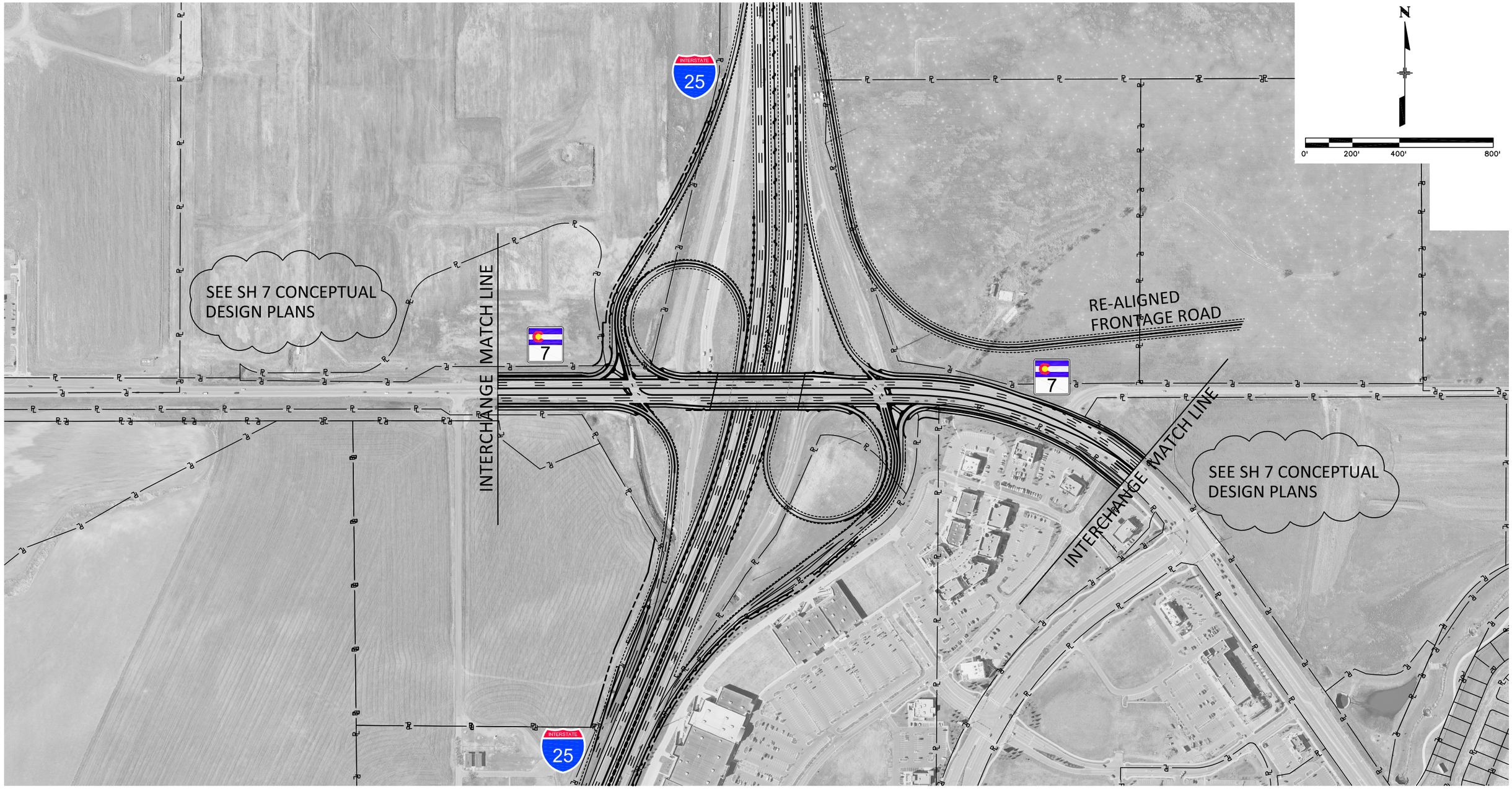
SH 7 PEL
Planning and Environmental Linkages Study

SH 7 & I-25 Interchange Design Option- Diverging Diamond Interchange (DDI)



SH 7 PEL
Planning and Environmental Linkages Study

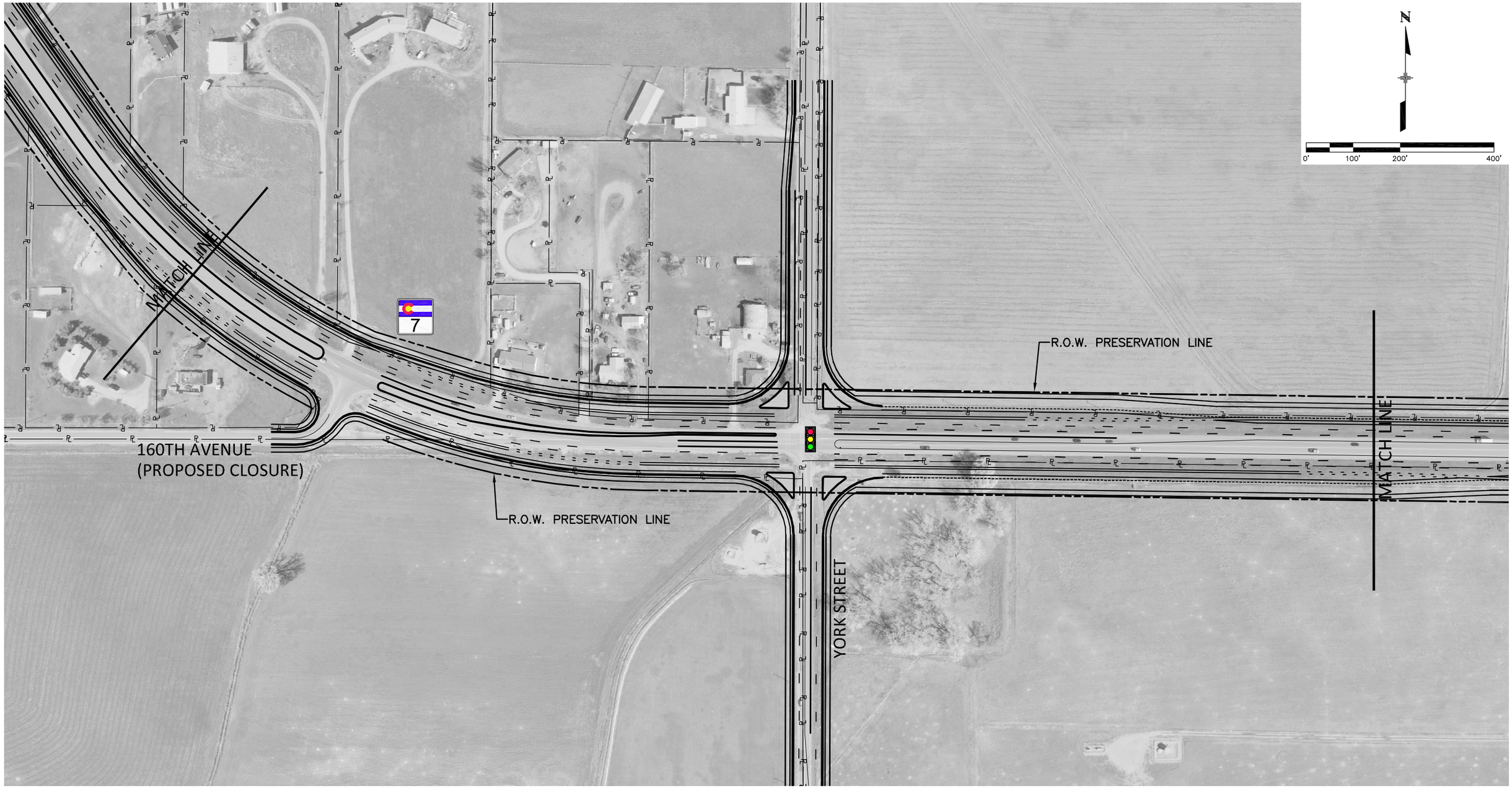
SH 7 & I-25 Interchange Design Option- Partial Cloverleaf



SH 7 Conceptual Design Plans

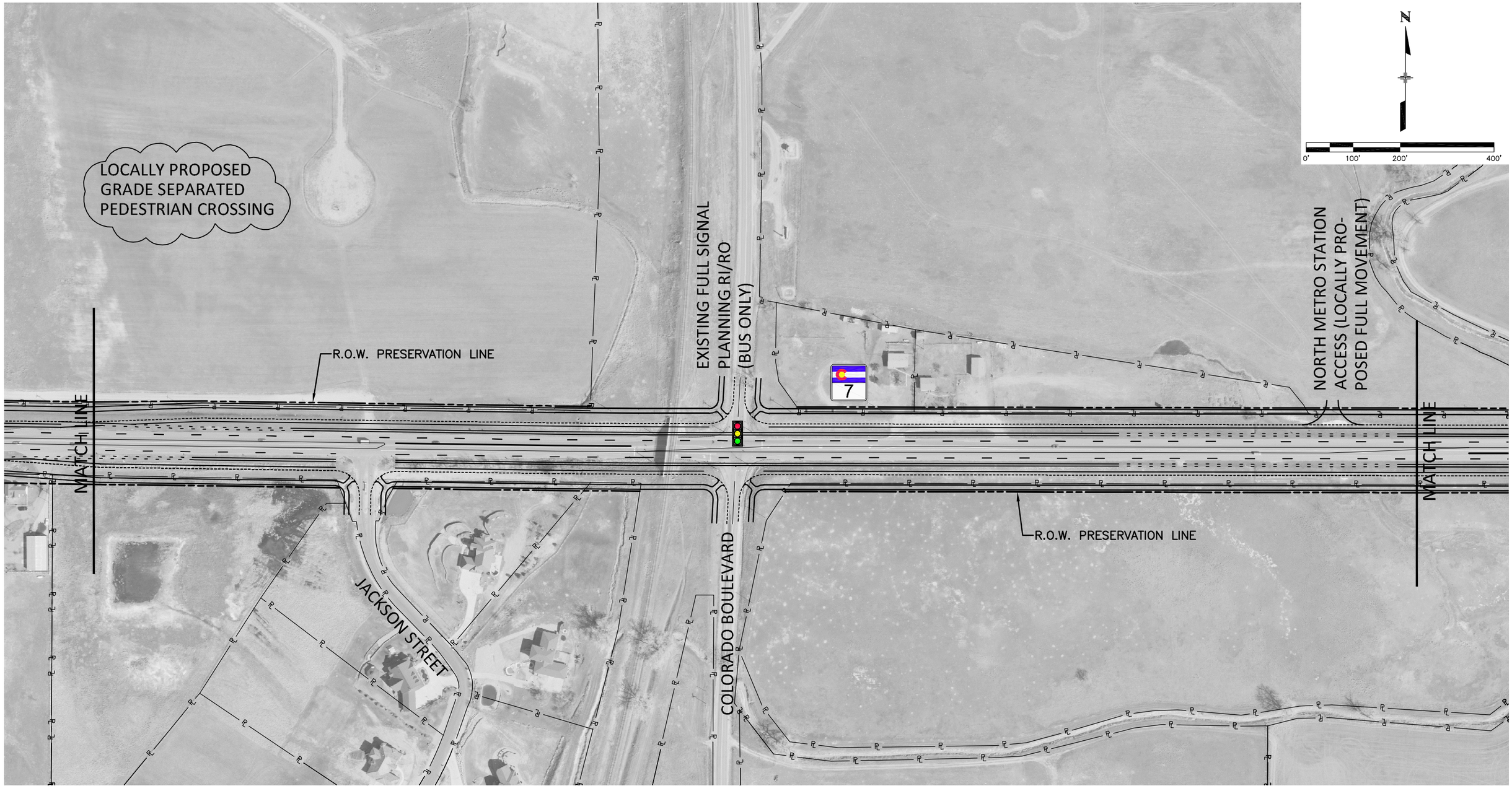
SH 7 Conceptual Design Plans

SH 7 Conceptual Design Plans

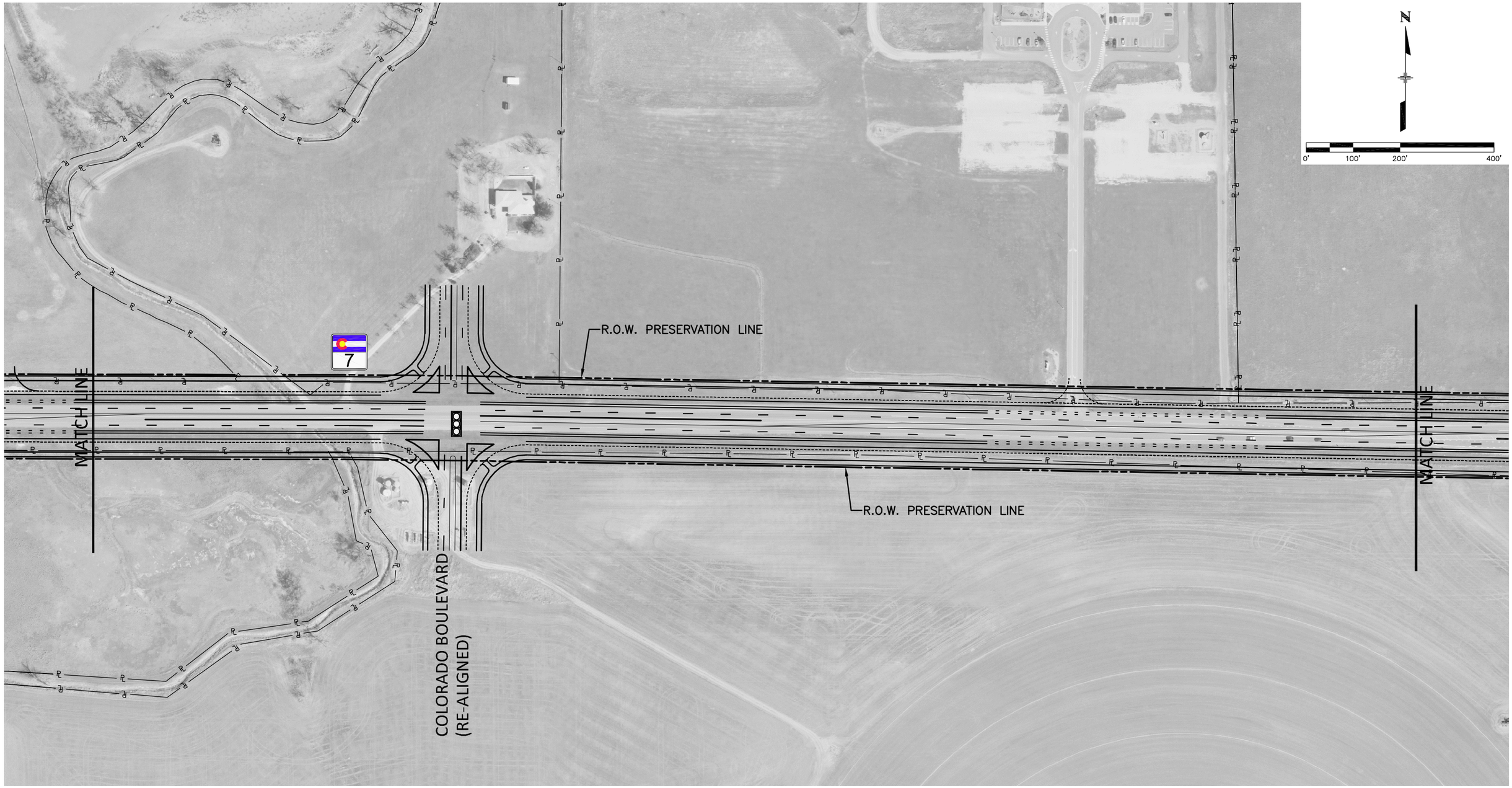


SH 7 Conceptual Design Plans

SH 7 Conceptual Design Plans



SH 7 Conceptual Design Plans



SH 7 Conceptual Design Plans

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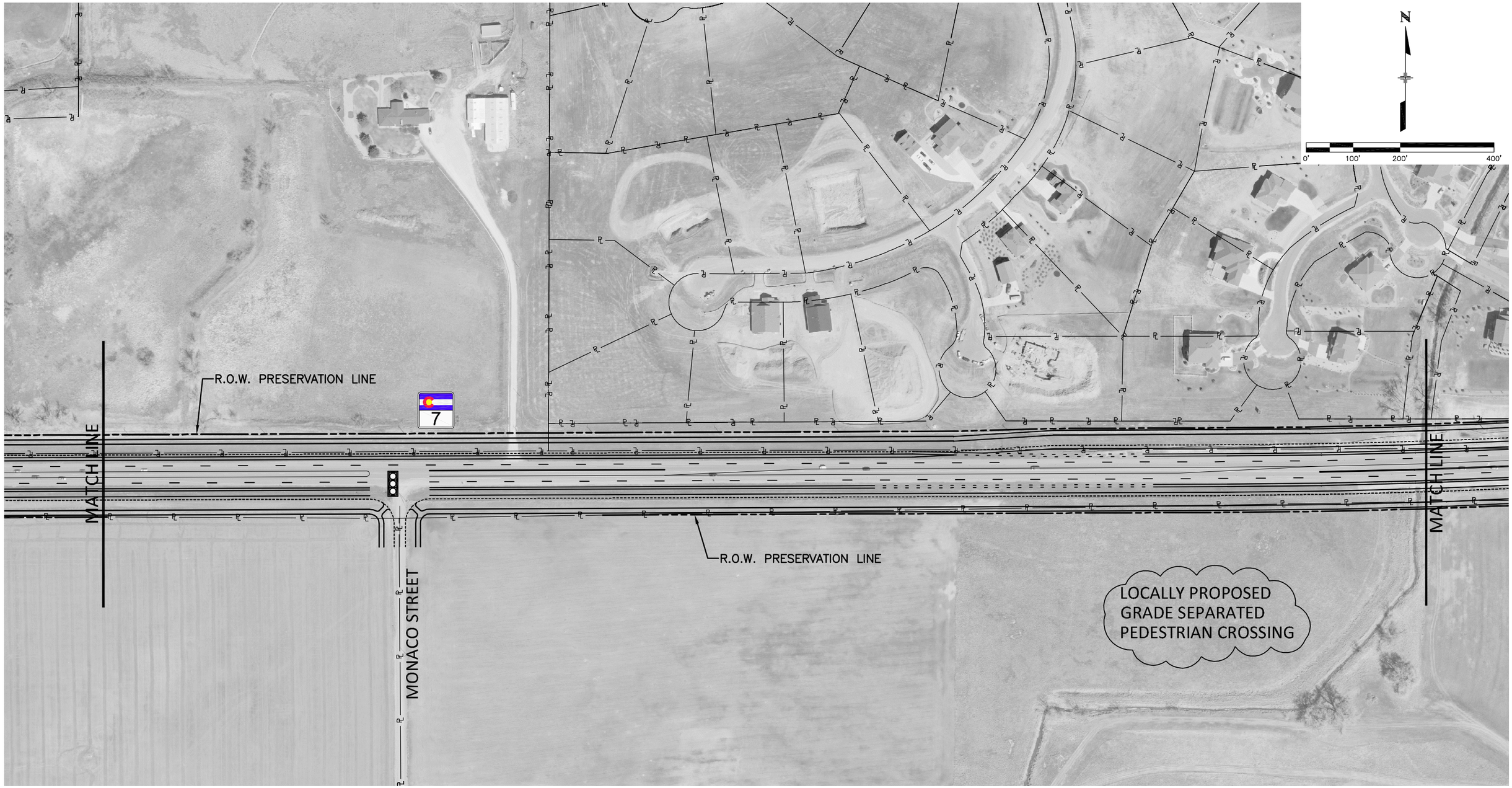

SH 7 Conceptual Design Plans

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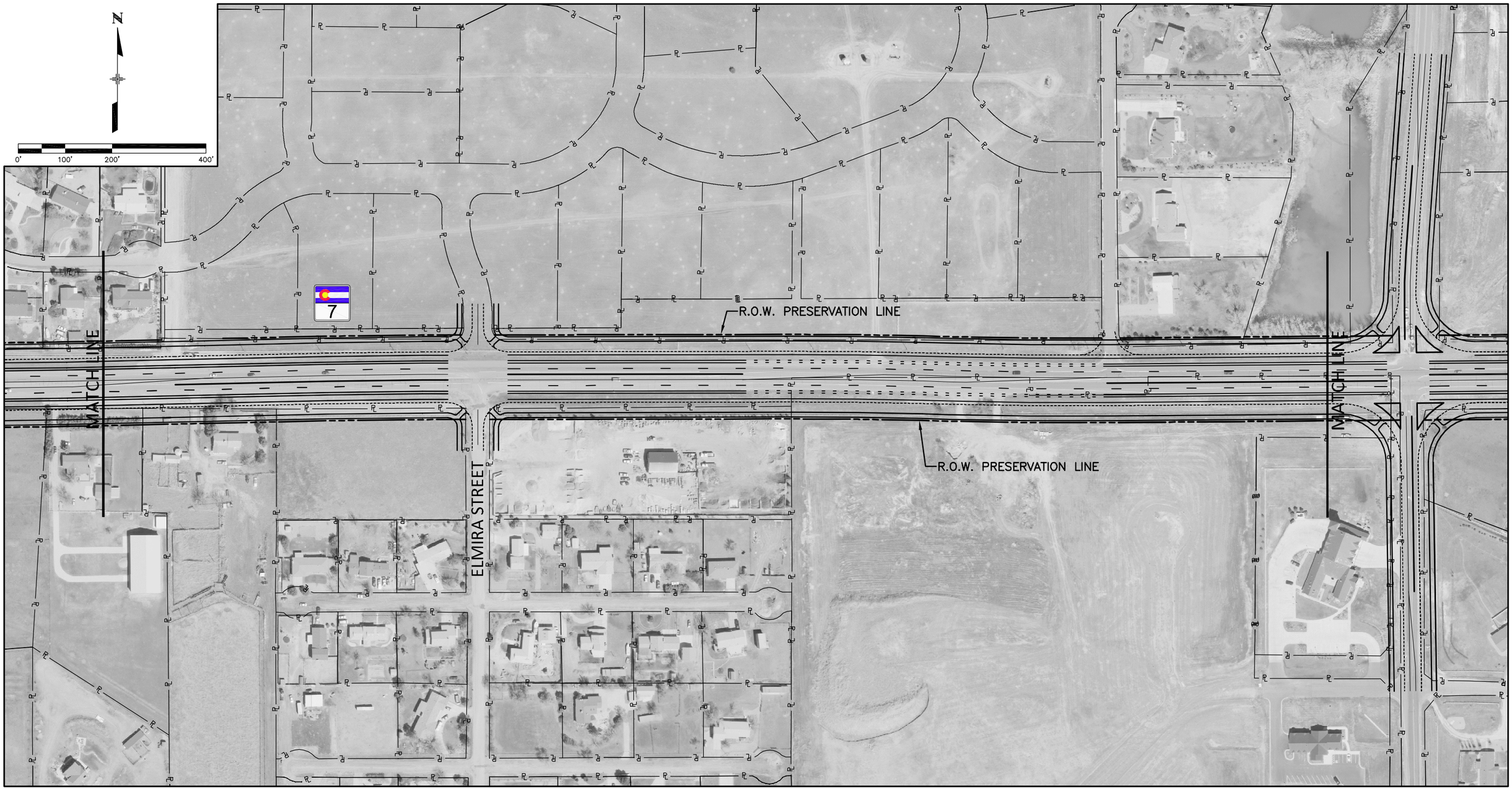
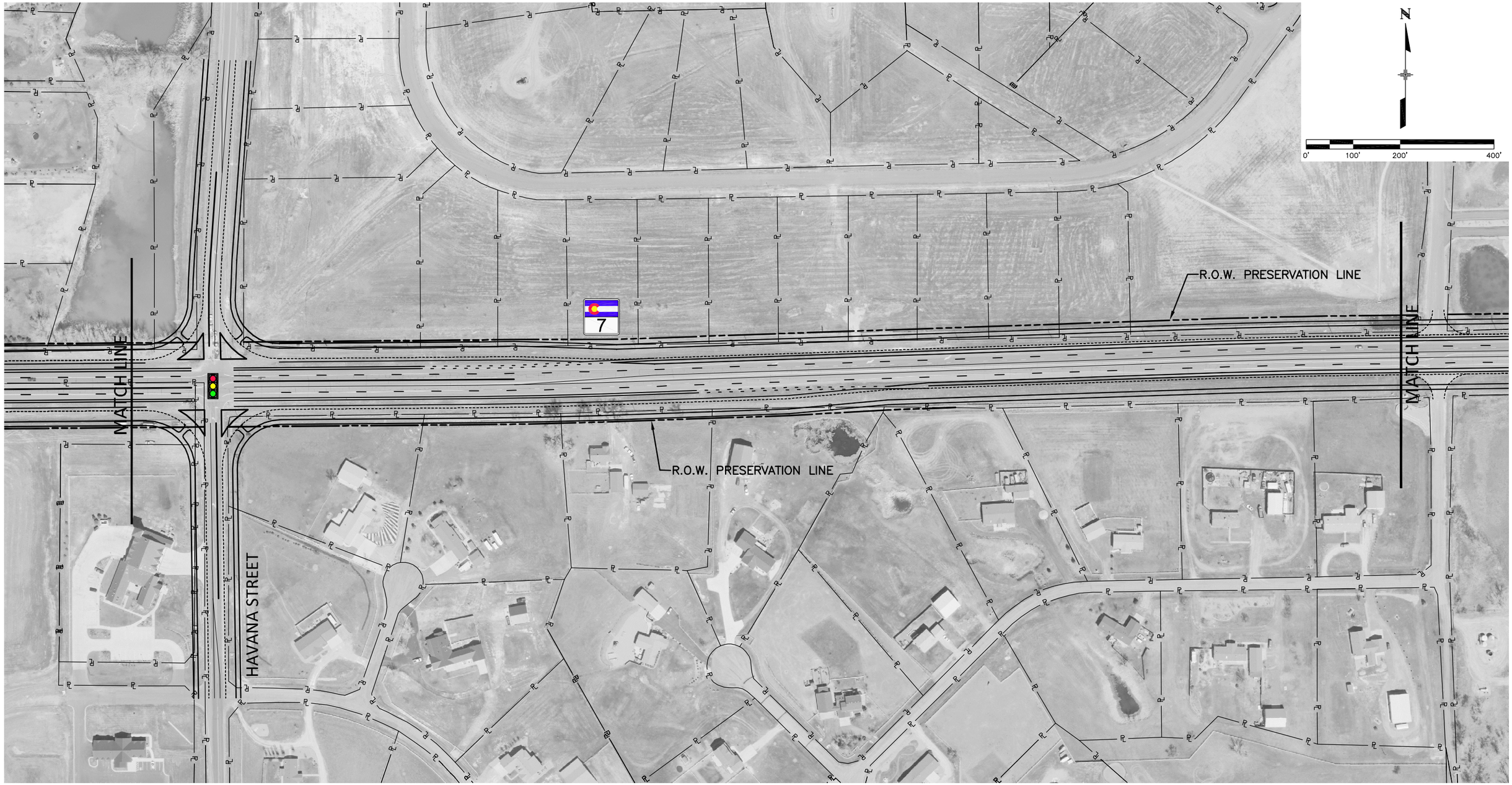


SH 7 Conceptual Design Plans



SH 7 Conceptual Design Plans

SH 7 Conceptual Design Plans

SH 7 Conceptual Design Plans

SH 7 PEL Study

Estimate of Conceptual Project Costs

Summary of Segment 1

SH 7 PEL Planning Environmental Linkage Study

Date Prepared: May 8, 2013

				Notes
1a	SH 7 (960' total; each side of Iowa Avenue)		738,000	*Urban Typical Section*
1b	SH 7 (Burlington Avenue to 119th/120th Street)		2,798,000	*Urban Typical Section*
	Total for Segment 1		**$3,536,000**	

SH 7 PEL Study

Estimate of Conceptual Project Costs

960' total; each side of Iowa Avenue

SH 7 PEL Planning Environmental Linkage Study

Date Prepared: May 8, 2013

	Input Factors			Notes
1	Length of Improvements	LF	960	
2	Approximate Width of Widening (North Side)	Feet	7	
3	Approximate Width of Widening (South Side)	Feet	7	
4	Approximate Width of Proposed ROW (North Side)	Feet	0	
5	Approximate Width of Proposed ROW (South Side)	Feet	0	
6	Number of Major Drainageways	#	0	
7	Required Bridge Widening	SF	0	
8	Number of Signalized Intersections	#	0	

	Output Factors		**(In 2012$)**	Notes
8	Urban Typical Section Project Costs		$738,000	*Preferred Typical Section*
9	Rural Typical Section Project Costs		$457,000	

SH 7 PEL Study

Estimate of Conceptual Project Costs

Urban Typical Section w/ Curb & Gutter

SH 7 PEL
Planning Environmental Linkage Study

Date Prepared: May 8, 2013

	Item		Unit Cost	Quantity	Extended Cost	*Notes*
1	Earthwork	CY	$12.33	0	$0	
2	Aggregate Base Course (Class 6)	TON	$15.45	894	$13,809	12-Inch Depth
3	Hot Mix Asphalt (Grade S)(100)(PG 64-22)	TON	$61.56	986	$60,674	12" Depth - Widening / 2" Overlay - Existing
4	Curb and Gutter	LF	$21.30	3,840	$81,792	Includes Median & Outside Edge C&G
5	Concrete Sidewalk	SY	$29.84	2,133	$63,659	10-Foot Shared Use Path
6	Concrete Box Culvert	Each	$500,000.00	0	$0	181-Foot Length ($2,700/lf Unit Price)
7	Bridge Widening	SF	$125.00	0	$0	
8	Traffic Signal	Each	$250,000.00	0	$0	
9					$0	
10					$0	
				Total Major Items	**$220,000**	

			% of Major Item Cost		
Total Major Items				**$220,000**	A
Drainage / Utilities	% of A		12.3%	$28,000	B-1
Environmental	% of A		9.6%	$22,000	B-2
Miscellaneous	% of A		2.7%	$6,000	B-3
Mobilization	% of A		15.4%	$34,000	B-4
Removals / Resets	% of A		13.0%	$29,000	B-5
Roadway	% of A		7.0%	$16,000	B-6
Signing and Striping	% of A		5.0%	$11,000	B-7
Traffic / Lighting / ITS	% of A		10.8%	$24,000	B-8
Traffic Control / Detour	% of A		20.6%	$46,000	B-9
Structural - Minor Structures / Walls	% of A		5.5%	$13,000	B-10
Bid Force Accounts	% of A		0.4%	$1,000	B-11
Total of Bid Construction Items				**$450,000**	B
Force Account - Misc.	% of B		6.8%	$31,000	C-1
Minor Contract Revisions	% of B		7.7%	$35,000	C-2
Total of Bid Construction Items & Force Account Items				**$516,000**	C
Design Engineering	% of C		10.0%	$52,000	D-1
Construction Engineering	% of C		17.0%	$88,000	D-2
Total Design & Construction Cost				**$656,000**	D
Right-of-Way	0	SF	$5	$0	E-1
Utilities	% of D		8.0%	$53,000	E-2
Total Project, Design & Construction Cost				**$709,000**	E
Contingency (Engineering, ROW & Utilities Only)	% of D1, D2, E1, E2		15.0%	**$29,000**	F
Total Project Cost Estimate				**$738,000**	G

SH 7 PEL Study

Estimate of Conceptual Project Costs

Rural Typical Section w/ Roadside Ditches

SH 7 PEL
Planning Environmental Linkage Study

Date Prepared: May 8, 2013

	Item		Unit Cost	Quantity	Extended Cost	*Notes*
1	Earthwork	CY	$12.33	0	$0	
2	Aggregate Base Course (Class 6)	TON	$15.45	894	$13,809	12-Inch Depth
3	Hot Mix Asphalt (Grade S)(100)(PG 64-22)	TON	$61.56	986	$60,674	12" Depth - Widening / 2" Overlay - Existing
4	Concrete Sidewalk	SY	$29.84	2,133	$63,659	10-Foot Shared Use Path
5	Concrete Box Culvert	Each	$500,000.00	0	$0	181-Foot Length ($2,700/lf Unit Price)
6	Bridge Widening	SF	$125.00	0	$0	
7	Traffic Signal	Each	$250,000.00	0	$0	
8					$0	
9					$0	
10					$0	
				Total Major Items	**$139,000**	

			% of Major Item Cost		
Total Major Items				**$139,000**	A
Drainage / Utilities	% of A		6.4%	$9,000	B-1
Environmental	% of A		9.6%	$14,000	B-2
Miscellaneous	% of A		2.7%	$4,000	B-3
Mobilization	% of A		15.4%	$22,000	B-4
Removals / Resets	% of A		13.0%	$19,000	B-5
Roadway	% of A		7.0%	$10,000	B-6
Signing and Striping	% of A		5.0%	$7,000	B-7
Traffic / Lighting / ITS	% of A		10.8%	$16,000	B-8
Traffic Control / Detour	% of A		20.6%	$29,000	B-9
Structural - Minor Structures / Walls	% of A		5.5%	$8,000	B-10
Bid Force Accounts	% of A		0.4%	$1,000	B-11
Total of Bid Construction Items				**$278,000**	B
Force Account - Misc.	% of B		6.8%	$19,000	C-1
Minor Contract Revisions	% of B		7.7%	$22,000	C-2
Total of Bid Construction Items & Force Account Items				**$319,000**	C
Design Engineering	% of C		10.0%	$32,000	D-1
Construction Engineering	% of C		17.0%	$55,000	D-2
Total Design & Construction Cost				**$406,000**	D
Right-of-Way	0	SF	$5	$0	E-1
Utilities	% of D		8.0%	$33,000	E-2
Total Project, Design & Construction Cost				**$439,000**	E
Contingency (Engineering, ROW & Utilities Only)	% of D1, D2, E1, E2		15.0%	**$18,000**	F
Total Project Cost Estimate				**$457,000**	G

SH 7 PEL Study

Estimate of Conceptual Project Costs

from Burlington Avenue to 119th/120th Street

SH 7 PEL Planning Environmental Linkage Study

Date Prepared: May 8, 2013

	Input Factors			Notes
1	Length of Improvements	LF	1,500	
2	Approximate Width of Widening (North Side)	Feet	12	
3	Approximate Width of Widening (South Side)	Feet	15	
4	Approximate Width of Proposed ROW (North Side)	Feet	15	
5	Approximate Width of Proposed ROW (South Side)	Feet	10	
6	Number of Major Drainageways	#	0	
7	Required Bridge Widening	SF	0	
8	Number of Signalized Intersections	#	1	

	Output Factors		(In 2012$)	Notes
8	Urban Typical Section Project Costs		$2,798,000	*Preferred Typical Section*
9	Rural Typical Section Project Costs		$2,539,000	

SH 7 PEL Study

Estimate of Conceptual Project Costs

Urban Typical Section w/ Curb & Gutter

SH 7 PEL Planning Environmental Linkage Study

Date Prepared: May 8, 2013

	Item		Unit Cost	Quantity	Extended Cost	Notes
1	Earthwork	CY	$12.33	3,889	$47,950	
2	Aggregate Base Course (Class 6)	TON	$15.45	2,693	$41,611	12-Inch Depth
3	Hot Mix Asphalt (Grade S)(100)(PG 64-22)	TON	$61.56	3,410	$209,920	12" Depth - Widening / 2" Overlay - Existing
4	Curb and Gutter	LF	$21.30	6,000	$127,800	Includes Median & Outside Edge C&G
5	Concrete Sidewalk	SY	$29.84	3,333	$99,467	10-Foot Shared Use Path
6	Concrete Box Culvert	Each	$500,000.00	0	$0	181-Foot Length ($2,700/lf Unit Price)
7	Bridge Widening	SF	$125.00	0	$0	
8	Traffic Signal	Each	$250,000.00	1	$250,000	
9					$0	
10					$0	
				Total Major Items	**$777,000**	

			% of Major Item Cost		
Total Major Items				**$777,000**	A
Drainage / Utilities	% of A		12.3%	$96,000	B-1
Environmental	% of A		9.6%	$75,000	B-2
Miscellaneous	% of A		2.7%	$21,000	B-3
Mobilization	% of A		15.4%	$120,000	B-4
Removals / Resets	% of A		13.0%	$102,000	B-5
Roadway	% of A		7.0%	$55,000	B-6
Signing and Striping	% of A		5.0%	$39,000	B-7
Traffic / Lighting / ITS	% of A		10.8%	$84,000	B-8
Traffic Control / Detour	% of A		20.6%	$161,000	B-9
Structural - Minor Structures / Walls	% of A		5.5%	$43,000	B-10
Bid Force Accounts	% of A		0.4%	$4,000	B-11
Total of Bid Construction Items				**$1,577,000**	B
Force Account - Misc.	% of B		6.8%	$108,000	C-1
Minor Contract Revisions	% of B		7.7%	$122,000	C-2
Total of Bid Construction Items & Force Account Items				**$1,807,000**	C
Design Engineering	% of C		10.0%	$181,000	D-1
Construction Engineering	% of C		17.0%	$308,000	D-2
Total Design & Construction Cost				**$2,296,000**	D
Right-of-Way	37,500	SF	$5	$188,000	E-1
Utilities	% of D		8.0%	$184,000	E-2
Total Project, Design & Construction Cost				**$2,668,000**	E
Contingency (Engineering, ROW & Utilities Only)	% of D1, D2, E1, E2		15.0%	**$130,000**	F
Total Project Cost Estimate				**$2,798,000**	G

SH 7 PEL Study

Estimate of Conceptual Project Costs

Rural Typical Section w/ Roadside Ditches

SH 7 PEL
Planning Environmental Linkage Study

Date Prepared: May 8, 2013

	Item		Unit Cost	Quantity	Extended Cost	*Notes*
1	Earthwork	CY	$12.33	9,556	$117,820	
2	Aggregate Base Course (Class 6)	TON	$15.45	2,693	$41,611	12-Inch Depth
3	Hot Mix Asphalt (Grade S)(100)(PG 64-22)	TON	$61.56	3,410	$209,920	12" Depth - Widening / 2" Overlay - Existing
4	Concrete Sidewalk	SY	$29.84	3,333	$99,467	10-Foot Shared Use Path
5	Concrete Box Culvert	Each	$500,000.00	0	$0	181-Foot Length ($2,700/lf Unit Price)
6	Bridge Widening	SF	$125.00	0	$0	
7	Traffic Signal	Each	$250,000.00	1	$250,000	
8					$0	
9					$0	
10					$0	
				Total Major Items	**$719,000**	

			% of Major Item Cost		
Total Major Items				**$719,000**	**A**
Drainage / Utilities	% of A		6.4%	$47,000	**B-1**
Environmental	% of A		9.6%	$70,000	**B-2**
Miscellaneous	% of A		2.7%	$20,000	**B-3**
Mobilization	% of A		15.4%	$111,000	**B-4**
Removals / Resets	% of A		13.0%	$94,000	**B-5**
Roadway	% of A		7.0%	$51,000	**B-6**
Signing and Striping	% of A		5.0%	$36,000	**B-7**
Traffic / Lighting / ITS	% of A		10.8%	$78,000	**B-8**
Traffic Control / Detour	% of A		20.6%	$149,000	**B-9**
Structural - Minor Structures / Walls	% of A		5.5%	$40,000	**B-10**
Bid Force Accounts	% of A		0.4%	$3,000	**B-11**
Total of Bid Construction Items				**$1,418,000**	**B**
Force Account - Misc.	% of B		6.8%	$97,000	**C-1**
Minor Contract Revisions	% of B		7.7%	$110,000	**C-2**
Total of Bid Construction Items & Force Account Items				**$1,625,000**	**C**
Design Engineering	% of C		10.0%	$163,000	**D-1**
Construction Engineering	% of C		17.0%	$277,000	**D-2**
Total Design & Construction Cost				**$2,065,000**	**D**
Right-of-Way	37,500	SF	$5	$188,000	**E-1**
Utilities	% of D		8.0%	$166,000	**E-2**
Total Project, Design & Construction Cost				**$2,419,000**	**E**
Contingency (Engineering, ROW & Utilities Only)	% of D1, D2, E1, E2		15.0%	**$120,000**	**F**
Total Project Cost Estimate				**$2,539,000**	**G**

SH 7 PEL Study

Estimate of Conceptual Project Costs

Intersection of SH 7 and US 287

SH 7 PEL
Planning Environmental Linkage Study

Date Prepared: May 8, 2013

	Input Factors			*Notes*
1	Length of Auxiliary Lanes (Combined Western/Eastern Legs)	LF	825	
2	Approximate Width of Widening (North Side)	Feet	6	
3	Approximate Width of Widening (South Side)	Feet	8	
4	Approximate Width of Proposed ROW (North Side)	Feet	0	*Match Existing ROW*
5	Approximate Width of Proposed ROW (South Side)	Feet	0	*Match Existing ROW*
6	Length of Cross Street Widening (Combined Northern/Southern Legs)	LF	0	*Match Existing*
7	Approximate Width of Widening (West Side)	Feet	0	
8	Approximate Width of Widening (East Side)	Feet	0	
9	Approximate Width of Proposed ROW (West Side)	Feet	0	
10	Approximate Width of Proposed ROW (East Side)	Feet	0	
11	Is the Intersection Signalized?	Yes/No	1	

	Output Factors		(In 2012$)	*Notes*
8	Urban Typical Section Project Costs		$866,000.00	*Preferred Typical Section*
9	Rural Typical Section Project Costs		$762,000.00	

SH 7 PEL Study

Estimate of Conceptual Project Costs

Urban Typical Section w/ Curb & Gutter

SH 7 PEL
Planning Environmental Linkage Study

Date Prepared: May 8, 2013

	Item		Unit Cost	Quantity	Extended Cost	*Notes*
1	Earthwork	CY	$12.33	1,344	$16,577	
2	Aggregate Base Course (Class 6)	TON	$15.45	768	$11,867	12-Inch Depth
3	Hot Mix Asphalt (Grade S)(100)(PG 64-22)	TON	$61.56	1,069	$65,797	10" Depth - Widening / 2" Overlay - Existing
4	Curb and Gutter	LF	$21.30	3,300	$70,290	Includes Outside Edge & Median C&G
5	Concrete Sidewalk	SY	$29.84	917	$27,353	5-Foot Sidewalk (Both Sides)
6	Traffic Signal	Each	$250,000.00	1	$250,000	
7					$0	
8					$0	
9					$0	
10					$0	
				Total Major Items	**$442,000**	

		% of Major Item Cost		
Total Major Items			**$442,000**	A
Drainage / Utilities	% of A	8.0%	$36,000	B-1
Environmental	% of A	3.0%	$14,000	B-2
Miscellaneous	% of A	1.5%	$7,000	B-3
Mobilization	% of A	9.3%	$42,000	B-4
Removals / Resets	% of A	3.7%	$17,000	B-5
Roadway	% of A	0.4%	$2,000	B-6
Signing and Striping	% of A	2.1%	$10,000	B-7
Traffic / Lighting / ITS	% of A	3.0%	$14,000	B-8
Traffic Control / Detour	% of A	9.6%	$43,000	B-9
Structural - Minor Structures / Walls	% of A	1.0%	$5,000	B-10
Bid Force Accounts	% of A	1.4%	$7,000	B-11
Total of Bid Construction Items			**$639,000**	B
Force Account - Misc.	% of B	2.6%	$17,000	C-1
Minor Contract Revisions	% of B	4.0%	$26,000	C-2
Total of Bid Construction Items & Force Account Items			**$682,000**	C
Design Engineering	% of C	8.0%	$55,000	D-1
Construction Engineering	% of C	17.0%	$116,000	D-2
Total Design & Construction Cost			**$853,000**	D
Right-of-Way	0 SF	$5	$0	E-1
Utilities	% of D	1.0%	$9,000	E-2
Total Project, Design & Construction Cost			**$862,000**	E
Contingency (Engineering, ROW & Utilities Only)	% of D1, D2, E1, E2	2.0%	**$4,000**	F
Total Project Cost Estimate			**$866,000**	G

SH 7 PEL Study

Estimate of Conceptual Project Costs

Rural Typical Section w/ Roadside Ditches

SH 7 PEL
Planning Environmental Linkage Study

Date Prepared: May 8, 2013

	Item		Unit Cost	Quantity	Extended Cost	*Notes*
1	Earthwork	CY	$12.33	3,667	$45,210	
2	Aggregate Base Course (Class 6)	TON	$15.45	768	$11,867	12-Inch Depth
3	Hot Mix Asphalt (Grade S)(100)(PG 64-22)	TON	$61.56	1,069	$65,797	10" Depth - Widening / 2" Overlay - Existing
4	Concrete Sidewalk	SY	$29.84	917	$27,353	5-Foot Sidewalk (Both Sides)
5	Traffic Signal	Each	$250,000.00	1	$250,000	
6					$0	
7					$0	
8					$0	
9					$0	
10					$0	
				Total Major Items	**$401,000**	

		% of Major Item Cost		
Total Major Items			**$401,000**	A
Drainage / Utilities	% of A	5.4%	$22,000	B-1
Environmental	% of A	3.0%	$13,000	B-2
Miscellaneous	% of A	1.5%	$7,000	B-3
Mobilization	% of A	9.3%	$38,000	B-4
Removals / Resets	% of A	3.7%	$15,000	B-5
Roadway	% of A	0.4%	$2,000	B-6
Signing and Striping	% of A	2.1%	$9,000	B-7
Traffic / Lighting / ITS	% of A	1.0%	$5,000	B-8
Traffic Control / Detour	% of A	9.6%	$39,000	B-9
Structural - Minor Structures / Walls	% of A	1.0%	$5,000	B-10
Bid Force Accounts	% of A	1.4%	$6,000	B-11
Total of Bid Construction Items			**$562,000**	B
Force Account - Misc.	% of B	2.6%	$15,000	C-1
Minor Contract Revisions	% of B	4.0%	$23,000	C-2
Total of Bid Construction Items & Force Account Items			**$600,000**	C
Design Engineering	% of C	8.0%	$48,000	D-1
Construction Engineering	% of C	17.0%	$102,000	D-2
Total Design & Construction Cost			**$750,000**	D
Right-of-Way	0 SF	$5	$0	E-1
Utilities	% of D	1.0%	$8,000	E-2
Total Project, Design & Construction Cost			**$758,000**	E
Contingency (Engineering, ROW & Utilities Only)	% of D1, D2, E1, E2	2.0%	**$4,000**	F
Total Project Cost Estimate			**$762,000**	G

SH 7 PEL Study

Estimate of Conceptual Project Costs

Intersection of SH 7 and Iowa Avenue

SH 7 PEL
Planning Environmental Linkage Study

Date Prepared: May 8, 2013

	Input Factors			Notes
1	Length of Auxiliary Lanes (Combined Western/Eastern Legs)	LF	900	
2	Approximate Width of Widening (North Side)	Feet	7	
3	Approximate Width of Widening (South Side)	Feet	7	
4	Approximate Width of Proposed ROW (North Side)	Feet	0	*Match Existing ROW*
5	Approximate Width of Proposed ROW (South Side)	Feet	0	*Match Existing ROW*
6	Length of Cross Street Widening (Combined Northern/Southern Legs)	LF	0	*Match Existing*
7	Approximate Width of Widening (West Side)	Feet	0	
8	Approximate Width of Widening (East Side)	Feet	0	
9	Approximate Width of Proposed ROW (West Side)	Feet	0	
10	Approximate Width of Proposed ROW (East Side)	Feet	0	
11	Is the Intersection Signalized?	Yes/No	0	

	Output Factors		(In 2012$)	Notes
8	Urban Typical Section Project Costs		$327,000.00	*Preferred Typical Section*
9	Rural Typical Section Project Costs		$301,000.00	

SH 7 PEL Study

Estimate of Conceptual Project Costs

Urban Typical Section w/ Curb & Gutter

SH 7 PEL
Planning Environmental Linkage Study

Date Prepared: May 8, 2013

	Item		Unit Cost	Quantity	Extended Cost	Notes
1	Earthwork	CY	$12.33	1,467	$18,084	
2	Aggregate Base Course (Class 6)	TON	$15.45	838	$12,946	12-Inch Depth
3	Hot Mix Asphalt (Grade S)(100)(PG 64-22)	TON	$61.56	1,034	$63,653	10" Depth - Widening / 2" Overlay - Existing
4	Curb and Gutter	LF	$21.30	1,800	$38,340	Includes Outside Edge C&G
5	Concrete Sidewalk	SY	$29.84	1,000	$29,840	5-Foot Sidewalk (Both Sides)
6	Traffic Signal	Each	$250,000.00	0	$0	
7					$0	
8					$0	
9					$0	
10					$0	
				Total Major Items	**$163,000**	

	% of Major Item Cost			
Total Major Items			**$163,000**	**A**
Drainage / Utilities	% of A	8.0%	$14,000	**B-1**
Environmental	% of A	3.0%	$5,000	**B-2**
Miscellaneous	% of A	1.5%	$3,000	**B-3**
Mobilization	% of A	9.3%	$16,000	**B-4**
Removals / Resets	% of A	3.7%	$7,000	**B-5**
Roadway	% of A	0.4%	$1,000	**B-6**
Signing and Striping	% of A	2.1%	$4,000	**B-7**
Traffic / Lighting / ITS	% of A	3.0%	$5,000	**B-8**
Traffic Control / Detour	% of A	9.6%	$16,000	**B-9**
Structural - Minor Structures / Walls	% of A	1.0%	$2,000	**B-10**
Bid Force Accounts	% of A	1.4%	$3,000	**B-11**
Total of Bid Construction Items			**$239,000**	**B**
Force Account - Misc.	% of B	2.6%	$7,000	**C-1**
Minor Contract Revisions	% of B	4.0%	$10,000	**C-2**
Total of Bid Construction Items & Force Account Items			**$256,000**	**C**
Design Engineering	% of C	8.0%	$21,000	**D-1**
Construction Engineering	% of C	17.0%	$44,000	**D-2**
Total Design & Construction Cost			**$321,000**	**D**
Right-of-Way	0 SF	$5	$0	**E-1**
Utilities	% of D	1.0%	$4,000	**E-2**
Total Project, Design & Construction Cost			**$325,000**	**E**
Contingency (Engineering, ROW & Utilities Only)	% of D1, D2, E1, E2	2.0%	**$2,000**	**F**
Total Project Cost Estimate			**$327,000**	**G**

SH 7 PEL Study

Estimate of Conceptual Project Costs

Rural Typical Section w/ Roadside Ditches

SH 7 PEL
Planning Environmental Linkage Study

Date Prepared: May 8, 2013

	Item		Unit Cost	Quantity	Extended Cost	*Notes*
1	Earthwork	CY	$12.33	4,000	$49,320	
2	Aggregate Base Course (Class 6)	TON	$15.45	838	$12,946	12-Inch Depth
3	Hot Mix Asphalt (Grade S)(100)(PG 64-22)	TON	$61.56	1,034	$63,653	10" Depth - Widening / 2" Overlay - Existing
4	Concrete Sidewalk	SY	$29.84	1,000	$29,840	5-Foot Sidewalk (Both Sides)
5	Traffic Signal	Each	$250,000.00	0	$0	
6					$0	
7					$0	
8					$0	
9					$0	
10					$0	
				Total Major Items	**$156,000**	

		% of Major Item Cost		
Total Major Items			**$156,000**	**A**
Drainage / Utilities	% of A	5.4%	$9,000	**B-1**
Environmental	% of A	3.0%	$5,000	**B-2**
Miscellaneous	% of A	1.5%	$3,000	**B-3**
Mobilization	% of A	9.3%	$15,000	**B-4**
Removals / Resets	% of A	3.7%	$6,000	**B-5**
Roadway	% of A	0.4%	$1,000	**B-6**
Signing and Striping	% of A	2.1%	$4,000	**B-7**
Traffic / Lighting / ITS	% of A	1.0%	$2,000	**B-8**
Traffic Control / Detour	% of A	9.6%	$15,000	**B-9**
Structural - Minor Structures / Walls	% of A	1.0%	$2,000	**B-10**
Bid Force Accounts	% of A	1.4%	$3,000	**B-11**
Total of Bid Construction Items			**$221,000**	**B**
Force Account - Misc.	% of B	2.6%	$6,000	**C-1**
Minor Contract Revisions	% of B	4.0%	$9,000	**C-2**
Total of Bid Construction Items & Force Account Items			**$236,000**	**C**
Design Engineering	% of C	8.0%	$19,000	**D-1**
Construction Engineering	% of C	17.0%	$41,000	**D-2**
Total Design & Construction Cost			**$296,000**	**D**
Right-of-Way	0 SF	$5	$0	**E-1**
Utilities	% of D	1.0%	$3,000	**E-2**
Total Project, Design & Construction Cost			**$299,000**	**E**
Contingency (Engineering, ROW & Utilities Only)	% of D1, D2, E1, E2	2.0%	**$2,000**	**F**
Total Project Cost Estimate			**$301,000**	**G**

SH 7 PEL Study

Estimate of Conceptual Project Costs

Intersection of SH 7 and Burlington Avenue

SH 7 PEL
Planning Environmental Linkage Study

Date Prepared: May 8, 2013

	Input Factors			*Notes*
1	Length of Auxiliary Lanes (Combined Western/Eastern Legs)	LF	350	
2	Approximate Width of Widening (North Side)	Feet	0	
3	Approximate Width of Widening (South Side)	Feet	0	
4	Approximate Width of Proposed ROW (North Side)	Feet	0	*Match Existing ROW*
5	Approximate Width of Proposed ROW (South Side)	Feet	5	*Ultimate ROW Width*
6	Length of Cross Street Widening (Combined Northern/Southern Legs)	LF	0	*Access to North already Constructed*
7	Approximate Width of Widening (West Side)	Feet	0	*Access to South not included in SH 7 Costs*
8	Approximate Width of Widening (East Side)	Feet	0	
9	Approximate Width of Proposed ROW (West Side)	Feet	0	
10	Approximate Width of Proposed ROW (East Side)	Feet	0	
11	Is the Intersection Signalized?	Yes/No	0	

	Output Factors		(In 2012$)	*Notes*
8	Urban Typical Section Project Costs		$91,000.00	*Preferred Typical Section*
9	Rural Typical Section Project Costs		$74,000.00	

SH 7 PEL Study

Estimate of Conceptual Project Costs

Urban Typical Section w/ Curb & Gutter

SH 7 PEL Planning Environmental Linkage Study

Date Prepared: May 8, 2013

	Item		Unit Cost	Quantity	Extended Cost	*Notes*
1	Earthwork	CY	$12.33	207	$2,557	
2	Aggregate Base Course (Class 6)	TON	$15.45	0	$0	12-Inch Depth
3	Hot Mix Asphalt (Grade S)(100)(PG 64-22)	TON	$61.56	103	$6,320	10" Depth - Widening / 2" Overlay - Existing
4	Curb and Gutter	LF	$21.30	700	$14,910	Includes Outside Edge C&G
5	Concrete Sidewalk	SY	$29.84	389	$11,604	10-Foot Shared Use Path (One Side Only)
6	Traffic Signal	Each	$250,000.00	0	$0	
7					$0	
8					$0	
9					$0	
10					$0	
				Total Major Items	**$36,000**	

			% of Major Item Cost		
Total Major Items				**$36,000**	**A**
Drainage / Utilities	% of A		8.0%	$3,000	**B-1**
Environmental	% of A		3.0%	$2,000	**B-2**
Miscellaneous	% of A		1.5%	$1,000	**B-3**
Mobilization	% of A		9.3%	$4,000	**B-4**
Removals / Resets	% of A		3.7%	$2,000	**B-5**
Roadway	% of A		0.4%	$1,000	**B-6**
Signing and Striping	% of A		2.1%	$1,000	**B-7**
Traffic / Lighting / ITS	% of A		3.0%	$2,000	**B-8**
Traffic Control / Detour	% of A		9.6%	$4,000	**B-9**
Structural - Minor Structures / Walls	% of A		1.0%	$1,000	**B-10**
Bid Force Accounts	% of A		1.4%	$1,000	**B-11**
Total of Bid Construction Items				**$58,000**	**B**
Force Account - Misc.	% of B		2.6%	$2,000	**C-1**
Minor Contract Revisions	% of B		4.0%	$3,000	**C-2**
Total of Bid Construction Items & Force Account Items				**$63,000**	**C**
Design Engineering	% of C		8.0%	$6,000	**D-1**
Construction Engineering	% of C		17.0%	$11,000	**D-2**
Total Design & Construction Cost				**$80,000**	**D**
Right-of-Way	1,750	SF	$5	$9,000	**E-1**
Utilities	% of D		1.0%	$1,000	**E-2**
Total Project, Design & Construction Cost				**$90,000**	**E**
Contingency (Engineering, ROW & Utilities Only)	% of D1, D2, E1, E2		2.0%	**$1,000**	**F**
Total Project Cost Estimate				**$91,000**	**G**

SH 7 PEL Study

Estimate of Conceptual Project Costs

Rural Typical Section w/ Roadside Ditches

SH 7 PEL Planning Environmental Linkage Study

Date Prepared: May 8, 2013

	Item		Unit Cost	Quantity	Extended Cost	*Notes*
1	Earthwork	CY	$12.33	830	$10,229	
2	Aggregate Base Course (Class 6)	TON	$15.45	0	$0	12-Inch Depth
3	Hot Mix Asphalt (Grade S)(100)(PG 64-22)	TON	$61.56	103	$6,320	10" Depth - Widening / 2" Overlay - Existing
4	Concrete Sidewalk	SY	$29.84	389	$11,604	10-Foot Shared Use Path (One Side Only)
5	Traffic Signal	Each	$250,000.00	0	$0	
6					$0	
7					$0	
8					$0	
9					$0	
10					$0	
				Total Major Items	**$29,000**	

			% of Major Item Cost		
Total Major Items				**$29,000**	**A**
Drainage / Utilities	% of A		5.4%	$2,000	**B-1**
Environmental	% of A		3.0%	$1,000	**B-2**
Miscellaneous	% of A		1.5%	$1,000	**B-3**
Mobilization	% of A		9.3%	$3,000	**B-4**
Removals / Resets	% of A		3.7%	$2,000	**B-5**
Roadway	% of A		0.4%	$1,000	**B-6**
Signing and Striping	% of A		2.1%	$1,000	**B-7**
Traffic / Lighting / ITS	% of A		1.0%	$1,000	**B-8**
Traffic Control / Detour	% of A		9.6%	$3,000	**B-9**
Structural - Minor Structures / Walls	% of A		1.0%	$1,000	**B-10**
Bid Force Accounts	% of A		1.4%	$1,000	**B-11**
Total of Bid Construction Items				**$46,000**	**B**
Force Account - Misc.	% of B		2.6%	$2,000	**C-1**
Minor Contract Revisions	% of B		4.0%	$2,000	**C-2**
Total of Bid Construction Items & Force Account Items				**$50,000**	**C**
Design Engineering	% of C		8.0%	$4,000	**D-1**
Construction Engineering	% of C		17.0%	$9,000	**D-2**
Total Design & Construction Cost				**$63,000**	**D**
Right-of-Way	1,750	SF	$5	$9,000	**E-1**
Utilities	% of D		1.0%	$1,000	**E-2**
Total Project, Design & Construction Cost				**$73,000**	**E**
Contingency (Engineering, ROW & Utilities Only)	% of D1, D2, E1, E2		2.0%	**$1,000**	**F**
Total Project Cost Estimate				**$74,000**	**G**

SH 7 PEL Study

Estimate of Conceptual Project Costs

Intersection of SH 7 and 119th/120th Street

SH 7 PEL Planning Environmental Linkage Study

Date Prepared: May 8, 2013

	Input Factors			Notes
1	Length of Auxiliary Lanes (Combined Western/Eastern Legs)	LF	1,350	
2	Approximate Width of Widening (North Side)	Feet	36	
3	Approximate Width of Widening (South Side)	Feet	12	
4	Approximate Width of Proposed ROW (North Side)	Feet	30	*Ultimate ROW Width*
5	Approximate Width of Proposed ROW (South Side)	Feet	15	*Ultimate ROW Width*
6	Length of Cross Street Widening (Combined Northern/Southern Legs)	LF	1,010	
7	Approximate Width of Widening (West Side)	Feet	10	
8	Approximate Width of Widening (East Side)	Feet	10	
9	Approximate Width of Proposed ROW (West Side)	Feet	0	
10	Approximate Width of Proposed ROW (East Side)	Feet	0	
11	Is the Intersection Signalized?	Yes/No	1	

	Output Factors		(In 2012$)	Notes
8	Urban Typical Section Project Costs		$1,828,000.00	
9	Rural Typical Section Project Costs		$1,887,000.00	*Preferred Typical Section*

SH 7 PEL Study

Estimate of Conceptual Project Costs

Urban Typical Section w/ Curb & Gutter

SH 7 PEL Planning Environmental Linkage Study

Date Prepared: May 8, 2013

	Item		Unit Cost	Quantity	Extended Cost	Notes
1	Earthwork	CY	$12.33	7,600	$93,708	
2	Aggregate Base Course (Class 6)	TON	$15.45	4,309	$66,577	12-Inch Depth
3	Hot Mix Asphalt (Grade S)(100)(PG 64-22)	TON	$61.56	4,356	$268,155	10" Depth - Widening / 2" Overlay - Existing
4	Curb and Gutter	LF	$21.30	2,700	$57,510	Includes Outside Edge C&G
5	Concrete Sidewalk	SY	$29.84	1,500	$44,760	10-Foot Shared Use Path (One Side Only)
6	Traffic Signal	Each	$250,000.00	1	$250,000	
7					$0	
8					$0	
9					$0	
10					$0	
				Total Major Items	**$781,000**	

		% of Major Item Cost		
Total Major Items			**$781,000**	**A**
Drainage / Utilities	% of A	8.0%	$63,000	**B-1**
Environmental	% of A	3.0%	$24,000	**B-2**
Miscellaneous	% of A	1.5%	$12,000	**B-3**
Mobilization	% of A	9.3%	$73,000	**B-4**
Removals / Resets	% of A	3.7%	$29,000	**B-5**
Roadway	% of A	0.4%	$4,000	**B-6**
Signing and Striping	% of A	2.1%	$17,000	**B-7**
Traffic / Lighting / ITS	% of A	3.0%	$24,000	**B-8**
Traffic Control / Detour	% of A	9.6%	$75,000	**B-9**
Structural - Minor Structures / Walls	% of A	1.0%	$8,000	**B-10**
Bid Force Accounts	% of A	1.4%	$11,000	**B-11**
Total of Bid Construction Items			**$1,121,000**	**B**
Force Account - Misc.	% of B	2.6%	$30,000	**C-1**
Minor Contract Revisions	% of B	4.0%	$45,000	**C-2**
Total of Bid Construction Items & Force Account Items			**$1,196,000**	**C**
Design Engineering	% of C	8.0%	$96,000	**D-1**
Construction Engineering	% of C	17.0%	$204,000	**D-2**
Total Design & Construction Cost			**$1,496,000**	**D**
Right-of-Way	60,750 SF	$5	$304,000	**E-1**
Utilities	% of D	1.0%	$15,000	**E-2**
Total Project, Design & Construction Cost			**$1,815,000**	**E**
Contingency (Engineering, ROW & Utilities Only)	% of D1, D2, E1, E2	2.0%	**$13,000**	**F**
Total Project Cost Estimate			**$1,828,000**	**G**

SH 7 PEL Study

Estimate of Conceptual Project Costs

Rural Typical Section w/ Roadside Ditches

SH 7 PEL Planning Environmental Linkage Study

Date Prepared: May 8, 2013

	Item		Unit Cost	Quantity	Extended Cost	*Notes*
1	Earthwork	CY	$12.33	16,800	$207,144	
2	Aggregate Base Course (Class 6)	TON	$15.45	4,309	$66,577	12-Inch Depth
3	Hot Mix Asphalt (Grade S)(100)(PG 64-22)	TON	$61.56	4,356	$268,155	10" Depth - Widening / 2" Overlay - Existing
4	Concrete Sidewalk	SY	$29.84	1,500	$44,760	10-Foot Shared Use Path (One Side Only)
5	Traffic Signal	Each	$250,000.00	1	$250,000	
6					$0	
7					$0	
8					$0	
9					$0	
10					$0	
				Total Major Items	**$837,000**	

			% of Major Item Cost		
Total Major Items				**$837,000**	**A**
Drainage / Utilities	% of A		5.4%	$46,000	**B-1**
Environmental	% of A		3.0%	$26,000	**B-2**
Miscellaneous	% of A		1.5%	$13,000	**B-3**
Mobilization	% of A		9.3%	$78,000	**B-4**
Removals / Resets	% of A		3.7%	$31,000	**B-5**
Roadway	% of A		0.4%	$4,000	**B-6**
Signing and Striping	% of A		2.1%	$18,000	**B-7**
Traffic / Lighting / ITS	% of A		1.0%	$9,000	**B-8**
Traffic Control / Detour	% of A		9.6%	$81,000	**B-9**
Structural - Minor Structures / Walls	% of A		1.0%	$9,000	**B-10**
Bid Force Accounts	% of A		1.4%	$12,000	**B-11**
Total of Bid Construction Items				**$1,164,000**	**B**
Force Account - Misc.	% of B		2.6%	$31,000	**C-1**
Minor Contract Revisions	% of B		4.0%	$47,000	**C-2**
Total of Bid Construction Items & Force Account Items				**$1,242,000**	**C**
Design Engineering	% of C		8.0%	$100,000	**D-1**
Construction Engineering	% of C		17.0%	$212,000	**D-2**
Total Design & Construction Cost				**$1,554,000**	**D**
Right-of-Way	60,750	SF	$5	$304,000	**E-1**
Utilities	% of D		1.0%	$16,000	**E-2**
Total Project, Design & Construction Cost				**$1,874,000**	**E**
Contingency (Engineering, ROW & Utilities Only)	% of D1, D2, E1, E2		2.0%	**$13,000**	**F**
Total Project Cost Estimate				**$1,887,000**	**G**

SH 7 PEL Study

Estimate of Conceptual Project Costs

Summary of Segment 2

SH 7 PEL Planning Environmental Linkage Study

Date Prepared: May 8, 2013

				Notes
2a	SH 7 (119th/120th Street to County Line Road)		12,140,000	*Rural Typical Section*
2b	SH 7 (County Line Road to Sheridan Parkway)		29,921,000	*Urban Typical Section*
	Total for Segment 2		**$42,061,000**	

SH 7 PEL Study

Estimate of Conceptual Project Costs

from 119th/120th Street to County Line Road

SH 7 PEL Planning Environmental Linkage Study

Date Prepared: May 8, 2013

	Input Factors			Notes
1	Length of Improvements	LF	5,300	
2	Approximate Width of Widening (North Side)	Feet	36	
3	Approximate Width of Widening (South Side)	Feet	24	
4	Approximate Width of Proposed ROW (North Side)	Feet	20	
5	Approximate Width of Proposed ROW (South Side)	Feet	15	
6	Number of Major Drainageways	#	0	
7	Required Bridge Widening	SF	0	
8	Number of Signalized Intersections	#	2	
	Output Factors		**(In 2012$)**	*Notes*
8	Urban Typical Section Project Costs		$12,528,000	
9	Rural Typical Section Project Costs		$12,140,000	*Preferred Typical Section*

SH 7 PEL Study

Estimate of Conceptual Project Costs

Urban Typical Section w/ Curb & Gutter

SH 7 PEL Planning Environmental Linkage Study

Date Prepared: May 8, 2013

	Item		Unit Cost	Quantity	Extended Cost	Notes
1	Earthwork	CY	$12.33	26,696	$329,165	
2	Aggregate Base Course (Class 6)	TON	$15.45	21,147	$326,721	12-Inch Depth
3	Hot Mix Asphalt (Grade S)(100)(PG 64-22)	TON	$61.56	24,421	$1,503,370	12" Depth - Widening / 2" Overlay - Existing
4	Curb and Gutter	LF	$21.30	21,200	$451,560	Includes Median & Outside Edge C&G
5	Concrete Sidewalk	SY	$29.84	11,778	$351,449	10-Foot Shared Use Path
6	Concrete Box Culvert	Each	$500,000.00	0	$0	181-Foot Length ($2,700/lf Unit Price)
7	Bridge Widening	SF	$125.00	0	$0	
8	Traffic Signal	Each	$250,000.00	2	$500,000	
9					$0	
10					$0	
				Total Major Items	**$3,463,000**	

			% of Major Item Cost		
Total Major Items				**$3,463,000**	A
Drainage / Utilities	% of A		12.3%	$426,000	B-1
Environmental	% of A		9.6%	$333,000	B-2
Miscellaneous	% of A		2.7%	$94,000	B-3
Mobilization	% of A		15.4%	$534,000	B-4
Removals / Resets	% of A		13.0%	$451,000	B-5
Roadway	% of A		7.0%	$243,000	B-6
Signing and Striping	% of A		5.0%	$174,000	B-7
Traffic / Lighting / ITS	% of A		10.8%	$375,000	B-8
Traffic Control / Detour	% of A		20.6%	$714,000	B-9
Structural - Minor Structures / Walls	% of A		5.5%	$191,000	B-10
Bid Force Accounts	% of A		0.4%	$14,000	B-11
Total of Bid Construction Items				**$7,012,000**	B
Force Account - Misc.	% of B		6.8%	$477,000	C-1
Minor Contract Revisions	% of B		7.7%	$540,000	C-2
Total of Bid Construction Items & Force Account Items				**$8,029,000**	C
Design Engineering	% of C		10.0%	$803,000	D-1
Construction Engineering	% of C		17.0%	$1,365,000	D-2
Total Design & Construction Cost				**$10,197,000**	D
Right-of-Way	185,500	SF	$5	$928,000	E-1
Utilities	% of D		8.0%	$816,000	E-2
Total Project, Design & Construction Cost				**$11,941,000**	E
Contingency (Engineering, ROW & Utilities Only)	% of D1, D2, E1, E2		15.0%	**$587,000**	F
Total Project Cost Estimate				**$12,528,000**	G

SH 7 PEL Study

Estimate of Conceptual Project Costs

Rural Typical Section w/ Roadside Ditches

SH 7 PEL Planning Environmental Linkage Study

Date Prepared: May 8, 2013

	Item		Unit Cost	Quantity	Extended Cost	Notes
1	Earthwork	CY	$12.33	59,674	$735,781	
2	Aggregate Base Course (Class 6)	TON	$15.45	21,147	$326,721	12-Inch Depth
3	Hot Mix Asphalt (Grade S)(100)(PG 64-22)	TON	$61.56	24,875	$1,531,284	12" Depth - Widening / 2" Overlay - Existing
4	Concrete Sidewalk	SY	$29.84	11,778	$351,449	10-Foot Shared Use Path
5	Concrete Box Culvert	Each	$500,000.00	0	$0	181-Foot Length ($2,700/lf Unit Price)
6	Bridge Widening	SF	$125.00	0	$0	
7	Traffic Signal	Each	$250,000.00	2	$500,000	
8					$0	
9					$0	
10					$0	
				Total Major Items	**$3,446,000**	

			% of Major Item Cost		
Total Major Items				**$3,446,000**	A
Drainage / Utilities	% of A		6.4%	$221,000	B-1
Environmental	% of A		9.6%	$331,000	B-2
Miscellaneous	% of A		2.7%	$94,000	B-3
Mobilization	% of A		15.4%	$531,000	B-4
Removals / Resets	% of A		13.0%	$448,000	B-5
Roadway	% of A		7.0%	$242,000	B-6
Signing and Striping	% of A		5.0%	$173,000	B-7
Traffic / Lighting / ITS	% of A		10.8%	$373,000	B-8
Traffic Control / Detour	% of A		20.6%	$710,000	B-9
Structural - Minor Structures / Walls	% of A		5.5%	$190,000	B-10
Bid Force Accounts	% of A		0.4%	$14,000	B-11
Total of Bid Construction Items				**$6,773,000**	B
Force Account - Misc.	% of B		6.8%	$461,000	C-1
Minor Contract Revisions	% of B		7.7%	$522,000	C-2
Total of Bid Construction Items & Force Account Items				**$7,756,000**	C
Design Engineering	% of C		10.0%	$776,000	D-1
Construction Engineering	% of C		17.0%	$1,319,000	D-2
Total Design & Construction Cost				**$9,851,000**	D
Right-of-Way	185,500	SF	$5	$928,000	E-1
Utilities	% of D		8.0%	$789,000	E-2
Total Project, Design & Construction Cost				**$11,568,000**	E
Contingency (Engineering, ROW & Utilities Only)	% of D1, D2, E1, E2		15.0%	**$572,000**	F
Total Project Cost Estimate				**$12,140,000**	G

SH 7 PEL Study

Estimate of Conceptual Project Costs

from County Line Road to Sheridan Parkway

SH 7 PEL Planning Environmental Linkage Study

Date Prepared: May 8, 2013

	Input Factors			Notes
1	Length of Improvements	LF	13,300	
2	Approximate Width of Widening (North Side)	Feet	36	
3	Approximate Width of Widening (South Side)	Feet	25	
4	Approximate Width of Proposed ROW (North Side)	Feet	25	
5	Approximate Width of Proposed ROW (South Side)	Feet	15	
6	Number of Major Drainageways	#	0	
7	Required Bridge Widening	SF	0	
8	Number of Signalized Intersections	#	4	

	Output Factors		(In 2012$)	Notes
8	Urban Typical Section Project Costs		$29,921,000	*Preferred Typical Section*
9	Rural Typical Section Project Costs		$29,041,000	

SH 7 PEL Study

Estimate of Conceptual Project Costs

Urban Typical Section w/ Curb & Gutter

SH 7 PEL Planning Environmental Linkage Study

Date Prepared: **May 8, 2013**

	Item		Unit Cost	Quantity	Extended Cost	*Notes*
1	Earthwork	CY	$12.33	67,978	$838,166	
2	Aggregate Base Course (Class 6)	TON	$15.45	53,951	$833,550	12-Inch Depth
3	Hot Mix Asphalt (Grade S)(100)(PG 64-22)	TON	$61.56	62,096	$3,822,643	12" Depth - Widening / 2" Overlay - Existing
4	Curb and Gutter	LF	$21.30	53,200	$1,133,160	Includes Median & Outside Edge C&G
5	Concrete Sidewalk	SY	$29.84	16,530	$493,255	10' Shared Use Path/1-Side Only thru Anthem
6	Concrete Box Culvert	Each	$500,000.00	0	$0	181-Foot Length ($2,700/lf Unit Price)
7	Bridge Widening	SF	$125.00	0	$0	
8	Traffic Signal	Each	$250,000.00	4	$1,000,000	
9					$0	
10					$0	
				Total Major Items	**$8,121,000**	

			% of Major Item Cost		
Total Major Items				**$8,121,000**	A
Drainage / Utilities	% of A		12.3%	$999,000	B-1
Environmental	% of A		9.6%	$780,000	B-2
Miscellaneous	% of A		2.7%	$220,000	B-3
Mobilization	% of A		15.4%	$1,251,000	B-4
Removals / Resets	% of A		13.0%	$1,056,000	B-5
Roadway	% of A		7.0%	$569,000	B-6
Signing and Striping	% of A		5.0%	$407,000	B-7
Traffic / Lighting / ITS	% of A		10.8%	$878,000	B-8
Traffic Control / Detour	% of A		20.6%	$1,673,000	B-9
Structural - Minor Structures / Walls	% of A		5.5%	$447,000	B-10
Bid Force Accounts	% of A		0.4%	$33,000	B-11
Total of Bid Construction Items				**$16,434,000**	B
Force Account - Misc.	% of B		6.8%	$1,118,000	C-1
Minor Contract Revisions	% of B		7.7%	$1,266,000	C-2
Total of Bid Construction Items & Force Account Items				**$18,818,000**	C
Design Engineering	% of C		10.0%	$1,882,000	D-1
Construction Engineering	% of C		17.0%	$3,200,000	D-2
Total Design & Construction Cost				**$23,900,000**	D
Right-of-Way	532,000	SF	$5	$2,660,000	E-1
Utilities	% of D		8.0%	$1,912,000	E-2
Total Project, Design & Construction Cost				**$28,472,000**	E
Contingency (Engineering, ROW & Utilities Only)	% of D1, D2, E1, E2		15.0%	**$1,449,000**	F
Total Project Cost Estimate				**$29,921,000**	G

SH 7 PEL Study

Estimate of Conceptual Project Costs

Rural Typical Section w/ Roadside Ditches

SH 7 PEL Planning Environmental Linkage Study

Date Prepared: **May 8, 2013**

	Item		Unit Cost	Quantity	Extended Cost	*Notes*
1	Earthwork	CY	$12.33	151,719	$1,870,689	
2	Aggregate Base Course (Class 6)	TON	$15.45	53,951	$833,550	12-Inch Depth
3	Hot Mix Asphalt (Grade S)(100)(PG 64-22)	TON	$61.56	63,234	$3,892,692	12" Depth - Widening / 2" Overlay - Existing
4	Concrete Sidewalk	SY	$29.84	16,530	$493,255	10' Shared Use Path/1-Side Only thru Anthem
5	Concrete Box Culvert	Each	$500,000.00	0	$0	181-Foot Length ($2,700/lf Unit Price)
6	Bridge Widening	SF	$125.00	0	$0	
7	Traffic Signal	Each	$250,000.00	4	$1,000,000	
8					$0	
9					$0	
10					$0	
				Total Major Items	**$8,091,000**	

			% of Major Item Cost		
Total Major Items				**$8,091,000**	A
Drainage / Utilities	% of A		6.4%	$518,000	B-1
Environmental	% of A		9.6%	$777,000	B-2
Miscellaneous	% of A		2.7%	$219,000	B-3
Mobilization	% of A		15.4%	$1,247,000	B-4
Removals / Resets	% of A		13.0%	$1,052,000	B-5
Roadway	% of A		7.0%	$567,000	B-6
Signing and Striping	% of A		5.0%	$405,000	B-7
Traffic / Lighting / ITS	% of A		10.8%	$874,000	B-8
Traffic Control / Detour	% of A		20.6%	$1,667,000	B-9
Structural - Minor Structures / Walls	% of A		5.5%	$446,000	B-10
Bid Force Accounts	% of A		0.4%	$33,000	B-11
Total of Bid Construction Items				**$15,896,000**	B
Force Account - Misc.	% of B		6.8%	$1,081,000	C-1
Minor Contract Revisions	% of B		7.7%	$1,224,000	C-2
Total of Bid Construction Items & Force Account Items				**$18,201,000**	C
Design Engineering	% of C		10.0%	$1,821,000	D-1
Construction Engineering	% of C		17.0%	$3,095,000	D-2
Total Design & Construction Cost				**$23,117,000**	D
Right-of-Way	532,000	SF	$5	$2,660,000	E-1
Utilities	% of D		8.0%	$1,850,000	E-2
Total Project, Design & Construction Cost				**$27,627,000**	E
Contingency (Engineering, ROW & Utilities Only)	% of D1, D2, E1, E2		15.0%	**$1,414,000**	F
Total Project Cost Estimate				**$29,041,000**	G

SH 7 PEL Study

Estimate of Conceptual Project Costs

Intersection of SH 7 and County Line Rd. - Roundabout

SH 7 PEL Planning Environmental Linkage Study

Date Prepared: May 8, 2013

	Input Factors			Notes
1	Length of Auxiliary Lanes (Combined Western/Eastern Legs)	LF	1,610	*Assumed to be same as signalized*
2	Approximate Width of Widening (North Side)	Feet	18	*Assumed to be same as signalized*
3	Approximate Width of Widening (South Side)	Feet	24	*Slightly higher to accommodate roundabout*
4	Approximate Width of Proposed ROW (North Side)	Feet	20	*Assumed to be same as signalized*
5	Approximate Width of Proposed ROW (South Side)	Feet	10	*Assumed to be same as signalized*
6	Length of Cross Street Widening (Combined Northern/Southern Legs)	LF	60	*Does not include costs for extending County*
7	Approximate Width of Widening (West Side)	Feet	0	*Line Road to the existing alignment*
8	Approximate Width of Widening (East Side)	Feet	0	
9	Approximate Width of Proposed ROW (West Side)	Feet	0	
10	Approximate Width of Proposed ROW (East Side)	Feet	0	
11	Is the Intersection Signalized?	Yes/No	0	

	Output Factors		(In 2012$)	Notes
8	Urban Typical Section Project Costs		$1,443,000.00	*Preferred Typical Section*
9	Rural Typical Section Project Costs		$1,338,000.00	

SH 7 PEL Study

Estimate of Conceptual Project Costs

Urban Typical Section w/ Curb & Gutter

SH 7 PEL Planning Environmental Linkage Study

Date Prepared: May 8, 2013

	Item		Unit Cost	Quantity	Extended Cost	Notes
1	Earthwork	CY	$12.33	5,963	$73,523	
2	Aggregate Base Course (Class 6)	TON	$15.45	4,497	$69,474	12-Inch Depth
3	Hot Mix Asphalt (Grade S)(100)(PG 64-22)	TON	$61.56	4,605	$283,459	10" Depth - Widening / 2" Overlay - Existing
4	Curb and Gutter	LF	$21.30	4,830	$102,879	Includes Outside Edge & Rndabout C&G
5	Concrete Sidewalk	SY	$29.84	1,789	$53,380	10-Foot Shared Use Path (One Side Only)
6	Traffic Signal	Each	$250,000.00	0	$0	
7					$0	
8					$0	
9					$0	
10					$0	
				Total Major Items	**$583,000**	

			% of Major Item Cost		
Total Major Items				**$583,000**	A
Drainage / Utilities	% of A		8.0%	$47,000	B-1
Environmental	% of A		3.0%	$18,000	B-2
Miscellaneous	% of A		1.5%	$9,000	B-3
Mobilization	% of A		9.3%	$55,000	B-4
Removals / Resets	% of A		3.7%	$22,000	B-5
Roadway	% of A		0.4%	$3,000	B-6
Signing and Striping	% of A		2.1%	$13,000	B-7
Traffic / Lighting / ITS	% of A		3.0%	$18,000	B-8
Traffic Control / Detour	% of A		17.0%	$100,000	B-9
Structural - Minor Structures / Walls	% of A		1.0%	$6,000	B-10
Bid Force Accounts	% of A		1.4%	$9,000	B-11
Total of Bid Construction Items				**$883,000**	B
Force Account - Misc.	% of B		2.6%	$23,000	C-1
Minor Contract Revisions	% of B		4.0%	$36,000	C-2
Total of Bid Construction Items & Force Account Items				**$942,000**	C
Design Engineering	% of C		8.0%	$76,000	D-1
Construction Engineering	% of C		17.0%	$161,000	D-2
Total Design & Construction Cost				**$1,179,000**	D
Right-of-Way	48,300	SF	$5	$242,000	E-1
Utilities	% of D		1.0%	$12,000	E-2
Total Project, Design & Construction Cost				**$1,433,000**	E
Contingency (Engineering, ROW & Utilities Only)	% of D1, D2, E1, E2		2.0%	**$10,000**	F
Total Project Cost Estimate				**$1,443,000**	G

SH 7 PEL Study

Estimate of Conceptual Project Costs

Rural Typical Section w/ Roadside Ditches

SH 7 PEL Planning Environmental Linkage Study

Date Prepared: May 8, 2013

	Item		Unit Cost	Quantity	Extended Cost	*Notes*
1	Earthwork	CY	$12.33	13,834	$170,574	
2	Aggregate Base Course (Class 6)	TON	$15.45	4,497	$69,474	12-Inch Depth
3	Hot Mix Asphalt (Grade S)(100)(PG 64-22)	TON	$61.56	4,605	$283,459	10" Depth - Widening / 2" Overlay - Existing
4	Concrete Sidewalk	SY	$29.84	1,789	$53,380	10-Foot Shared Use Path (One Side Only)
5	Traffic Signal	Each	$250,000.00	0	$0	
6					$0	
7					$0	
8					$0	
9					$0	
10					$0	
				Total Major Items	**$577,000**	

		% of Major Item Cost		
Total Major Items			**$577,000**	A
Drainage / Utilities	% of A	5.4%	$32,000	B-1
Environmental	% of A	3.0%	$18,000	B-2
Miscellaneous	% of A	1.5%	$9,000	B-3
Mobilization	% of A	9.3%	$54,000	B-4
Removals / Resets	% of A	3.7%	$22,000	B-5
Roadway	% of A	0.4%	$3,000	B-6
Signing and Striping	% of A	2.1%	$13,000	B-7
Traffic / Lighting / ITS	% of A	1.0%	$6,000	B-8
Traffic Control / Detour	% of A	9.6%	$56,000	B-9
Structural - Minor Structures / Walls	% of A	1.0%	$6,000	B-10
Bid Force Accounts	% of A	1.4%	$9,000	B-11
Total of Bid Construction Items			**$805,000**	B
Force Account - Misc.	% of B	2.6%	$21,000	C-1
Minor Contract Revisions	% of B	4.0%	$33,000	C-2
Total of Bid Construction Items & Force Account Items			**$859,000**	C
Design Engineering	% of C	8.0%	$69,000	D-1
Construction Engineering	% of C	17.0%	$147,000	D-2
Total Design & Construction Cost			**$1,075,000**	D
Right-of-Way	48,300 SF	$5	$242,000	E-1
Utilities	% of D	1.0%	$11,000	E-2
Total Project, Design & Construction Cost			**$1,328,000**	E
Contingency (Engineering, ROW & Utilities Only)	% of D1, D2, E1, E2	2.0%	**$10,000**	F
Total Project Cost Estimate			**$1,338,000**	G

SH 7 PEL Study

Estimate of Conceptual Project Costs

Intersection of SH 7 and County Line Rd. - Signalized

SH 7 PEL Planning Environmental Linkage Study

Date Prepared: May 8, 2013

	Input Factors			*Notes*
1	Length of Auxiliary Lanes (Combined Western/Eastern Legs)	LF	1,610	
2	Approximate Width of Widening (North Side)	Feet	18	
3	Approximate Width of Widening (South Side)	Feet	12	
4	Approximate Width of Proposed ROW (North Side)	Feet	20	*Ultimate ROW Width*
5	Approximate Width of Proposed ROW (South Side)	Feet	10	*Ultimate ROW Width*
6	Length of Cross Street Widening (Combined Northern/Southern Legs)	LF	60	*Does not include costs for extending County*
7	Approximate Width of Widening (West Side)	Feet	0	*Line Road to the existing alignment*
8	Approximate Width of Widening (East Side)	Feet	0	
9	Approximate Width of Proposed ROW (West Side)	Feet	0	
10	Approximate Width of Proposed ROW (East Side)	Feet	0	
11	Is the Intersection Signalized?	Yes/No	1	

	Output Factors		(In 2012$)	*Notes*
8	Urban Typical Section Project Costs		$1,589,000.00	*Preferred Typical Section*
9	Rural Typical Section Project Costs		$1,563,000.00	

SH 7 PEL Study

Estimate of Conceptual Project Costs

Intersection of SH 7 and Vista Parkway

SH 7 PEL Planning Environmental Linkage Study

Date Prepared: May 8, 2013

	Input Factors			Notes
1	Length of Auxiliary Lanes (Combined Western/Eastern Legs)	LF	1,700	
2	Approximate Width of Widening (North Side)	Feet	12	
3	Approximate Width of Widening (South Side)	Feet	4	
4	Approximate Width of Proposed ROW (North Side)	Feet	27	*Ultimate ROW Width*
5	Approximate Width of Proposed ROW (South Side)	Feet	6	*Ultimate ROW Width*
6	Length of Cross Street Widening (Combined Northern/Southern Legs)	LF	545	
7	Approximate Width of Widening (West Side)	Feet	4	*Minor Widening to North at "T" Intersection*
8	Approximate Width of Widening (East Side)	Feet	4	
9	Approximate Width of Proposed ROW (West Side)	Feet	0	
10	Approximate Width of Proposed ROW (East Side)	Feet	0	
11	Is the Intersection Signalized?	Yes/No	1	

	Output Factors		(In 2012$)	Notes
8	Urban Typical Section Project Costs		$1,497,000.00	*Preferred Typical Section*
9	Rural Typical Section Project Costs		$1,463,000.00	

SH 7 PEL Study

Estimate of Conceptual Project Costs

Urban Typical Section w/ Curb & Gutter

SH 7 PEL Planning Environmental Linkage Study

Date Prepared: May 8, 2013

	Item		Unit Cost	Quantity	Extended Cost	Notes
1	Earthwork	CY	$12.33	4,030	$49,685	
2	Aggregate Base Course (Class 6)	TON	$15.45	1,809	$27,946	12-Inch Depth
3	Hot Mix Asphalt (Grade S)(100)(PG 64-22)	TON	$61.56	2,660	$163,722	10" Depth - Widening / 2" Overlay - Existing
4	Curb and Gutter	LF	$21.30	3,400	$72,420	Includes Outside Edge C&G
5	Concrete Sidewalk	SY	$29.84	1,889	$56,364	10-Foot Shared Use Path (One Side Only)
6	Traffic Signal	Each	$250,000.00	1	$250,000	
7					$0	
8					$0	
9					$0	
10					$0	
				Total Major Items	**$621,000**	

			% of Major Item Cost		
Total Major Items				**$621,000**	A
Drainage / Utilities	% of A		8.0%	$50,000	B-1
Environmental	% of A		3.0%	$19,000	B-2
Miscellaneous	% of A		1.5%	$10,000	B-3
Mobilization	% of A		9.3%	$58,000	B-4
Removals / Resets	% of A		3.7%	$23,000	B-5
Roadway	% of A		0.4%	$3,000	B-6
Signing and Striping	% of A		2.1%	$14,000	B-7
Traffic / Lighting / ITS	% of A		3.0%	$19,000	B-8
Traffic Control / Detour	% of A		9.6%	$60,000	B-9
Structural - Minor Structures / Walls	% of A		1.0%	$7,000	B-10
Bid Force Accounts	% of A		1.4%	$9,000	B-11
Total of Bid Construction Items				**$893,000**	B
Force Account - Misc.	% of B		2.6%	$24,000	C-1
Minor Contract Revisions	% of B		4.0%	$36,000	C-2
Total of Bid Construction Items & Force Account Items				**$953,000**	C
Design Engineering	% of C		8.0%	$77,000	D-1
Construction Engineering	% of C		17.0%	$163,000	D-2
Total Design & Construction Cost				**$1,193,000**	D
Right-of-Way	56,100	SF	$5	$281,000	E-1
Utilities	% of D		1.0%	$12,000	E-2
Total Project, Design & Construction Cost				**$1,486,000**	E
Contingency (Engineering, ROW & Utilities Only)	% of D1, D2, E1, E2		2.0%	**$11,000**	F
Total Project Cost Estimate				**$1,497,000**	G

SH 7 PEL Study

Estimate of Conceptual Project Costs

Rural Typical Section w/ Roadside Ditches

SH 7 PEL Planning Environmental Linkage Study

Date Prepared: May 8, 2013

	Item		Unit Cost	Quantity	Extended Cost	*Notes*
1	Earthwork	CY	$12.33	10,074	$124,213	
2	Aggregate Base Course (Class 6)	TON	$15.45	1,809	$27,946	12-Inch Depth
3	Hot Mix Asphalt (Grade S)(100)(PG 64-22)	TON	$61.56	2,660	$163,722	10" Depth - Widening / 2" Overlay - Existing
4	Concrete Sidewalk	SY	$29.84	1,889	$56,364	10-Foot Shared Use Path (One Side Only)
5	Traffic Signal	Each	$250,000.00	1	$250,000	
6					$0	
7					$0	
8					$0	
9					$0	
10					$0	
				Total Major Items	**$623,000**	

			% of Major Item Cost		
Total Major Items				**$623,000**	**A**
Drainage / Utilities	% of A		5.4%	$34,000	**B-1**
Environmental	% of A		3.0%	$19,000	**B-2**
Miscellaneous	% of A		1.5%	$10,000	**B-3**
Mobilization	% of A		9.3%	$58,000	**B-4**
Removals / Resets	% of A		3.7%	$24,000	**B-5**
Roadway	% of A		0.4%	$3,000	**B-6**
Signing and Striping	% of A		2.1%	$14,000	**B-7**
Traffic / Lighting / ITS	% of A		1.0%	$7,000	**B-8**
Traffic Control / Detour	% of A		9.6%	$60,000	**B-9**
Structural - Minor Structures / Walls	% of A		1.0%	$7,000	**B-10**
Bid Force Accounts	% of A		1.4%	$9,000	**B-11**
Total of Bid Construction Items				**$868,000**	**B**
Force Account - Misc.	% of B		2.6%	$23,000	**C-1**
Minor Contract Revisions	% of B		4.0%	$35,000	**C-2**
Total of Bid Construction Items & Force Account Items				**$926,000**	**C**
Design Engineering	% of C		8.0%	$75,000	**D-1**
Construction Engineering	% of C		17.0%	$158,000	**D-2**
Total Design & Construction Cost				**$1,159,000**	**D**
Right-of-Way	56,100	SF	$5	$281,000	**E-1**
Utilities	% of D		1.0%	$12,000	**E-2**
Total Project, Design & Construction Cost				**$1,452,000**	**E**
Contingency (Engineering, ROW & Utilities Only)	% of D1, D2, E1, E2		2.0%	**$11,000**	**F**
Total Project Cost Estimate				**$1,463,000**	**G**

SH 7 PEL Study

Estimate of Conceptual Project Costs

Intersection of SH 7 and Mountain View Boulevard

SH 7 PEL Planning Environmental Linkage Study

Date Prepared: May 8, 2013

	Input Factors			*Notes*
1	Length of Auxiliary Lanes (Combined Western/Eastern Legs)	LF	1,565	
2	Approximate Width of Widening (North Side)	Feet	12	
3	Approximate Width of Widening (South Side)	Feet	5	
4	Approximate Width of Proposed ROW (North Side)	Feet	30	*Ultimate ROW Width*
5	Approximate Width of Proposed ROW (South Side)	Feet	4	*Ultimate ROW Width*
6	Length of Cross Street Widening (Combined Northern/Southern Legs)	LF	200	
7	Approximate Width of Widening (West Side)	Feet	4	*Match Existing to North "T" Intersection*
8	Approximate Width of Widening (East Side)	Feet	5	
9	Approximate Width of Proposed ROW (West Side)	Feet	0	
10	Approximate Width of Proposed ROW (East Side)	Feet	0	
11	Is the Intersection Signalized?	Yes/No	1	

	Output Factors		**(In 2012$)**	*Notes*
8	Urban Typical Section Project Costs		$1,449,000.00	*Preferred Typical Section*
9	Rural Typical Section Project Costs		$1,419,000.00	

SH 7 PEL Study

Estimate of Conceptual Project Costs

Urban Typical Section w/ Curb & Gutter

SH 7 PEL Planning Environmental Linkage Study

Date Prepared: May 8, 2013

	Item		Unit Cost	Quantity	Extended Cost	*Notes*
1	Earthwork	CY	$12.33	3,941	$48,598	
2	Aggregate Base Course (Class 6)	TON	$15.45	1,769	$27,335	12-Inch Depth
3	Hot Mix Asphalt (Grade S)(100)(PG 64-22)	TON	$61.56	2,544	$156,608	10" Depth - Widening / 2" Overlay - Existing
4	Curb and Gutter	LF	$21.30	3,130	$66,669	Includes Outside Edge C&G
5	Concrete Sidewalk	SY	$29.84	1,739	$51,888	10-Foot Shared Use Path (One Side Only)
6	Traffic Signal	Each	$250,000.00	1	$250,000	
7					$0	
8					$0	
9					$0	
10					$0	
				Total Major Items	**$602,000**	

		% of Major Item Cost		
Total Major Items			**$602,000**	**A**
Drainage / Utilities	% of A	8.0%	$49,000	**B-1**
Environmental	% of A	3.0%	$19,000	**B-2**
Miscellaneous	% of A	1.5%	$10,000	**B-3**
Mobilization	% of A	9.3%	$56,000	**B-4**
Removals / Resets	% of A	3.7%	$23,000	**B-5**
Roadway	% of A	0.4%	$3,000	**B-6**
Signing and Striping	% of A	2.1%	$13,000	**B-7**
Traffic / Lighting / ITS	% of A	3.0%	$19,000	**B-8**
Traffic Control / Detour	% of A	9.6%	$58,000	**B-9**
Structural - Minor Structures / Walls	% of A	1.0%	$7,000	**B-10**
Bid Force Accounts	% of A	1.4%	$9,000	**B-11**
Total of Bid Construction Items			**$868,000**	**B**
Force Account - Misc.	% of B	2.6%	$23,000	**C-1**
Minor Contract Revisions	% of B	4.0%	$35,000	**C-2**
Total of Bid Construction Items & Force Account Items			**$926,000**	**C**
Design Engineering	% of C	8.0%	$75,000	**D-1**
Construction Engineering	% of C	17.0%	$158,000	**D-2**
Total Design & Construction Cost			**$1,159,000**	**D**
Right-of-Way	53,210 SF	$5	$267,000	**E-1**
Utilities	% of D	1.0%	$12,000	**E-2**
Total Project, Design & Construction Cost			**$1,438,000**	**E**
Contingency (Engineering, ROW & Utilities Only)	% of D1, D2, E1, E2	2.0%	**$11,000**	**F**
Total Project Cost Estimate			**$1,449,000**	**G**

SH 7 PEL Study

Estimate of Conceptual Project Costs

Rural Typical Section w/ Roadside Ditches

SH 7 PEL Planning Environmental Linkage Study

Date Prepared: May 8, 2013

	Item		Unit Cost	Quantity	Extended Cost	*Notes*
1	Earthwork	CY	$12.33	9,738	$120,067	
2	Aggregate Base Course (Class 6)	TON	$15.45	1,769	$27,335	12-Inch Depth
3	Hot Mix Asphalt (Grade S)(100)(PG 64-22)	TON	$61.56	2,544	$156,608	10" Depth - Widening / 2" Overlay - Existing
4	Concrete Sidewalk	SY	$29.84	1,739	$51,888	10-Foot Shared Use Path (One Side Only)
5	Traffic Signal	Each	$250,000.00	1	$250,000	
6					$0	
7					$0	
8					$0	
9					$0	
10					$0	
				Total Major Items	**$606,000**	

		% of Major Item Cost		
Total Major Items			**$606,000**	**A**
Drainage / Utilities	% of A	5.4%	$33,000	**B-1**
Environmental	% of A	3.0%	$19,000	**B-2**
Miscellaneous	% of A	1.5%	$10,000	**B-3**
Mobilization	% of A	9.3%	$57,000	**B-4**
Removals / Resets	% of A	3.7%	$23,000	**B-5**
Roadway	% of A	0.4%	$3,000	**B-6**
Signing and Striping	% of A	2.1%	$13,000	**B-7**
Traffic / Lighting / ITS	% of A	1.0%	$7,000	**B-8**
Traffic Control / Detour	% of A	9.6%	$59,000	**B-9**
Structural - Minor Structures / Walls	% of A	1.0%	$7,000	**B-10**
Bid Force Accounts	% of A	1.4%	$9,000	**B-11**
Total of Bid Construction Items			**$846,000**	**B**
Force Account - Misc.	% of B	2.6%	$22,000	**C-1**
Minor Contract Revisions	% of B	4.0%	$34,000	**C-2**
Total of Bid Construction Items & Force Account Items			**$902,000**	**C**
Design Engineering	% of C	8.0%	$73,000	**D-1**
Construction Engineering	% of C	17.0%	$154,000	**D-2**
Total Design & Construction Cost			**$1,129,000**	**D**
Right-of-Way	53,210 SF	$5	$267,000	**E-1**
Utilities	% of D	1.0%	$12,000	**E-2**
Total Project, Design & Construction Cost			**$1,408,000**	**E**
Contingency (Engineering, ROW & Utilities Only)	% of D1, D2, E1, E2	2.0%	**$11,000**	**F**
Total Project Cost Estimate			**$1,419,000**	**G**

SH 7 PEL Study

Estimate of Conceptual Project Costs

Intersection of SH 7 and Sheridan Parkway

SH 7 PEL
Planning Environmental Linkage Study

Date Prepared: May 8, 2013

	Input Factors			Notes
1	Length of Auxiliary Lanes (Combined Western/Eastern Legs)	LF	1,925	
2	Approximate Width of Widening (North Side)	Feet	12	
3	Approximate Width of Widening (South Side)	Feet	12	
4	Approximate Width of Proposed ROW (North Side)	Feet	30	*Ultimate ROW Width*
5	Approximate Width of Proposed ROW (South Side)	Feet	35	*Ultimate ROW Width*
6	Length of Cross Street Widening (Combined Northern/Southern Legs)	LF	1,170	
7	Approximate Width of Widening (West Side)	Feet	10	
8	Approximate Width of Widening (East Side)	Feet	8	
9	Approximate Width of Proposed ROW (West Side)	Feet	0	
10	Approximate Width of Proposed ROW (East Side)	Feet	0	
11	Is the Intersection Signalized?	Yes/No	1	

	Output Factors		(In 2012$)	Notes
8	Urban Typical Section Project Costs		$2,233,000.00	*Preferred Typical Section*
9	Rural Typical Section Project Costs		$2,243,000.00	

SH 7 PEL Study

Estimate of Conceptual Project Costs

Urban Typical Section w/ Curb & Gutter

SH 7 PEL
Planning Environmental Linkage Study

Date Prepared: May 8, 2013

	Item		Unit Cost	Quantity	Extended Cost	Notes
1	Earthwork	CY	$12.33	7,130	$87,908	
2	Aggregate Base Course (Class 6)	TON	$15.45	3,072	$47,467	12-Inch Depth
3	Hot Mix Asphalt (Grade S)(100)(PG 64-22)	TON	$61.56	4,659	$286,777	10" Depth - Widening / 2" Overlay - Existing
4	Curb and Gutter	LF	$21.30	3,850	$82,005	Includes Outside Edge C&G
5	Concrete Sidewalk	SY	$29.84	2,139	$63,824	10-Foot Shared Use Path (One Side Only)
6	Traffic Signal	Each	$250,000.00	1	$250,000	
7					$0	
8					$0	
9					$0	
10					$0	
				Total Major Items	**$818,000**	

			% of Major Item Cost		
Total Major Items				**$818,000**	**A**
Drainage / Utilities	% of A		8.0%	$66,000	**B-1**
Environmental	% of A		3.0%	$25,000	**B-2**
Miscellaneous	% of A		1.5%	$13,000	**B-3**
Mobilization	% of A		9.3%	$77,000	**B-4**
Removals / Resets	% of A		3.7%	$31,000	**B-5**
Roadway	% of A		0.4%	$4,000	**B-6**
Signing and Striping	% of A		2.1%	$18,000	**B-7**
Traffic / Lighting / ITS	% of A		3.0%	$25,000	**B-8**
Traffic Control / Detour	% of A		9.6%	$79,000	**B-9**
Structural - Minor Structures / Walls	% of A		1.0%	$9,000	**B-10**
Bid Force Accounts	% of A		1.4%	$12,000	**B-11**
Total of Bid Construction Items				**$1,177,000**	**B**
Force Account - Misc.	% of B		2.6%	$31,000	**C-1**
Minor Contract Revisions	% of B		4.0%	$48,000	**C-2**
Total of Bid Construction Items & Force Account Items				**$1,256,000**	**C**
Design Engineering	% of C		8.0%	$101,000	**D-1**
Construction Engineering	% of C		17.0%	$214,000	**D-2**
Total Design & Construction Cost				**$1,571,000**	**D**
Right-of-Way	125,125	SF	$5	$626,000	**E-1**
Utilities	% of D		1.0%	$16,000	**E-2**
Total Project, Design & Construction Cost				**$2,213,000**	**E**
Contingency (Engineering, ROW & Utilities Only)	% of D1, D2, E1, E2		2.0%	**$20,000**	**F**
Total Project Cost Estimate				**$2,233,000**	**G**

SH 7 PEL Study

Estimate of Conceptual Project Costs

Rural Typical Section w/ Roadside Ditches

SH 7 PEL Planning Environmental Linkage Study

Date Prepared: May 8, 2013

	Item		Unit Cost	Quantity	Extended Cost	Notes
1	Earthwork	CY	$12.33	16,541	$203,947	
2	Aggregate Base Course (Class 6)	TON	$15.45	3,072	$47,467	12-Inch Depth
3	Hot Mix Asphalt (Grade S)(100)(PG 64-22)	TON	$61.56	4,659	$286,777	10" Depth - Widening / 2" Overlay - Existing
4	Concrete Sidewalk	SY	$29.84	2,139	$63,824	10-Foot Shared Use Path (One Side Only)
5	Traffic Signal	Each	$250,000.00	1	$250,000	
6					$0	
7					$0	
8					$0	
9					$0	
10					$0	
				Total Major Items	**$853,000**	

		% of Major Item Cost		
Total Major Items			**$853,000**	**A**
Drainage / Utilities	% of A	5.4%	$47,000	**B-1**
Environmental	% of A	3.0%	$26,000	**B-2**
Miscellaneous	% of A	1.5%	$13,000	**B-3**
Mobilization	% of A	9.3%	$80,000	**B-4**
Removals / Resets	% of A	3.7%	$32,000	**B-5**
Roadway	% of A	0.4%	$4,000	**B-6**
Signing and Striping	% of A	2.1%	$18,000	**B-7**
Traffic / Lighting / ITS	% of A	1.0%	$9,000	**B-8**
Traffic Control / Detour	% of A	9.6%	$82,000	**B-9**
Structural - Minor Structures / Walls	% of A	1.0%	$9,000	**B-10**
Bid Force Accounts	% of A	1.4%	$12,000	**B-11**
Total of Bid Construction Items			**$1,185,000**	**B**
Force Account - Misc.	% of B	2.6%	$31,000	**C-1**
Minor Contract Revisions	% of B	4.0%	$48,000	**C-2**
Total of Bid Construction Items & Force Account Items			**$1,264,000**	**C**
Design Engineering	% of C	8.0%	$102,000	**D-1**
Construction Engineering	% of C	17.0%	$215,000	**D-2**
Total Design & Construction Cost			**$1,581,000**	**D**
Right-of-Way	125,125 SF	$5	$626,000	**E-1**
Utilities	% of D	1.0%	$16,000	**E-2**
Total Project, Design & Construction Cost			**$2,223,000**	**E**
Contingency (Engineering, ROW & Utilities Only)	% of D1, D2, E1, E2	2.0%	**$20,000**	**F**
Total Project Cost Estimate			**$2,243,000**	**G**

SH 7 PEL Study

Estimate of Conceptual Project Costs

Segment 2 Multimodal Costs

SH 7 PEL Planning Environmental Linkage Study

Date Prepared: May 8, 2013

	Input Factors			Notes
1	Length of Improvements	LF	7,920	
2	Approximate Width of Widening (North Side)	Feet	12	
3	Approximate Width of Widening (South Side)	Feet	12	
4	Approximate Width of Proposed ROW (North Side)	Feet	0	
5	Approximate Width of Proposed ROW (South Side)	Feet	0	
6	Number of Major Drainageways	#	0	
7	Required Bridge Widening	SF	0	
8	Number of Signalized Intersections	#	6	

	Output Factors		(In 2012$)	Notes
8	Urban Typical Section Project Costs		$8,542,000	*Preferred Typical Section*
9				

SH 7 PEL Study

Estimate of Conceptual Project Costs

Urban Typical Section w/ Curb & Gutter

SH 7 PEL Planning Environmental Linkage Study

Date Prepared: **May 8, 2013**

	Item		Unit Cost	Quantity	Extended Cost	*Notes*
1	Earthwork	CY	$12.33	18,773	$231,475	
2	Aggregate Base Course (Class 6)	TON	$15.45	12,640	$195,293	12-Inch Depth
3	Hot Mix Asphalt (Grade S)(100)(PG 64-22)	TON	$61.56	13,939	$858,097	12" Depth - Widening / 2" Overlay - Existing
4	Curb and Gutter	LF	$21.30	15,840	$337,392	Outside C&G Only
5	Concrete Sidewalk	SY	$29.84	28,041	$836,747	10-Foot Shared Use Path (Both Side - Anthem's)
6	Concrete Box Culvert	Each	$500,000.00	0	$0	181-Foot Length ($2,700/lf Unit Price)
7	Bridge Widening	SF	$125.00	0	$0	
8	Traffic Signal Modifications	Each	$20,000.00	6	$120,000	
9					$0	
10					$0	
				Total Major Items	**$2,580,000**	

			% of Major Item Cost		
Total Major Items				**$2,580,000**	A
Drainage / Utilities	% of A		12.3%	$318,000	B-1
Environmental	% of A		9.6%	$248,000	B-2
Miscellaneous	% of A		2.7%	$70,000	B-3
Mobilization	% of A		15.4%	$398,000	B-4
Removals / Resets	% of A		13.0%	$336,000	B-5
Roadway	% of A		7.0%	$181,000	B-6
Signing and Striping	% of A		5.0%	$129,000	B-7
Traffic / Lighting / ITS	% of A		10.8%	$279,000	B-8
Traffic Control / Detour	% of A		20.6%	$532,000	B-9
Structural - Minor Structures / Walls	% of A		5.5%	$142,000	B-10
Bid Force Accounts	% of A		0.4%	$11,000	B-11
Total of Bid Construction Items				**$5,224,000**	B
Force Account - Misc.	% of B		6.8%	$356,000	C-1
Minor Contract Revisions	% of B		7.7%	$403,000	C-2
Total of Bid Construction Items & Force Account Items				**$5,983,000**	C
Design Engineering	% of C		10.0%	$599,000	D-1
Construction Engineering	% of C		17.0%	$1,018,000	D-2
Total Design & Construction Cost				**$7,600,000**	D
Right-of-Way	0	SF	$5	$0	E-1
Utilities	% of D		8.0%	$608,000	E-2
Total Project, Design & Construction Cost				**$8,208,000**	E
Contingency (Engineering, ROW & Utilities Only)	% of D1, D2, E1, E2		15.0%	**$334,000**	F
Total Project Cost Estimate				**$8,542,000**	G

SH 7 PEL Study

Estimate of Conceptual Project Costs

Rural Typical Section w/ Roadside Ditches

SH 7 PEL Planning Environmental Linkage Study

Date Prepared: **May 8, 2013**

	Item		Unit Cost	Quantity	Extended Cost	*Notes*
1	Earthwork	CY	$12.33	46,933	$578,688	
2	Aggregate Base Course (Class 6)	TON	$15.45	12,640	$195,293	12-Inch Depth
3	Hot Mix Asphalt (Grade S)(100)(PG 64-22)	TON	$61.56	19,747	$1,215,638	12" Depth - Widening / 2" Overlay - Existing
4	Concrete Sidewalk	SY	$29.84	4,574	$136,501	10-Foot Shared Use Path (Both Side - Anthem's)
5	Concrete Box Culvert	Each	$500,000.00	0	$0	181-Foot Length ($2,700/lf Unit Price)
6	Bridge Widening	SF	$125.00	0	$0	
7	Traffic Signal	Each	$250,000.00	6	$1,500,000	
8					$0	
9					$0	
10					$0	
				Total Major Items	**$3,627,000**	

			% of Major Item Cost		
Total Major Items				**$3,627,000**	A
Drainage / Utilities	% of A		6.4%	$233,000	B-1
Environmental	% of A		9.6%	$349,000	B-2
Miscellaneous	% of A		2.7%	$98,000	B-3
Mobilization	% of A		15.4%	$559,000	B-4
Removals / Resets	% of A		13.0%	$472,000	B-5
Roadway	% of A		7.0%	$254,000	B-6
Signing and Striping	% of A		5.0%	$182,000	B-7
Traffic / Lighting / ITS	% of A		10.8%	$392,000	B-8
Traffic Control / Detour	% of A		20.6%	$748,000	B-9
Structural - Minor Structures / Walls	% of A		5.5%	$200,000	B-10
Bid Force Accounts	% of A		0.4%	$15,000	B-11
Total of Bid Construction Items				**$7,129,000**	B
Force Account - Misc.	% of B		6.8%	$485,000	C-1
Minor Contract Revisions	% of B		7.7%	$549,000	C-2
Total of Bid Construction Items & Force Account Items				**$8,163,000**	C
Design Engineering	% of C		10.0%	$817,000	D-1
Construction Engineering	% of C		17.0%	$1,388,000	D-2
Total Design & Construction Cost				**$10,368,000**	D
Right-of-Way	0	SF	$5	$0	E-1
Utilities	% of D		8.0%	$830,000	E-2
Total Project, Design & Construction Cost				**$11,198,000**	E
Contingency (Engineering, ROW & Utilities Only)	% of D1, D2, E1, E2		15.0%	**$456,000**	F
Total Project Cost Estimate				**$11,654,000**	G

SH 7 PEL Study

Estimate of Conceptual Project Costs

Summary of Segment 3

SH 7 PEL Planning Environmental Linkage Study

Date Prepared: May 8, 2013

				Notes
3a	SH 7 (Sheridan Parkway to I-25)		19,815,000	*Urban Typical Section*
3b	SH 7 (I-25 to 164th Avenue)		7,596,000	*Urban Typical Section*
3c	SH 7 (164th Avenue to York Street)		13,092,000	*Urban Typical Section*
	Total for Segment 3		**$40,503,000**	

SH 7 PEL Study

Estimate of Conceptual Project Costs

from Sheridan Parkway to I-25

SH 7 PEL Planning Environmental Linkage Study

Date Prepared: May 8, 2013

	Input Factors			*Notes*
1	Length of Improvements	LF	6,488	
2	Approximate Width of Widening (North Side)	Feet	38	
3	Approximate Width of Widening (South Side)	Feet	38	
4	Approximate Width of Proposed ROW (North Side)	Feet	45	
5	Approximate Width of Proposed ROW (South Side)	Feet	35	
6	Number of Major Drainageways	#	0	
7	Required Bridge Widening	SF	0	
8	Number of Signalized Intersections	#	3	
	Output Factors		**(In 2012$)**	*Notes*
8	Urban Typical Section Project Costs		$19,815,000	*Preferred Typical Section*
9	Rural Typical Section Project Costs		$19,558,000	

SH 7 PEL Study

Estimate of Conceptual Project Costs

Urban Typical Section w/ Curb & Gutter

SH 7 PEL Planning Environmental Linkage Study

Date Prepared: **May 8, 2013**

	Item		Unit Cost	Quantity	Extended Cost	Notes
1	Earthwork	CY	$12.33	40,370	$497,759	
2	Aggregate Base Course (Class 6)	TON	$15.45	32,790	$506,611	12-Inch Depth
3	Hot Mix Asphalt (Grade S)(100)(PG 64-22)	TON	$61.56	38,142	$2,348,036	12" Depth - Widening / 2" Overlay - Existing
4	Curb and Gutter	LF	$21.30	25,952	$552,778	Includes Median & Outside Edge C&G
5	Concrete Sidewalk	SY	$29.84	14,418	$430,226	10-Foot Shared Use Path
6	Concrete Box Culvert	Each	$500,000.00	0	$0	181-Foot Length ($2,700/lf Unit Price)
7	Bridge Widening	SF	$125.00	0	$0	
8	Traffic Signal	Each	$250,000.00	3	$750,000	
9					$0	
10					$0	
				Total Major Items	**$5,086,000**	

			% of Major Item Cost		
Total Major Items				**$5,086,000**	A
Drainage / Utilities	% of A		12.3%	$626,000	B-1
Environmental	% of A		9.6%	$489,000	B-2
Miscellaneous	% of A		2.7%	$138,000	B-3
Mobilization	% of A		15.4%	$784,000	B-4
Removals / Resets	% of A		13.0%	$662,000	B-5
Roadway	% of A		7.0%	$357,000	B-6
Signing and Striping	% of A		5.0%	$255,000	B-7
Traffic / Lighting / ITS	% of A		10.8%	$550,000	B-8
Traffic Control / Detour	% of A		20.6%	$1,048,000	B-9
Structural - Minor Structures / Walls	% of A		5.5%	$280,000	B-10
Bid Force Accounts	% of A		0.4%	$21,000	B-11
Total of Bid Construction Items				**$10,296,000**	B
Force Account - Misc.	% of B		6.8%	$701,000	C-1
Minor Contract Revisions	% of B		7.7%	$793,000	C-2
Total of Bid Construction Items & Force Account Items				**$11,790,000**	C
Design Engineering	% of C		10.0%	$1,179,000	D-1
Construction Engineering	% of C		17.0%	$2,005,000	D-2
Total Design & Construction Cost				**$14,974,000**	D
Right-of-Way	519,040	SF	$5	$2,596,000	E-1
Utilities	% of D		8.0%	$1,198,000	E-2
Total Project, Design & Construction Cost				**$18,768,000**	E
Contingency (Engineering, ROW & Utilities Only)	% of D1, D2, E1, E2		15.0%	**$1,047,000**	F
Total Project Cost Estimate				**$19,815,000**	G

SH 7 PEL Study

Estimate of Conceptual Project Costs

Rural Typical Section w/ Roadside Ditches

SH 7 PEL Planning Environmental Linkage Study

Date Prepared: **May 8, 2013**

	Item		Unit Cost	Quantity	Extended Cost	Notes
1	Earthwork	CY	$12.33	88,429	$1,090,330	
2	Aggregate Base Course (Class 6)	TON	$15.45	32,790	$506,611	12-Inch Depth
3	Hot Mix Asphalt (Grade S)(100)(PG 64-22)	TON	$61.56	38,697	$2,382,207	12" Depth - Widening / 2" Overlay - Existing
4	Concrete Sidewalk	SY	$29.84	14,418	$430,226	10-Foot Shared Use Path
5	Concrete Box Culvert	Each	$500,000.00	0	$0	181-Foot Length ($2,700/lf Unit Price)
6	Bridge Widening	SF	$125.00	0	$0	
7	Traffic Signal	Each	$250,000.00	3	$750,000	
8					$0	
9					$0	
10					$0	
				Total Major Items	**$5,160,000**	

			% of Major Item Cost		
Total Major Items				**$5,160,000**	A
Drainage / Utilities	% of A		6.4%	$331,000	B-1
Environmental	% of A		9.6%	$496,000	B-2
Miscellaneous	% of A		2.7%	$140,000	B-3
Mobilization	% of A		15.4%	$795,000	B-4
Removals / Resets	% of A		13.0%	$671,000	B-5
Roadway	% of A		7.0%	$362,000	B-6
Signing and Striping	% of A		5.0%	$258,000	B-7
Traffic / Lighting / ITS	% of A		10.8%	$558,000	B-8
Traffic Control / Detour	% of A		20.6%	$1,063,000	B-9
Structural - Minor Structures / Walls	% of A		5.5%	$284,000	B-10
Bid Force Accounts	% of A		0.4%	$21,000	B-11
Total of Bid Construction Items				**$10,139,000**	B
Force Account - Misc.	% of B		6.8%	$690,000	C-1
Minor Contract Revisions	% of B		7.7%	$781,000	C-2
Total of Bid Construction Items & Force Account Items				**$11,610,000**	C
Design Engineering	% of C		10.0%	$1,161,000	D-1
Construction Engineering	% of C		17.0%	$1,974,000	D-2
Total Design & Construction Cost				**$14,745,000**	D
Right-of-Way	519,040	SF	$5	$2,596,000	E-1
Utilities	% of D		8.0%	$1,180,000	E-2
Total Project, Design & Construction Cost				**$18,521,000**	E
Contingency (Engineering, ROW & Utilities Only)	% of D1, D2, E1, E2		15.0%	**$1,037,000**	F
Total Project Cost Estimate				**$19,558,000**	G

SH 7 PEL Study

Estimate of Conceptual Project Costs

from I-25 to 164th Avenue

SH 7 PEL Planning Environmental Linkage Study

Date Prepared: May 8, 2013

	Input Factors			Notes
1	Length of Improvements	LF	2,800	
2	Approximate Width of Widening (North Side)	Feet	25	
3	Approximate Width of Widening (South Side)	Feet	23	
4	Approximate Width of Proposed ROW (North Side)	Feet	21	
5	Approximate Width of Proposed ROW (South Side)	Feet	55	
6	Number of Major Drainageways	#	0	
7	Required Bridge Widening	SF	0	
8	Number of Signalized Intersections	#	2	

	Output Factors		(In 2012$)	Notes
8	Urban Typical Section Project Costs		$7,596,000	*Preferred Typical Section*
9	Rural Typical Section Project Costs		$7,286,000	

SH 7 PEL Study

Estimate of Conceptual Project Costs

Urban Typical Section w/ Curb & Gutter

SH 7 PEL Planning Environmental Linkage Study

Date Prepared: May 8, 2013

	Item		Unit Cost	Quantity	Extended Cost	Notes
1	Earthwork	CY	$12.33	11,615	$143,211	
2	Aggregate Base Course (Class 6)	TON	$15.45	8,938	$138,086	12-Inch Depth
3	Hot Mix Asphalt (Grade S)(100)(PG 64-22)	TON	$61.56	11,670	$718,392	12" Depth - Widening / 2" Overlay - Existing
4	Curb and Gutter	LF	$21.30	11,200	$238,560	Includes Median & Outside Edge C&G
5	Concrete Sidewalk	SY	$29.84	6,222	$185,671	10-Foot Shared Use Path
6	Concrete Box Culvert	Each	$500,000.00	0	$0	181-Foot Length ($2,700/lf Unit Price)
7	Bridge Widening	SF	$125.00	0	$0	
8	Traffic Signal	Each	$250,000.00	2	$500,000	
9					$0	
10					$0	
				Total Major Items	**$1,924,000**	

			% of Major Item Cost		
Total Major Items				**$1,924,000**	A
Drainage / Utilities	% of A		12.3%	$237,000	B-1
Environmental	% of A		9.6%	$185,000	B-2
Miscellaneous	% of A		2.7%	$52,000	B-3
Mobilization	% of A		15.4%	$297,000	B-4
Removals / Resets	% of A		13.0%	$251,000	B-5
Roadway	% of A		7.0%	$135,000	B-6
Signing and Striping	% of A		5.0%	$97,000	B-7
Traffic / Lighting / ITS	% of A		10.8%	$208,000	B-8
Traffic Control / Detour	% of A		20.6%	$397,000	B-9
Structural - Minor Structures / Walls	% of A		5.5%	$106,000	B-10
Bid Force Accounts	% of A		0.4%	$8,000	B-11
Total of Bid Construction Items				**$3,897,000**	B
Force Account - Misc.	% of B		6.8%	$265,000	C-1
Minor Contract Revisions	% of B		7.7%	$301,000	C-2
Total of Bid Construction Items & Force Account Items				**$4,463,000**	C
Design Engineering	% of C		10.0%	$447,000	D-1
Construction Engineering	% of C		17.0%	$759,000	D-2
Total Design & Construction Cost				**$5,669,000**	D
Right-of-Way	212,800	SF	$5	$1,064,000	E-1
Utilities	% of D		8.0%	$454,000	E-2
Total Project, Design & Construction Cost				**$7,187,000**	E
Contingency (Engineering, ROW & Utilities Only)	% of D1, D2, E1, E2		15.0%	**$409,000**	F
Total Project Cost Estimate				**$7,596,000**	G

SH 7 PEL Study

Estimate of Conceptual Project Costs

Rural Typical Section w/ Roadside Ditches

SH 7 PEL Planning Environmental Linkage Study

Date Prepared: May 8, 2013

	Item		Unit Cost	Quantity	Extended Cost	Notes
1	Earthwork	CY	$12.33	26,548	$327,339	
2	Aggregate Base Course (Class 6)	TON	$15.45	8,938	$138,086	12-Inch Depth
3	Hot Mix Asphalt (Grade S)(100)(PG 64-22)	TON	$61.56	11,909	$733,139	12" Depth - Widening / 2" Overlay - Existing
4	Concrete Sidewalk	SY	$29.84	6,222	$185,671	10-Foot Shared Use Path
5	Concrete Box Culvert	Each	$500,000.00	0	$0	181-Foot Length ($2,700/lf Unit Price)
6	Bridge Widening	SF	$125.00	0	$0	
7	Traffic Signal	Each	$250,000.00	2	$500,000	
8					$0	
9					$0	
10					$0	
				Total Major Items	**$1,885,000**	

			% of Major Item Cost		
Total Major Items				**$1,885,000**	A
Drainage / Utilities	% of A		6.4%	$121,000	B-1
Environmental	% of A		9.6%	$181,000	B-2
Miscellaneous	% of A		2.7%	$51,000	B-3
Mobilization	% of A		15.4%	$291,000	B-4
Removals / Resets	% of A		13.0%	$246,000	B-5
Roadway	% of A		7.0%	$132,000	B-6
Signing and Striping	% of A		5.0%	$95,000	B-7
Traffic / Lighting / ITS	% of A		10.8%	$204,000	B-8
Traffic Control / Detour	% of A		20.6%	$389,000	B-9
Structural - Minor Structures / Walls	% of A		5.5%	$104,000	B-10
Bid Force Accounts	% of A		0.4%	$8,000	B-11
Total of Bid Construction Items				**$3,707,000**	B
Force Account - Misc.	% of B		6.8%	$253,000	C-1
Minor Contract Revisions	% of B		7.7%	$286,000	C-2
Total of Bid Construction Items & Force Account Items				**$4,246,000**	C
Design Engineering	% of C		10.0%	$425,000	D-1
Construction Engineering	% of C		17.0%	$722,000	D-2
Total Design & Construction Cost				**$5,393,000**	D
Right-of-Way	212,800	SF	$5	$1,064,000	E-1
Utilities	% of D		8.0%	$432,000	E-2
Total Project, Design & Construction Cost				**$6,889,000**	E
Contingency (Engineering, ROW & Utilities Only)	% of D1, D2, E1, E2		15.0%	**$397,000**	F
Total Project Cost Estimate				**$7,286,000**	G

SH 7 PEL Study

Estimate of Conceptual Project Costs

from 164th Avenue to York Street

SH 7 PEL Planning Environmental Linkage Study

Date Prepared: May 8, 2013

	Input Factors			Notes
1	Length of Improvements	LF	4,500	
2	Approximate Width of Widening (North Side)	Feet	43	
3	Approximate Width of Widening (South Side)	Feet	41	
4	Approximate Width of Proposed ROW (North Side)	Feet	30	
5	Approximate Width of Proposed ROW (South Side)	Feet	33	
6	Number of Major Drainageways	#	0	
7	Required Bridge Widening	SF	0	
8	Number of Signalized Intersections	#	1	

	Output Factors		(In 2012$)	Notes
8	Urban Typical Section Project Costs		$13,092,000	*Preferred Typical Section*
9	Rural Typical Section Project Costs		$13,032,000	

SH 7 PEL Study

Estimate of Conceptual Project Costs

Urban Typical Section w/ Curb & Gutter

SH 7 PEL Planning Environmental Linkage Study

Date Prepared: **May 8, 2013**

	Item		Unit Cost	Quantity	Extended Cost	Notes
1	Earthwork	CY	$12.33	30,667	$378,120	
2	Aggregate Base Course (Class 6)	TON	$15.45	25,137	$388,367	12-Inch Depth
3	Hot Mix Asphalt (Grade S)(100)(PG 64-22)	TON	$61.56	28,655	$1,764,002	12" Depth - Widening / 2" Overlay - Existing
4	Curb and Gutter	LF	$21.30	18,000	$383,400	Includes Median & Outside Edge C&G
5	Concrete Sidewalk	SY	$29.84	10,000	$298,400	10-Foot Shared Use Path
6	Concrete Box Culvert	Each	$500,000.00	0	$0	181-Foot Length ($2,700/lf Unit Price)
7	Bridge Widening	SF	$125.00	0	$0	
8	Traffic Signal	Each	$250,000.00	1	$250,000	
9					$0	
10					$0	
				Total Major Items	**$3,463,000**	

			% of Major Item Cost		
Total Major Items				**$3,463,000**	A
Drainage / Utilities	% of A		12.3%	$426,000	B-1
Environmental	% of A		9.6%	$333,000	B-2
Miscellaneous	% of A		2.7%	$94,000	B-3
Mobilization	% of A		15.4%	$534,000	B-4
Removals / Resets	% of A		13.0%	$451,000	B-5
Roadway	% of A		7.0%	$243,000	B-6
Signing and Striping	% of A		5.0%	$174,000	B-7
Traffic / Lighting / ITS	% of A		10.8%	$375,000	B-8
Traffic Control / Detour	% of A		20.6%	$714,000	B-9
Structural - Minor Structures / Walls	% of A		5.5%	$191,000	B-10
Bid Force Accounts	% of A		0.4%	$14,000	B-11
Total of Bid Construction Items				**$7,012,000**	B
Force Account - Misc.	% of B		6.8%	$477,000	C-1
Minor Contract Revisions	% of B		7.7%	$540,000	C-2
Total of Bid Construction Items & Force Account Items				**$8,029,000**	C
Design Engineering	% of C		10.0%	$803,000	D-1
Construction Engineering	% of C		17.0%	$1,365,000	D-2
Total Design & Construction Cost				**$10,197,000**	D
Right-of-Way	283,500	SF	$5	$1,418,000	E-1
Utilities	% of D		8.0%	$816,000	E-2
Total Project, Design & Construction Cost				**$12,431,000**	E
Contingency (Engineering, ROW & Utilities Only)	% of D1, D2, E1, E2		15.0%	**$661,000**	F
Total Project Cost Estimate				**$13,092,000**	G

SH 7 PEL Study

Estimate of Conceptual Project Costs

Rural Typical Section w/ Roadside Ditches

SH 7 PEL Planning Environmental Linkage Study

Date Prepared: **May 8, 2013**

	Item		Unit Cost	Quantity	Extended Cost	Notes
1	Earthwork	CY	$12.33	66,667	$822,000	
2	Aggregate Base Course (Class 6)	TON	$15.45	25,137	$388,367	12-Inch Depth
3	Hot Mix Asphalt (Grade S)(100)(PG 64-22)	TON	$61.56	29,040	$1,787,702	12" Depth - Widening / 2" Overlay - Existing
4	Concrete Sidewalk	SY	$29.84	10,000	$298,400	10-Foot Shared Use Path
5	Concrete Box Culvert	Each	$500,000.00	0	$0	181-Foot Length ($2,700/lf Unit Price)
6	Bridge Widening	SF	$125.00	0	$0	
7	Traffic Signal	Each	$250,000.00	1	$250,000	
8					$0	
9					$0	
10					$0	
				Total Major Items	**$3,547,000**	

			% of Major Item Cost		
Total Major Items				**$3,547,000**	A
Drainage / Utilities	% of A		6.4%	$228,000	B-1
Environmental	% of A		9.6%	$341,000	B-2
Miscellaneous	% of A		2.7%	$96,000	B-3
Mobilization	% of A		15.4%	$547,000	B-4
Removals / Resets	% of A		13.0%	$462,000	B-5
Roadway	% of A		7.0%	$249,000	B-6
Signing and Striping	% of A		5.0%	$178,000	B-7
Traffic / Lighting / ITS	% of A		10.8%	$384,000	B-8
Traffic Control / Detour	% of A		20.6%	$731,000	B-9
Structural - Minor Structures / Walls	% of A		5.5%	$196,000	B-10
Bid Force Accounts	% of A		0.4%	$15,000	B-11
Total of Bid Construction Items				**$6,974,000**	B
Force Account - Misc.	% of B		6.8%	$475,000	C-1
Minor Contract Revisions	% of B		7.7%	$537,000	C-2
Total of Bid Construction Items & Force Account Items				**$7,986,000**	C
Design Engineering	% of C		10.0%	$799,000	D-1
Construction Engineering	% of C		17.0%	$1,358,000	D-2
Total Design & Construction Cost				**$10,143,000**	D
Right-of-Way	283,500	SF	$5	$1,418,000	E-1
Utilities	% of D		8.0%	$812,000	E-2
Total Project, Design & Construction Cost				**$12,373,000**	E
Contingency (Engineering, ROW & Utilities Only)	% of D1, D2, E1, E2		15.0%	**$659,000**	F
Total Project Cost Estimate				**$13,032,000**	G

SH 7 PEL Study

Estimate of Conceptual Project Costs

Intersection of SH 7 and Pecos Street

SH 7 PEL
Planning Environmental Linkage Study

Date Prepared:	May 8, 2013

	Input Factors			Notes
1	Length of Auxiliary Lanes (Combined Western/Eastern Legs)	LF	1,555	
2	Approximate Width of Widening (North Side)	Feet	18	
3	Approximate Width of Widening (South Side)	Feet	18	
4	Approximate Width of Proposed ROW (North Side)	Feet	35	*Ultimate ROW Width*
5	Approximate Width of Proposed ROW (South Side)	Feet	35	*Ultimate ROW Width*
6	Length of Cross Street Widening (Combined Northern/Southern Legs)	LF	95	
7	Approximate Width of Widening (West Side)	Feet	0	*Match Existing*
8	Approximate Width of Widening (East Side)	Feet	0	
9	Approximate Width of Proposed ROW (West Side)	Feet	0	
10	Approximate Width of Proposed ROW (East Side)	Feet	0	
11	Is the Intersection Signalized?	Yes/No	1	

	Output Factors		(In 2012$)	Notes
8	Urban Typical Section Project Costs		$1,970,000.00	*Preferred Typical Section*
9	Rural Typical Section Project Costs		$1,961,000.00	

SH 7 PEL Study

Estimate of Conceptual Project Costs

Urban Typical Section w/ Curb & Gutter

SH 7 PEL
Planning Environmental Linkage Study

Date Prepared:	May 8, 2013

	Item		Unit Cost	Quantity	Extended Cost	Notes
1	Earthwork	CY	$12.33	5,068	$62,490	
2	Aggregate Base Course (Class 6)	TON	$15.45	3,723	$57,515	12-Inch Depth
3	Hot Mix Asphalt (Grade S)(100)(PG 64-22)	TON	$61.56	3,877	$238,676	10" Depth - Widening / 2" Overlay - Existing
4	Curb and Gutter	LF	$21.30	3,110	$66,243	Includes Outside Edge C&G
5	Concrete Sidewalk	SY	$29.84	1,728	$51,557	10-Foot Shared Use Path (One Side Only)
6	Traffic Signal	Each	$250,000.00	1	$250,000	
7					$0	
8					$0	
9					$0	
10					$0	
				Total Major Items	**$727,000**	

			% of Major Item Cost		
Total Major Items				**$727,000**	A
Drainage / Utilities	% of A		8.0%	$59,000	B-1
Environmental	% of A		3.0%	$22,000	B-2
Miscellaneous	% of A		1.5%	$11,000	B-3
Mobilization	% of A		9.3%	$68,000	B-4
Removals / Resets	% of A		3.7%	$27,000	B-5
Roadway	% of A		0.4%	$3,000	B-6
Signing and Striping	% of A		2.1%	$16,000	B-7
Traffic / Lighting / ITS	% of A		3.0%	$22,000	B-8
Traffic Control / Detour	% of A		9.6%	$70,000	B-9
Structural - Minor Structures / Walls	% of A		1.0%	$8,000	B-10
Bid Force Accounts	% of A		1.4%	$11,000	B-11
Total of Bid Construction Items				**$1,044,000**	B
Force Account - Misc.	% of B		2.6%	$28,000	C-1
Minor Contract Revisions	% of B		4.0%	$42,000	C-2
Total of Bid Construction Items & Force Account Items				**$1,114,000**	C
Design Engineering	% of C		8.0%	$90,000	D-1
Construction Engineering	% of C		17.0%	$190,000	D-2
Total Design & Construction Cost				**$1,394,000**	D
Right-of-Way	108,850	SF	$5	$545,000	E-1
Utilities	% of D		1.0%	$14,000	E-2
Total Project, Design & Construction Cost				**$1,953,000**	E
Contingency (Engineering, ROW & Utilities Only)	% of D1, D2, E1, E2		2.0%	**$17,000**	F
Total Project Cost Estimate				**$1,970,000**	G

SH 7 PEL Study

Estimate of Conceptual Project Costs

Rural Typical Section w/ Roadside Ditches

SH 7 PEL Planning Environmental Linkage Study

Date Prepared: May 8, 2013

	Item		Unit Cost	Quantity	Extended Cost	*Notes*
1	Earthwork	CY	$12.33	11,979	$147,704	
2	Aggregate Base Course (Class 6)	TON	$15.45	3,723	$57,515	12-Inch Depth
3	Hot Mix Asphalt (Grade S)(100)(PG 64-22)	TON	$61.56	3,877	$238,676	10" Depth - Widening / 2" Overlay - Existing
4	Concrete Sidewalk	SY	$29.84	1,728	$51,557	10-Foot Shared Use Path (One Side Only)
5	Traffic Signal	Each	$250,000.00	1	$250,000	
6					$0	
7					$0	
8					$0	
9					$0	
10					$0	
				Total Major Items	**$746,000**	

		% of Major Item Cost		
Total Major Items			**$746,000**	**A**
Drainage / Utilities	% of A	5.4%	$41,000	**B-1**
Environmental	% of A	3.0%	$23,000	**B-2**
Miscellaneous	% of A	1.5%	$12,000	**B-3**
Mobilization	% of A	9.3%	$70,000	**B-4**
Removals / Resets	% of A	3.7%	$28,000	**B-5**
Roadway	% of A	0.4%	$3,000	**B-6**
Signing and Striping	% of A	2.1%	$16,000	**B-7**
Traffic / Lighting / ITS	% of A	1.0%	$8,000	**B-8**
Traffic Control / Detour	% of A	9.6%	$72,000	**B-9**
Structural - Minor Structures / Walls	% of A	1.0%	$8,000	**B-10**
Bid Force Accounts	% of A	1.4%	$11,000	**B-11**
Total of Bid Construction Items			**$1,038,000**	**B**
Force Account - Misc.	% of B	2.6%	$27,000	**C-1**
Minor Contract Revisions	% of B	4.0%	$42,000	**C-2**
Total of Bid Construction Items & Force Account Items			**$1,107,000**	**C**
Design Engineering	% of C	8.0%	$89,000	**D-1**
Construction Engineering	% of C	17.0%	$189,000	**D-2**
Total Design & Construction Cost			**$1,385,000**	**D**
Right-of-Way	108,850 SF	$5	$545,000	**E-1**
Utilities	% of D	1.0%	$14,000	**E-2**
Total Project, Design & Construction Cost			**$1,944,000**	**E**
Contingency (Engineering, ROW & Utilities Only)	% of D1, D2, E1, E2	2.0%	**$17,000**	**F**
Total Project Cost Estimate			**$1,961,000**	**G**

SH 7 PEL Study

Estimate of Conceptual Project Costs

Intersection of SH 7 and Huron Street

SH 7 PEL Planning Environmental Linkage Study

Date Prepared: May 8, 2013

	Input Factors			*Notes*
1	Length of Auxiliary Lanes (Combined Western/Eastern Legs)	LF	1,660	
2	Approximate Width of Widening (North Side)	Feet	18	
3	Approximate Width of Widening (South Side)	Feet	18	
4	Approximate Width of Proposed ROW (North Side)	Feet	50	*Ultimate ROW Width*
5	Approximate Width of Proposed ROW (South Side)	Feet	35	*Ultimate ROW Width*
6	Length of Cross Street Widening (Combined Northern/Southern Legs)	LF	80	
7	Approximate Width of Widening (West Side)	Feet	0	*Access not included in SH 7 Costs*
8	Approximate Width of Widening (East Side)	Feet	0	
9	Approximate Width of Proposed ROW (West Side)	Feet	0	
10	Approximate Width of Proposed ROW (East Side)	Feet	0	
11	Is the Intersection Signalized?	Yes/No	1	

	Output Factors		(In 2012$)	*Notes*
8	Urban Typical Section Project Costs		$2,197,000.00	*Preferred Typical Section*
9	Rural Typical Section Project Costs		$2,188,000.00	

SH 7 PEL Study

Estimate of Conceptual Project Costs

Urban Typical Section w/ Curb & Gutter

SH 7 PEL Planning Environmental Linkage Study

Date Prepared: May 8, 2013

	Item		Unit Cost	Quantity	Extended Cost	*Notes*
1	Earthwork	CY	$12.33	5,410	$66,710	
2	Aggregate Base Course (Class 6)	TON	$15.45	3,974	$61,399	12-Inch Depth
3	Hot Mix Asphalt (Grade S)(100)(PG 64-22)	TON	$61.56	4,139	$254,793	10" Depth - Widening / 2" Overlay - Existing
4	Curb and Gutter	LF	$21.30	3,320	$70,716	Includes Outside Edge C&G
5	Concrete Sidewalk	SY	$29.84	1,844	$55,038	10-Foot Shared Use Path (One Side Only)
6	Traffic Signal	Each	$250,000.00	1	$250,000	
7					$0	
8					$0	
9					$0	
10					$0	
				Total Major Items	**$759,000**	

		% of Major Item Cost		
Total Major Items			**$759,000**	**A**
Drainage / Utilities	% of A	8.0%	$61,000	**B-1**
Environmental	% of A	3.0%	$23,000	**B-2**
Miscellaneous	% of A	1.5%	$12,000	**B-3**
Mobilization	% of A	9.3%	$71,000	**B-4**
Removals / Resets	% of A	3.7%	$29,000	**B-5**
Roadway	% of A	0.4%	$4,000	**B-6**
Signing and Striping	% of A	2.1%	$16,000	**B-7**
Traffic / Lighting / ITS	% of A	3.0%	$23,000	**B-8**
Traffic Control / Detour	% of A	9.6%	$73,000	**B-9**
Structural - Minor Structures / Walls	% of A	1.0%	$8,000	**B-10**
Bid Force Accounts	% of A	1.4%	$11,000	**B-11**
Total of Bid Construction Items			**$1,090,000**	**B**
Force Account - Misc.	% of B	2.6%	$29,000	**C-1**
Minor Contract Revisions	% of B	4.0%	$44,000	**C-2**
Total of Bid Construction Items & Force Account Items			**$1,163,000**	**C**
Design Engineering	% of C	8.0%	$94,000	**D-1**
Construction Engineering	% of C	17.0%	$198,000	**D-2**
Total Design & Construction Cost			**$1,455,000**	**D**
Right-of-Way	141,100 SF	$5	$706,000	**E-1**
Utilities	% of D	1.0%	$15,000	**E-2**
Total Project, Design & Construction Cost			**$2,176,000**	**E**
Contingency (Engineering, ROW & Utilities Only)	% of D1, D2, E1, E2	2.0%	**$21,000**	**F**
Total Project Cost Estimate			**$2,197,000**	**G**

SH 7 PEL Study

Estimate of Conceptual Project Costs

Rural Typical Section w/ Roadside Ditches

SH 7 PEL Planning Environmental Linkage Study

Date Prepared: May 8, 2013

	Item		Unit Cost	Quantity	Extended Cost	*Notes*
1	Earthwork	CY	$12.33	12,788	$157,678	
2	Aggregate Base Course (Class 6)	TON	$15.45	3,974	$61,399	12-Inch Depth
3	Hot Mix Asphalt (Grade S)(100)(PG 64-22)	TON	$61.56	4,139	$254,793	10" Depth - Widening / 2" Overlay - Existing
4	Concrete Sidewalk	SY	$29.84	1,844	$55,038	10-Foot Shared Use Path (One Side Only)
5	Traffic Signal	Each	$250,000.00	1	$250,000	
6					$0	
7					$0	
8					$0	
9					$0	
10					$0	
				Total Major Items	**$779,000**	

		% of Major Item Cost		
Total Major Items			**$779,000**	**A**
Drainage / Utilities	% of A	5.4%	$43,000	**B-1**
Environmental	% of A	3.0%	$24,000	**B-2**
Miscellaneous	% of A	1.5%	$12,000	**B-3**
Mobilization	% of A	9.3%	$73,000	**B-4**
Removals / Resets	% of A	3.7%	$29,000	**B-5**
Roadway	% of A	0.4%	$4,000	**B-6**
Signing and Striping	% of A	2.1%	$17,000	**B-7**
Traffic / Lighting / ITS	% of A	1.0%	$8,000	**B-8**
Traffic Control / Detour	% of A	9.6%	$75,000	**B-9**
Structural - Minor Structures / Walls	% of A	1.0%	$8,000	**B-10**
Bid Force Accounts	% of A	1.4%	$11,000	**B-11**
Total of Bid Construction Items			**$1,083,000**	**B**
Force Account - Misc.	% of B	2.6%	$29,000	**C-1**
Minor Contract Revisions	% of B	4.0%	$44,000	**C-2**
Total of Bid Construction Items & Force Account Items			**$1,156,000**	**C**
Design Engineering	% of C	8.0%	$93,000	**D-1**
Construction Engineering	% of C	17.0%	$197,000	**D-2**
Total Design & Construction Cost			**$1,446,000**	**D**
Right-of-Way	141,100 SF	$5	$706,000	**E-1**
Utilities	% of D	1.0%	$15,000	**E-2**
Total Project, Design & Construction Cost			**$2,167,000**	**E**
Contingency (Engineering, ROW & Utilities Only)	% of D1, D2, E1, E2	2.0%	**$21,000**	**F**
Total Project Cost Estimate			**$2,188,000**	**G**

SH 7 PEL Study

Estimate of Conceptual Project Costs

Intersection of SH 7 and North Washington Street

SH 7 PEL Planning Environmental Linkage Study

Date Prepared: May 8, 2013

	Input Factors			Notes
1	Length of Auxiliary Lanes (Combined Western/Eastern Legs)	LF	1,800	
2	Approximate Width of Widening (North Side)	Feet	6	
3	Approximate Width of Widening (South Side)	Feet	6	
4	Approximate Width of Proposed ROW (North Side)	Feet	30	*Ultimate ROW Width*
5	Approximate Width of Proposed ROW (South Side)	Feet	60	*Ultimate ROW Width*
6	Length of Cross Street Widening (Combined Northern/Southern Legs)	LF	0	*Match Existing*
7	Approximate Width of Widening (West Side)	Feet	0	
8	Approximate Width of Widening (East Side)	Feet	0	
9	Approximate Width of Proposed ROW (West Side)	Feet	0	
10	Approximate Width of Proposed ROW (East Side)	Feet	0	
11	Is the Intersection Signalized?	Yes/No	1	

	Output Factors		(In 2012$)	Notes
8	Urban Typical Section Project Costs		$2,084,000.00	*Preferred Typical Section*
9	Rural Typical Section Project Costs		$2,011,000.00	

SH 7 PEL Study

Estimate of Conceptual Project Costs

Urban Typical Section w/ Curb & Gutter

SH 7 PEL Planning Environmental Linkage Study

Date Prepared: May 8, 2013

	Item		Unit Cost	Quantity	Extended Cost	Notes
1	Earthwork	CY	$12.33	2,667	$32,880	
2	Aggregate Base Course (Class 6)	TON	$15.45	1,436	$22,192	12-Inch Depth
3	Hot Mix Asphalt (Grade S)(100)(PG 64-22)	TON	$61.56	3,300	$203,148	10" Depth - Widening / 2" Overlay - Existing
4	Curb and Gutter	LF	$21.30	3,600	$76,680	Includes Outside Edge C&G (Median C&G Remains
5	Concrete Sidewalk	SY	$29.84	2,000	$59,680	10-Foot Shared Use Path (One Side Only)
6	Traffic Signal	Each	$250,000.00	1	$250,000	
7					$0	
8					$0	
9					$0	
10					$0	
				Total Major Items	**$645,000**	

			% of Major Item Cost		
Total Major Items				**$645,000**	A
Drainage / Utilities	% of A		8.0%	$52,000	B-1
Environmental	% of A		3.0%	$20,000	B-2
Miscellaneous	% of A		1.5%	$10,000	B-3
Mobilization	% of A		9.3%	$60,000	B-4
Removals / Resets	% of A		3.7%	$24,000	B-5
Roadway	% of A		0.4%	$3,000	B-6
Signing and Striping	% of A		2.1%	$14,000	B-7
Traffic / Lighting / ITS	% of A		3.0%	$20,000	B-8
Traffic Control / Detour	% of A		9.6%	$62,000	B-9
Structural - Minor Structures / Walls	% of A		1.0%	$7,000	B-10
Bid Force Accounts	% of A		1.4%	$10,000	B-11
Total of Bid Construction Items				**$927,000**	B
Force Account - Misc.	% of B		2.6%	$25,000	C-1
Minor Contract Revisions	% of B		4.0%	$38,000	C-2
Total of Bid Construction Items & Force Account Items				**$990,000**	C
Design Engineering	% of C		8.0%	$80,000	D-1
Construction Engineering	% of C		17.0%	$169,000	D-2
Total Design & Construction Cost				**$1,239,000**	D
Right-of-Way	162,000	SF	$5	$810,000	E-1
Utilities	% of D		1.0%	$13,000	E-2
Total Project, Design & Construction Cost				**$2,062,000**	E
Contingency (Engineering, ROW & Utilities Only)	% of D1, D2, E1, E2		2.0%	**$22,000**	F
Total Project Cost Estimate				**$2,084,000**	G

SH 7 PEL Study

Estimate of Conceptual Project Costs

Rural Typical Section w/ Roadside Ditches

SH 7 PEL Planning Environmental Linkage Study

Date Prepared:	May 8, 2013

	Item		Unit Cost	Quantity	Extended Cost	Notes
1	Earthwork	CY	$12.33	7,467	$92,064	
2	Aggregate Base Course (Class 6)	TON	$15.45	1,436	$22,192	12-Inch Depth
3	Hot Mix Asphalt (Grade S)(100)(PG 64-22)	TON	$61.56	3,300	$203,148	10" Depth - Widening / 2" Overlay - Existing
4	Concrete Sidewalk	SY	$29.84	2,000	$59,680	10-Foot Shared Use Path (One Side Only)
5	Traffic Signal	Each	$250,000.00	1	$250,000	
6					$0	
7					$0	
8					$0	
9					$0	
10					$0	
				Total Major Items	**$628,000**	

		% of Major Item Cost		
Total Major Items			**$628,000**	**A**
Drainage / Utilities	% of A	5.4%	$34,000	B-1
Environmental	% of A	3.0%	$19,000	B-2
Miscellaneous	% of A	1.5%	$10,000	B-3
Mobilization	% of A	9.3%	$59,000	B-4
Removals / Resets	% of A	3.7%	$24,000	B-5
Roadway	% of A	0.4%	$3,000	B-6
Signing and Striping	% of A	2.1%	$14,000	B-7
Traffic / Lighting / ITS	% of A	1.0%	$7,000	B-8
Traffic Control / Detour	% of A	9.6%	$61,000	B-9
Structural - Minor Structures / Walls	% of A	1.0%	$7,000	B-10
Bid Force Accounts	% of A	1.4%	$9,000	B-11
Total of Bid Construction Items			**$875,000**	B
Force Account - Misc.	% of B	2.6%	$23,000	C-1
Minor Contract Revisions	% of B	4.0%	$35,000	C-2
Total of Bid Construction Items & Force Account Items			**$933,000**	C
Design Engineering	% of C	8.0%	$75,000	D-1
Construction Engineering	% of C	17.0%	$159,000	D-2
Total Design & Construction Cost			**$1,167,000**	D
Right-of-Way	162,000 SF	$5	$810,000	E-1
Utilities	% of D	1.0%	$12,000	E-2
Total Project, Design & Construction Cost			**$1,989,000**	E
Contingency (Engineering, ROW & Utilities Only)	% of D1, D2, E1, E2	2.0%	**$22,000**	F
Total Project Cost Estimate			**$2,011,000**	G

SH 7 PEL Study

Estimate of Conceptual Project Costs

Intersection of SH 7 and York Street

SH 7 PEL Planning Environmental Linkage Study

Date Prepared:	May 8, 2013

	Input Factors			Notes
1	Length of Auxiliary Lanes (Combined Western/Eastern Legs)	LF	1,800	
2	Approximate Width of Widening (North Side)	Feet	18	
3	Approximate Width of Widening (South Side)	Feet	18	
4	Approximate Width of Proposed ROW (North Side)	Feet	42	*Ultimate ROW Width*
5	Approximate Width of Proposed ROW (South Side)	Feet	70	*Ultimate ROW Width*
6	Length of Cross Street Widening (Combined Northern/Southern Legs)	LF	250	
7	Approximate Width of Widening (West Side)	Feet	12	
8	Approximate Width of Widening (East Side)	Feet	12	
9	Approximate Width of Proposed ROW (West Side)	Feet	40	
10	Approximate Width of Proposed ROW (East Side)	Feet	35	
11	Is the Intersection Signalized?	Yes/No	1	

	Output Factors		(In 2012$)	Notes
8	Urban Typical Section Project Costs		$2,667,000.00	*Preferred Typical Section*
9	Rural Typical Section Project Costs		$2,728,000.00	

SH 7 PEL Study

Estimate of Conceptual Project Costs

Urban Typical Section w/ Curb & Gutter

SH 7 PEL Planning Environmental Linkage Study

Date Prepared: May 8, 2013

	Item		Unit Cost	Quantity	Extended Cost	*Notes*
1	Earthwork	CY	$12.33	9,067	$111,792	
2	Aggregate Base Course (Class 6)	TON	$15.45	4,309	$66,577	12-Inch Depth
3	Hot Mix Asphalt (Grade S)(100)(PG 64-22)	TON	$61.56	4,488	$276,281	10" Depth - Widening / 2" Overlay - Existing
4	Curb and Gutter	LF	$21.30	3,600	$76,680	Includes Outside Edge C&G
5	Concrete Sidewalk	SY	$29.84	2,000	$59,680	10-Foot Shared Use Path (One Side Only)
6	Traffic Signal	Each	$250,000.00	1	$250,000	
7					$0	
8					$0	
9					$0	
10					$0	
				Total Major Items	**$842,000**	

		% of Major Item Cost		
Total Major Items			**$842,000**	A
Drainage / Utilities	% of A	8.0%	$68,000	B-1
Environmental	% of A	3.0%	$26,000	B-2
Miscellaneous	% of A	1.5%	$13,000	B-3
Mobilization	% of A	9.3%	$79,000	B-4
Removals / Resets	% of A	3.7%	$32,000	B-5
Roadway	% of A	0.4%	$4,000	B-6
Signing and Striping	% of A	2.1%	$18,000	B-7
Traffic / Lighting / ITS	% of A	3.0%	$26,000	B-8
Traffic Control / Detour	% of A	9.6%	$81,000	B-9
Structural - Minor Structures / Walls	% of A	1.0%	$9,000	B-10
Bid Force Accounts	% of A	1.4%	$12,000	B-11
Total of Bid Construction Items			**$1,210,000**	B
Force Account - Misc.	% of B	2.6%	$32,000	C-1
Minor Contract Revisions	% of B	4.0%	$49,000	C-2
Total of Bid Construction Items & Force Account Items			**$1,291,000**	C
Design Engineering	% of C	8.0%	$104,000	D-1
Construction Engineering	% of C	17.0%	$220,000	D-2
Total Design & Construction Cost			**$1,615,000**	D
Right-of-Way	201,600 SF	$5	$1,008,000	E-1
Utilities	% of D	1.0%	$17,000	E-2
Total Project, Design & Construction Cost			**$2,640,000**	E
Contingency (Engineering, ROW & Utilities Only)	% of D1, D2, E1, E2	2.0%	**$27,000**	F
Total Project Cost Estimate			**$2,667,000**	G

SH 7 PEL Study

Estimate of Conceptual Project Costs

Rural Typical Section w/ Roadside Ditches

SH 7 PEL Planning Environmental Linkage Study

Date Prepared: May 8, 2013

	Item		Unit Cost	Quantity	Extended Cost	*Notes*
1	Earthwork	CY	$12.33	20,267	$249,888	
2	Aggregate Base Course (Class 6)	TON	$15.45	4,309	$66,577	12-Inch Depth
3	Hot Mix Asphalt (Grade S)(100)(PG 64-22)	TON	$61.56	4,488	$276,281	10" Depth - Widening / 2" Overlay - Existing
4	Concrete Sidewalk	SY	$29.84	2,000	$59,680	10-Foot Shared Use Path (One Side Only)
5	Traffic Signal	Each	$250,000.00	1	$250,000	
6					$0	
7					$0	
8					$0	
9					$0	
10					$0	
				Total Major Items	**$903,000**	

		% of Major Item Cost		
Total Major Items			**$903,000**	A
Drainage / Utilities	% of A	5.4%	$49,000	B-1
Environmental	% of A	3.0%	$28,000	B-2
Miscellaneous	% of A	1.5%	$14,000	B-3
Mobilization	% of A	9.3%	$84,000	B-4
Removals / Resets	% of A	3.7%	$34,000	B-5
Roadway	% of A	0.4%	$4,000	B-6
Signing and Striping	% of A	2.1%	$19,000	B-7
Traffic / Lighting / ITS	% of A	1.0%	$10,000	B-8
Traffic Control / Detour	% of A	9.6%	$87,000	B-9
Structural - Minor Structures / Walls	% of A	1.0%	$10,000	B-10
Bid Force Accounts	% of A	1.4%	$13,000	B-11
Total of Bid Construction Items			**$1,255,000**	B
Force Account - Misc.	% of B	2.6%	$33,000	C-1
Minor Contract Revisions	% of B	4.0%	$51,000	C-2
Total of Bid Construction Items & Force Account Items			**$1,339,000**	C
Design Engineering	% of C	8.0%	$108,000	D-1
Construction Engineering	% of C	17.0%	$228,000	D-2
Total Design & Construction Cost			**$1,675,000**	D
Right-of-Way	201,600 SF	$5	$1,008,000	E-1
Utilities	% of D	1.0%	$17,000	E-2
Total Project, Design & Construction Cost			**$2,700,000**	E
Contingency (Engineering, ROW & Utilities Only)	% of D1, D2, E1, E2	2.0%	**$28,000**	F
Total Project Cost Estimate			**$2,728,000**	G

SH 7 PEL Study

Estimate of Conceptual Project Costs

Summary of Segment 4

SH 7 PEL Planning Environmental Linkage Study

Date Prepared: May 8, 2013

				Notes
4a	SH 7 (York Street to Holly Street)		26,197,000	*Rural Typical Section*
	Total for Segment 4		**$26,197,000**	

SH 7 PEL Study

Estimate of Conceptual Project Costs

from York Street to Holly Street

SH 7 PEL Planning Environmental Linkage Study

Date Prepared: May 8, 2013

	Input Factors			*Notes*
1	Length of Improvements	LF	10,500	
2	Approximate Width of Widening (North Side)	Feet	30	
3	Approximate Width of Widening (South Side)	Feet	30	
4	Approximate Width of Proposed ROW (North Side)	Feet	26	
5	Approximate Width of Proposed ROW (South Side)	Feet	31	
6	Number of Major Drainageways	#	1	
7	Required Bridge Widening	SF	0	
8	Number of Signalized Intersections	#	3	

	Output Factors		**(In 2012$)**	*Notes*
8	Urban Typical Section Project Costs		$26,991,000	
9	Rural Typical Section Project Costs		$26,197,000	*Preferred Typical Section*

SH 7 PEL Study

Estimate of Conceptual Project Costs

Urban Typical Section w/ Curb & Gutter

SH 7 PEL
Planning Environmental Linkage Study

Date Prepared: May 8, 2013

	Item		Unit Cost	Quantity	Extended Cost	*Notes*
1	Earthwork	CY	$12.33	52,889	$652,120	
2	Aggregate Base Course (Class 6)	TON	$15.45	41,895	$647,278	12-Inch Depth
3	Hot Mix Asphalt (Grade S)(100)(PG 64-22)	TON	$61.56	48,382	$2,978,375	12" Depth - Widening / 2" Overlay - Existing
4	Curb and Gutter	LF	$21.30	42,000	$894,600	Includes Median & Outside Edge C&G
5	Concrete Sidewalk	SY	$29.84	23,333	$696,267	10-Foot Shared Use Path
6	Concrete Box Culvert	Each	$500,000.00	1	$500,000	181-Foot Length ($2,700/lf Unit Price)
7	Bridge Widening	SF	$125.00	0	$0	
8	Traffic Signal	Each	$250,000.00	3	$750,000	
9					$0	
10					$0	
				Total Major Items	**$7,119,000**	

			% of Major Item Cost		
Total Major Items				**$7,119,000**	**A**
Drainage / Utilities	% of A		12.3%	$876,000	**B-1**
Environmental	% of A		9.6%	$684,000	**B-2**
Miscellaneous	% of A		2.7%	$193,000	**B-3**
Mobilization	% of A		15.4%	$1,097,000	**B-4**
Removals / Resets	% of A		13.0%	$926,000	**B-5**
Roadway	% of A		7.0%	$499,000	**B-6**
Signing and Striping	% of A		5.0%	$356,000	**B-7**
Traffic / Lighting / ITS	% of A		10.8%	$769,000	**B-8**
Traffic Control / Detour	% of A		20.6%	$1,467,000	**B-9**
Structural - Minor Structures / Walls	% of A		5.5%	$392,000	**B-10**
Bid Force Accounts	% of A		0.4%	$29,000	**B-11**
Total of Bid Construction Items				**$14,407,000**	**B**
Force Account - Misc.	% of B		6.8%	$980,000	**C-1**
Minor Contract Revisions	% of B		7.7%	$1,110,000	**C-2**
Total of Bid Construction Items & Force Account Items				**$16,497,000**	**C**
Design Engineering	% of C		10.0%	$1,650,000	**D-1**
Construction Engineering	% of C		17.0%	$2,805,000	**D-2**
Total Design & Construction Cost				**$20,952,000**	**D**
Right-of-Way	598,500	SF	$5	$2,993,000	**E-1**
Utilities	% of D		8.0%	$1,677,000	**E-2**
Total Project, Design & Construction Cost				**$25,622,000**	**E**
Contingency (Engineering, ROW & Utilities Only)	% of D1, D2, E1, E2		15.0%	**$1,369,000**	**F**
Total Project Cost Estimate				**$26,991,000**	**G**

SH 7 PEL Study

Estimate of Conceptual Project Costs

Rural Typical Section w/ Roadside Ditches

SH 7 PEL
Planning Environmental Linkage Study

Date Prepared: May 8, 2013

	Item		Unit Cost	Quantity	Extended Cost	*Notes*
1	Earthwork	CY	$12.33	118,222	$1,457,680	
2	Aggregate Base Course (Class 6)	TON	$15.45	41,895	$647,278	12-Inch Depth
3	Hot Mix Asphalt (Grade S)(100)(PG 64-22)	TON	$61.56	49,280	$3,033,677	12" Depth - Widening / 2" Overlay - Existing
4	Concrete Sidewalk	SY	$29.84	23,333	$696,267	10-Foot Shared Use Path
5	Concrete Box Culvert	Each	$500,000.00	1	$500,000	181-Foot Length ($2,700/lf Unit Price)
6	Bridge Widening	SF	$125.00	0	$0	
7	Traffic Signal	Each	$250,000.00	3	$750,000	
8					$0	
9					$0	
10					$0	
				Total Major Items	**$7,085,000**	

			% of Major Item Cost		
Total Major Items				**$7,085,000**	**A**
Drainage / Utilities	% of A		6.4%	$454,000	**B-1**
Environmental	% of A		9.6%	$681,000	**B-2**
Miscellaneous	% of A		2.7%	$192,000	**B-3**
Mobilization	% of A		15.4%	$1,092,000	**B-4**
Removals / Resets	% of A		13.0%	$922,000	**B-5**
Roadway	% of A		7.0%	$496,000	**B-6**
Signing and Striping	% of A		5.0%	$355,000	**B-7**
Traffic / Lighting / ITS	% of A		10.8%	$766,000	**B-8**
Traffic Control / Detour	% of A		20.6%	$1,460,000	**B-9**
Structural - Minor Structures / Walls	% of A		5.5%	$390,000	**B-10**
Bid Force Accounts	% of A		0.4%	$29,000	**B-11**
Total of Bid Construction Items				**$13,922,000**	**B**
Force Account - Misc.	% of B		6.8%	$947,000	**C-1**
Minor Contract Revisions	% of B		7.7%	$1,072,000	**C-2**
Total of Bid Construction Items & Force Account Items				**$15,941,000**	**C**
Design Engineering	% of C		10.0%	$1,595,000	**D-1**
Construction Engineering	% of C		17.0%	$2,710,000	**D-2**
Total Design & Construction Cost				**$20,246,000**	**D**
Right-of-Way	598,500	SF	$5	$2,993,000	**E-1**
Utilities	% of D		8.0%	$1,620,000	**E-2**
Total Project, Design & Construction Cost				**$24,859,000**	**E**
Contingency (Engineering, ROW & Utilities Only)	% of D1, D2, E1, E2		15.0%	**$1,338,000**	**F**
Total Project Cost Estimate				**$26,197,000**	**G**

SH 7 PEL Study

Estimate of Conceptual Project Costs

Intersection of SH 7 and Colorado Boulevard

SH 7 PEL Planning Environmental Linkage Study

Date Prepared: May 8, 2013

	Input Factors			Notes
1	Length of Auxiliary Lanes (Combined Western/Eastern Legs)	LF	2,650	
2	Approximate Width of Widening (North Side)	Feet	17	
3	Approximate Width of Widening (South Side)	Feet	18	
4	Approximate Width of Proposed ROW (North Side)	Feet	14	*Ultimate ROW Width*
5	Approximate Width of Proposed ROW (South Side)	Feet	19	*Ultimate ROW Width*
6	Length of Cross Street Widening (Combined Northern/Southern Legs)	LF	250	*Colorado Blvd. not included in SH 7 Costs*
7	Approximate Width of Widening (West Side)	Feet	0	
8	Approximate Width of Widening (East Side)	Feet	0	
9	Approximate Width of Proposed ROW (West Side)	Feet	0	
10	Approximate Width of Proposed ROW (East Side)	Feet	0	
11	Is the Intersection Signalized?	Yes/No	1	

	Output Factors		(In 2012$)	Notes
8	Urban Typical Section Project Costs		$2,527,000.00	
9	Rural Typical Section Project Costs		$2,519,000.00	*Preferred Typical Section*

SH 7 PEL Study

Estimate of Conceptual Project Costs

Urban Typical Section w/ Curb & Gutter

SH 7 PEL Planning Environmental Linkage Study

Date Prepared: May 8, 2013

	Item		Unit Cost	Quantity	Extended Cost	Notes
1	Earthwork	CY	$12.33	8,441	$104,074	
2	Aggregate Base Course (Class 6)	TON	$15.45	6,168	$95,294	12-Inch Depth
3	Hot Mix Asphalt (Grade S)(100)(PG 64-22)	TON	$61.56	6,834	$420,704	10" Depth - Widening / 2" Overlay - Existing
4	Curb and Gutter	LF	$21.30	5,300	$112,890	Includes Outside Edge C&G
5	Concrete Sidewalk	SY	$29.84	2,944	$87,862	10-Foot Shared Use Path (One Side Only)
6	Traffic Signal	Each	$250,000.00	1	$250,000	
7					$0	
8					$0	
9					$0	
10					$0	
				Total Major Items	**$1,071,000**	

			% of Major Item Cost		
Total Major Items				**$1,071,000**	A
Drainage / Utilities	% of A		8.0%	$86,000	B-1
Environmental	% of A		3.0%	$33,000	B-2
Miscellaneous	% of A		1.5%	$17,000	B-3
Mobilization	% of A		9.3%	$100,000	B-4
Removals / Resets	% of A		3.7%	$40,000	B-5
Roadway	% of A		0.4%	$5,000	B-6
Signing and Striping	% of A		2.1%	$23,000	B-7
Traffic / Lighting / ITS	% of A		3.0%	$33,000	B-8
Traffic Control / Detour	% of A		9.6%	$103,000	B-9
Structural - Minor Structures / Walls	% of A		1.0%	$11,000	B-10
Bid Force Accounts	% of A		1.4%	$15,000	B-11
Total of Bid Construction Items				**$1,537,000**	B
Force Account - Misc.	% of B		2.6%	$40,000	C-1
Minor Contract Revisions	% of B		4.0%	$62,000	C-2
Total of Bid Construction Items & Force Account Items				**$1,639,000**	C
Design Engineering	% of C		8.0%	$132,000	D-1
Construction Engineering	% of C		17.0%	$279,000	D-2
Total Design & Construction Cost				**$2,050,000**	D
Right-of-Way	87,450	SF	$5	$438,000	E-1
Utilities	% of D		1.0%	$21,000	E-2
Total Project, Design & Construction Cost				**$2,509,000**	E
Contingency (Engineering, ROW & Utilities Only)	% of D1, D2, E1, E2		2.0%	**$18,000**	F
Total Project Cost Estimate				**$2,527,000**	G

SH 7 PEL Study

Estimate of Conceptual Project Costs

Rural Typical Section w/ Roadside Ditches

SH 7 PEL
Planning Environmental Linkage Study

Date Prepared: May 8, 2013

	Item		Unit Cost	Quantity	Extended Cost	*Notes*
1	Earthwork	CY	$12.33	20,022	$246,874	
2	Aggregate Base Course (Class 6)	TON	$15.45	6,168	$95,294	12-Inch Depth
3	Hot Mix Asphalt (Grade S)(100)(PG 64-22)	TON	$61.56	6,834	$420,704	10" Depth - Widening / 2" Overlay - Existing
4	Concrete Sidewalk	SY	$29.84	2,944	$87,862	10-Foot Shared Use Path (One Side Only)
5	Traffic Signal	Each	$250,000.00	1	$250,000	
6					$0	
7					$0	
8					$0	
9					$0	
10					$0	
				Total Major Items	**$1,101,000**	

			% of Major Item Cost		
Total Major Items				**$1,101,000**	A
Drainage / Utilities	% of A		5.4%	$60,000	B-1
Environmental	% of A		3.0%	$34,000	B-2
Miscellaneous	% of A		1.5%	$17,000	B-3
Mobilization	% of A		9.3%	$103,000	B-4
Removals / Resets	% of A		3.7%	$41,000	B-5
Roadway	% of A		0.4%	$5,000	B-6
Signing and Striping	% of A		2.1%	$24,000	B-7
Traffic / Lighting / ITS	% of A		1.0%	$12,000	B-8
Traffic Control / Detour	% of A		9.6%	$106,000	B-9
Structural - Minor Structures / Walls	% of A		1.0%	$12,000	B-10
Bid Force Accounts	% of A		1.4%	$16,000	B-11
Total of Bid Construction Items				**$1,531,000**	B
Force Account - Misc.	% of B		2.6%	$40,000	C-1
Minor Contract Revisions	% of B		4.0%	$62,000	C-2
Total of Bid Construction Items & Force Account Items				**$1,633,000**	C
Design Engineering	% of C		8.0%	$131,000	D-1
Construction Engineering	% of C		17.0%	$278,000	D-2
Total Design & Construction Cost				**$2,042,000**	D
Right-of-Way	87,450	SF	$5	$438,000	E-1
Utilities	% of D		1.0%	$21,000	E-2
Total Project, Design & Construction Cost				**$2,501,000**	E
Contingency (Engineering, ROW & Utilities Only)	% of D1, D2, E1, E2		2.0%	**$18,000**	F
Total Project Cost Estimate				**$2,519,000**	G

SH 7 PEL Study

Estimate of Conceptual Project Costs

Intersection of SH 7 and Holly Street

SH 7 PEL
Planning Environmental Linkage Study

Date Prepared: May 8, 2013

	Input Factors			*Notes*
1	Length of Auxiliary Lanes (Combined Western/Eastern Legs)	LF	2,300	
2	Approximate Width of Widening (North Side)	Feet	9	
3	Approximate Width of Widening (South Side)	Feet	8	
4	Approximate Width of Proposed ROW (North Side)	Feet	8	*Ultimate ROW Width*
5	Approximate Width of Proposed ROW (South Side)	Feet	0	*Match Existing ROW*
6	Length of Cross Street Widening (Combined Northern/Southern Legs)	LF	250	
7	Approximate Width of Widening (West Side)	Feet	0	*Match Existing*
8	Approximate Width of Widening (East Side)	Feet	0	
9	Approximate Width of Proposed ROW (West Side)	Feet	36	
10	Approximate Width of Proposed ROW (East Side)	Feet	16	
11	Is the Intersection Signalized?	Yes/No	1	

	Output Factors		(In 2012$)	*Notes*
8	Urban Typical Section Project Costs		$1,547,000.00	
9	Rural Typical Section Project Costs		$1,481,000.00	*Preferred Typical Section*

SH 7 PEL Study

Estimate of Conceptual Project Costs

Urban Typical Section w/ Curb & Gutter

SH 7 PEL Planning Environmental Linkage Study

Date Prepared: May 8, 2013

	Item		Unit Cost	Quantity	Extended Cost	*Notes*
1	Earthwork	CY	$12.33	4,259	$52,517	
2	Aggregate Base Course (Class 6)	TON	$15.45	2,600	$40,172	12-Inch Depth
3	Hot Mix Asphalt (Grade S)(100)(PG 64-22)	TON	$61.56	3,739	$230,159	10" Depth - Widening / 2" Overlay - Existing
4	Curb and Gutter	LF	$21.30	4,600	$97,980	Includes Outside Edge C&G
5	Concrete Sidewalk	SY	$29.84	2,556	$76,258	10-Foot Shared Use Path (One Side Only)
6	Traffic Signal	Each	$250,000.00	1	$250,000	
7					$0	
8					$0	
9					$0	
10					$0	
				Total Major Items	**$748,000**	

		% of Major Item Cost		
Total Major Items			**$748,000**	A
Drainage / Utilities	% of A	8.0%	$60,000	B-1
Environmental	% of A	3.0%	$23,000	B-2
Miscellaneous	% of A	1.5%	$12,000	B-3
Mobilization	% of A	9.3%	$70,000	B-4
Removals / Resets	% of A	3.7%	$28,000	B-5
Roadway	% of A	0.4%	$3,000	B-6
Signing and Striping	% of A	2.1%	$16,000	B-7
Traffic / Lighting / ITS	% of A	3.0%	$23,000	B-8
Traffic Control / Detour	% of A	9.6%	$72,000	B-9
Structural - Minor Structures / Walls	% of A	1.0%	$8,000	B-10
Bid Force Accounts	% of A	1.4%	$11,000	B-11
Total of Bid Construction Items			**$1,074,000**	B
Force Account - Misc.	% of B	2.6%	$28,000	C-1
Minor Contract Revisions	% of B	4.0%	$43,000	C-2
Total of Bid Construction Items & Force Account Items			**$1,145,000**	C
Design Engineering	% of C	8.0%	$92,000	D-1
Construction Engineering	% of C	17.0%	$195,000	D-2
Total Design & Construction Cost			**$1,432,000**	D
Right-of-Way	18,400 SF	$5	$92,000	E-1
Utilities	% of D	1.0%	$15,000	E-2
Total Project, Design & Construction Cost			**$1,539,000**	E
Contingency (Engineering, ROW & Utilities Only)	% of D1, D2, E1, E2	2.0%	**$8,000**	F
Total Project Cost Estimate			**$1,547,000**	G

SH 7 PEL Study

Estimate of Conceptual Project Costs

Rural Typical Section w/ Roadside Ditches

SH 7 PEL Planning Environmental Linkage Study

Date Prepared: May 8, 2013

	Item		Unit Cost	Quantity	Extended Cost	*Notes*
1	Earthwork	CY	$12.33	11,244	$138,644	
2	Aggregate Base Course (Class 6)	TON	$15.45	2,600	$40,172	12-Inch Depth
3	Hot Mix Asphalt (Grade S)(100)(PG 64-22)	TON	$61.56	3,739	$230,159	10" Depth - Widening / 2" Overlay - Existing
4	Concrete Sidewalk	SY	$29.84	2,556	$76,258	10-Foot Shared Use Path (One Side Only)
5	Traffic Signal	Each	$250,000.00	1	$250,000	
6					$0	
7					$0	
8					$0	
9					$0	
10					$0	
				Total Major Items	**$736,000**	

		% of Major Item Cost		
Total Major Items			**$736,000**	A
Drainage / Utilities	% of A	5.4%	$40,000	B-1
Environmental	% of A	3.0%	$23,000	B-2
Miscellaneous	% of A	1.5%	$12,000	B-3
Mobilization	% of A	9.3%	$69,000	B-4
Removals / Resets	% of A	3.7%	$28,000	B-5
Roadway	% of A	0.4%	$3,000	B-6
Signing and Striping	% of A	2.1%	$16,000	B-7
Traffic / Lighting / ITS	% of A	1.0%	$8,000	B-8
Traffic Control / Detour	% of A	9.6%	$71,000	B-9
Structural - Minor Structures / Walls	% of A	1.0%	$8,000	B-10
Bid Force Accounts	% of A	1.4%	$11,000	B-11
Total of Bid Construction Items			**$1,025,000**	B
Force Account - Misc.	% of B	2.6%	$27,000	C-1
Minor Contract Revisions	% of B	4.0%	$41,000	C-2
Total of Bid Construction Items & Force Account Items			**$1,093,000**	C
Design Engineering	% of C	8.0%	$88,000	D-1
Construction Engineering	% of C	17.0%	$186,000	D-2
Total Design & Construction Cost			**$1,367,000**	D
Right-of-Way	18,400 SF	$5	$92,000	E-1
Utilities	% of D	1.0%	$14,000	E-2
Total Project, Design & Construction Cost			**$1,473,000**	E
Contingency (Engineering, ROW & Utilities Only)	% of D1, D2, E1, E2	2.0%	**$8,000**	F
Total Project Cost Estimate			**$1,481,000**	G

SH 7 PEL Study

Estimate of Conceptual Project Costs

Summary of Segment 5

SH 7 PEL Planning Environmental Linkage Study

Date Prepared: May 8, 2013

				Notes
5a	SH 7 (Holly Street to Yosemite Street)		26,003,000	*Rural Typical Section*
5b	SH 7 (Yosemite Street to Riverdale Road)		18,460,000	*Rural Typical Section*
5c	SH 7 (Riverdale Road to US 85)		19,551,000	*Urban Typical Section*
	Total for Segment 5		**$64,014,000**	

SH 7 PEL Study

Estimate of Conceptual Project Costs

from Holly Street to Yosemite Street

SH 7 PEL Planning Environmental Linkage Study

Date Prepared: May 8, 2013

	Input Factors			Notes
1	Length of Improvements	LF	10,600	
2	Approximate Width of Widening (North Side)	Feet	27	
3	Approximate Width of Widening (South Side)	Feet	29	
4	Approximate Width of Proposed ROW (North Side)	Feet	33	
5	Approximate Width of Proposed ROW (South Side)	Feet	19	
6	Number of Major Drainageways	#	1	
7	Required Bridge Widening	SF	0	
8	Number of Signalized Intersections	#	4	

	Output Factors		**(In 2012$)**	Notes
8	Urban Typical Section Project Costs		$26,930,000	
9	Rural Typical Section Project Costs		$26,003,000	*Preferred Typical Section*

SH 7 PEL Study

Estimate of Conceptual Project Costs

Urban Typical Section w/ Curb & Gutter

SH 7 PEL Planning Environmental Linkage Study

Date Prepared: May 8, 2013

	Item		Unit Cost	Quantity	Extended Cost	*Notes*
1	Earthwork	CY	$12.33	50,252	$619,605	
2	Aggregate Base Course (Class 6)	TON	$15.45	39,474	$609,879	12-Inch Depth
3	Hot Mix Asphalt (Grade S)(100)(PG 64-22)	TON	$61.56	46,251	$2,847,232	12" Depth - Widening / 2" Overlay - Existing
4	Curb and Gutter	LF	$21.30	42,400	$903,120	Includes Median & Outside Edge C&G
5	Concrete Sidewalk	SY	$29.84	23,556	$702,898	10-Foot Shared Use Path
6	Concrete Box Culvert	Each	$500,000.00	1	$500,000	181-Foot Length ($2,700/lf Unit Price)
7	Bridge Widening	SF	$125.00	0	$0	
8	Traffic Signal	Each	$250,000.00	4	$1,000,000	
9					$0	
10					$0	
				Total Major Items	**$7,183,000**	

			% of Major Item Cost		
Total Major Items				**$7,183,000**	**A**
Drainage / Utilities	% of A		12.3%	$884,000	**B-1**
Environmental	% of A		9.6%	$690,000	**B-2**
Miscellaneous	% of A		2.7%	$194,000	**B-3**
Mobilization	% of A		15.4%	$1,107,000	**B-4**
Removals / Resets	% of A		13.0%	$934,000	**B-5**
Roadway	% of A		7.0%	$503,000	**B-6**
Signing and Striping	% of A		5.0%	$360,000	**B-7**
Traffic / Lighting / ITS	% of A		10.8%	$776,000	**B-8**
Traffic Control / Detour	% of A		20.6%	$1,480,000	**B-9**
Structural - Minor Structures / Walls	% of A		5.5%	$396,000	**B-10**
Bid Force Accounts	% of A		0.4%	$29,000	**B-11**
Total of Bid Construction Items				**$14,536,000**	**B**
Force Account - Misc.	% of B		6.8%	$989,000	**C-1**
Minor Contract Revisions	% of B		7.7%	$1,120,000	**C-2**
Total of Bid Construction Items & Force Account Items				**$16,645,000**	**C**
Design Engineering	% of C		10.0%	$1,665,000	**D-1**
Construction Engineering	% of C		17.0%	$2,830,000	**D-2**
Total Design & Construction Cost				**$21,140,000**	**D**
Right-of-Way	551,200	SF	$5	$2,756,000	**E-1**
Utilities	% of D		8.0%	$1,692,000	**E-2**
Total Project, Design & Construction Cost				**$25,588,000**	**E**
Contingency (Engineering, ROW & Utilities Only)	% of D1, D2, E1, E2		15.0%	**$1,342,000**	**F**
Total Project Cost Estimate				**$26,930,000**	**G**

SH 7 PEL Study

Estimate of Conceptual Project Costs

Rural Typical Section w/ Roadside Ditches

SH 7 PEL Planning Environmental Linkage Study

Date Prepared: May 8, 2013

	Item		Unit Cost	Quantity	Extended Cost	*Notes*
1	Earthwork	CY	$12.33	113,067	$1,394,112	
2	Aggregate Base Course (Class 6)	TON	$15.45	39,474	$609,879	12-Inch Depth
3	Hot Mix Asphalt (Grade S)(100)(PG 64-22)	TON	$61.56	47,158	$2,903,060	12" Depth - Widening / 2" Overlay - Existing
4	Concrete Sidewalk	SY	$29.84	23,556	$702,898	10-Foot Shared Use Path
5	Concrete Box Culvert	Each	$500,000.00	1	$500,000	181-Foot Length ($2,700/lf Unit Price)
6	Bridge Widening	SF	$125.00	0	$0	
7	Traffic Signal	Each	$250,000.00	4	$1,000,000	
8					$0	
9					$0	
10					$0	
				Total Major Items	**$7,110,000**	

			% of Major Item Cost		
Total Major Items				**$7,110,000**	**A**
Drainage / Utilities	% of A		6.4%	$456,000	**B-1**
Environmental	% of A		9.6%	$683,000	**B-2**
Miscellaneous	% of A		2.7%	$192,000	**B-3**
Mobilization	% of A		15.4%	$1,095,000	**B-4**
Removals / Resets	% of A		13.0%	$925,000	**B-5**
Roadway	% of A		7.0%	$498,000	**B-6**
Signing and Striping	% of A		5.0%	$356,000	**B-7**
Traffic / Lighting / ITS	% of A		10.8%	$768,000	**B-8**
Traffic Control / Detour	% of A		20.6%	$1,465,000	**B-9**
Structural - Minor Structures / Walls	% of A		5.5%	$392,000	**B-10**
Bid Force Accounts	% of A		0.4%	$29,000	**B-11**
Total of Bid Construction Items				**$13,969,000**	**B**
Force Account - Misc.	% of B		6.8%	$950,000	**C-1**
Minor Contract Revisions	% of B		7.7%	$1,076,000	**C-2**
Total of Bid Construction Items & Force Account Items				**$15,995,000**	**C**
Design Engineering	% of C		10.0%	$1,600,000	**D-1**
Construction Engineering	% of C		17.0%	$2,720,000	**D-2**
Total Design & Construction Cost				**$20,315,000**	**D**
Right-of-Way	551,200	SF	$5	$2,756,000	**E-1**
Utilities	% of D		8.0%	$1,626,000	**E-2**
Total Project, Design & Construction Cost				**$24,697,000**	**E**
Contingency (Engineering, ROW & Utilities Only)	% of D1, D2, E1, E2		15.0%	**$1,306,000**	**F**
Total Project Cost Estimate				**$26,003,000**	**G**

SH 7 PEL Study

Estimate of Conceptual Project Costs

from Yosemite Street to Riverdale Road

SH 7 PEL Planning Environmental Linkage Study

Date Prepared: May 8, 2013

	Input Factors			Notes
1	Length of Improvements	LF	11,100	
2	Approximate Width of Widening (North Side)	Feet	23	
3	Approximate Width of Widening (South Side)	Feet	20	
4	Approximate Width of Proposed ROW (North Side)	Feet	16	
5	Approximate Width of Proposed ROW (South Side)	Feet	13	
6	Number of Major Drainageways	#	0	
7	Required Bridge Widening	SF	0	
8	Number of Signalized Intersections	#	1	

	Output Factors		(In 2012$)	Notes
8	Urban Typical Section Project Costs		$19,646,000	
9	Rural Typical Section Project Costs		$18,460,000	*Preferred Typical Section*

SH 7 PEL Study

Estimate of Conceptual Project Costs

Urban Typical Section w/ Curb & Gutter

SH 7 PEL Planning Environmental Linkage Study

Date Prepared: May 8, 2013

	Item		Unit Cost	Quantity	Extended Cost	Notes
1	Earthwork	CY	$12.33	41,933	$517,038	
2	Aggregate Base Course (Class 6)	TON	$15.45	31,740	$490,390	12-Inch Depth
3	Hot Mix Asphalt (Grade S)(100)(PG 64-22)	TON	$61.56	39,615	$2,438,679	12" Depth - Widening / 2" Overlay - Existing
4	Curb and Gutter	LF	$21.30	44,400	$945,720	Includes Median & Outside Edge C&G
5	Concrete Sidewalk	SY	$29.84	24,667	$736,053	10-Foot Shared Use Path
6	Concrete Box Culvert	Each	$500,000.00	0	$0	181-Foot Length ($2,700/lf Unit Price)
7	Bridge Widening	SF	$125.00	0	$0	
8	Traffic Signal	Each	$250,000.00	1	$250,000	
9					$0	
10					$0	
				Total Major Items	**$5,378,000**	

		% of Major Item Cost		
Total Major Items			**$5,378,000**	A
Drainage / Utilities	% of A	12.3%	$662,000	B-1
Environmental	% of A	9.6%	$517,000	B-2
Miscellaneous	% of A	2.7%	$146,000	B-3
Mobilization	% of A	15.4%	$829,000	B-4
Removals / Resets	% of A	13.0%	$700,000	B-5
Roadway	% of A	7.0%	$377,000	B-6
Signing and Striping	% of A	5.0%	$269,000	B-7
Traffic / Lighting / ITS	% of A	10.8%	$581,000	B-8
Traffic Control / Detour	% of A	20.6%	$1,108,000	B-9
Structural - Minor Structures / Walls	% of A	5.5%	$296,000	B-10
Bid Force Accounts	% of A	0.4%	$22,000	B-11
Total of Bid Construction Items			**$10,885,000**	B
Force Account - Misc.	% of B	6.8%	$741,000	C-1
Minor Contract Revisions	% of B	7.7%	$839,000	C-2
Total of Bid Construction Items & Force Account Items			**$12,465,000**	C
Design Engineering	% of C	10.0%	$1,247,000	D-1
Construction Engineering	% of C	17.0%	$2,120,000	D-2
Total Design & Construction Cost			**$15,832,000**	D
Right-of-Way	321,900 SF	$5	$1,610,000	E-1
Utilities	% of D	8.0%	$1,267,000	E-2
Total Project, Design & Construction Cost			**$18,709,000**	E
Contingency (Engineering, ROW & Utilities Only)	% of D1, D2, E1, E2	15.0%	**$937,000**	F
Total Project Cost Estimate			**$19,646,000**	G

SH 7 PEL Study

Estimate of Conceptual Project Costs

Rural Typical Section w/ Roadside Ditches

SH 7 PEL Planning Environmental Linkage Study

Date Prepared: May 8, 2013

	Item		Unit Cost	Quantity	Extended Cost	*Notes*
1	Earthwork	CY	$12.33	97,022	$1,196,284	
2	Aggregate Base Course (Class 6)	TON	$15.45	31,740	$490,390	12-Inch Depth
3	Hot Mix Asphalt (Grade S)(100)(PG 64-22)	TON	$61.56	40,564	$2,497,140	12" Depth - Widening / 2" Overlay - Existing
4	Concrete Sidewalk	SY	$29.84	24,667	$736,053	10-Foot Shared Use Path
5	Concrete Box Culvert	Each	$500,000.00	0	$0	181-Foot Length ($2,700/lf Unit Price)
6	Bridge Widening	SF	$125.00	0	$0	
7	Traffic Signal	Each	$250,000.00	1	$250,000	
8					$0	
9					$0	
10					$0	
				Total Major Items	**$5,170,000**	

			% of Major Item Cost		
Total Major Items				**$5,170,000**	A
Drainage / Utilities	% of A		6.4%	$331,000	B-1
Environmental	% of A		9.6%	$497,000	B-2
Miscellaneous	% of A		2.7%	$140,000	B-3
Mobilization	% of A		15.4%	$797,000	B-4
Removals / Resets	% of A		13.0%	$673,000	B-5
Roadway	% of A		7.0%	$362,000	B-6
Signing and Striping	% of A		5.0%	$259,000	B-7
Traffic / Lighting / ITS	% of A		10.8%	$559,000	B-8
Traffic Control / Detour	% of A		20.6%	$1,066,000	B-9
Structural - Minor Structures / Walls	% of A		5.5%	$285,000	B-10
Bid Force Accounts	% of A		0.4%	$21,000	B-11
Total of Bid Construction Items				**$10,160,000**	B
Force Account - Misc.	% of B		6.8%	$691,000	C-1
Minor Contract Revisions	% of B		7.7%	$783,000	C-2
Total of Bid Construction Items & Force Account Items				**$11,634,000**	C
Design Engineering	% of C		10.0%	$1,164,000	D-1
Construction Engineering	% of C		17.0%	$1,978,000	D-2
Total Design & Construction Cost				**$14,776,000**	D
Right-of-Way	321,900	SF	$5	$1,610,000	E-1
Utilities	% of D		8.0%	$1,183,000	E-2
Total Project, Design & Construction Cost				**$17,569,000**	E
Contingency (Engineering, ROW & Utilities Only)	% of D1, D2, E1, E2		15.0%	**$891,000**	F
Total Project Cost Estimate				**$18,460,000**	G

SH 7 PEL Study

Estimate of Conceptual Project Costs

from Riverdale Road to US 85

SH 7 PEL Planning Environmental Linkage Study

Date Prepared: May 8, 2013

	Input Factors			*Notes*
1	Length of Improvements	LF	5,400	
2	Approximate Width of Widening (North Side)	Feet	19	
3	Approximate Width of Widening (South Side)	Feet	29	
4	Approximate Width of Proposed ROW (North Side)	Feet	30	
5	Approximate Width of Proposed ROW (South Side)	Feet	7	
6	Number of Major Drainageways	#	1	
7	Required Bridge Widening	SF	19,300	
8	Number of Signalized Intersections	#	0	

	Output Factors		**(In 2012$)**	*Notes*
8	Urban Typical Section Project Costs		$19,551,000	*Preferred Typical Section*
9	Rural Typical Section Project Costs		$18,765,000	

SH 7 PEL Study

Estimate of Conceptual Project Costs

Urban Typical Section w/ Curb & Gutter

SH 7 PEL Planning Environmental Linkage Study

Date Prepared: May 8, 2013

	Item		Unit Cost	Quantity	Extended Cost	*Notes*
1	Earthwork	CY	$12.33	22,400	$276,192	
2	Aggregate Base Course (Class 6)	TON	$15.45	17,237	$266,309	12-Inch Depth
3	Hot Mix Asphalt (Grade S)(100)(PG 64-22)	TON	$61.56	20,922	$1,287,958	12" Depth - Widening / 2" Overlay - Existing
4	Curb and Gutter	LF	$21.30	21,600	$460,080	Includes Median & Outside Edge C&G
5	Concrete Sidewalk	SY	$29.84	12,000	$358,080	10-Foot Shared Use Path
6	Concrete Box Culvert	Each	$500,000.00	1	$500,000	181-Foot Length ($2,700/lf Unit Price)
7	Bridge Widening	SF	$125.00	19,300	$2,412,500	
8	Traffic Signal	Each	$250,000.00	0	$0	
9					$0	
10					$0	
				Total Major Items	**$5,562,000**	

			% of Major Item Cost		
Total Major Items				**$5,562,000**	**A**
Drainage / Utilities	% of A		12.3%	$685,000	**B-1**
Environmental	% of A		9.6%	$534,000	**B-2**
Miscellaneous	% of A		2.7%	$151,000	**B-3**
Mobilization	% of A		15.4%	$857,000	**B-4**
Removals / Resets	% of A		13.0%	$724,000	**B-5**
Roadway	% of A		7.0%	$390,000	**B-6**
Signing and Striping	% of A		5.0%	$279,000	**B-7**
Traffic / Lighting / ITS	% of A		10.8%	$601,000	**B-8**
Traffic Control / Detour	% of A		20.6%	$1,146,000	**B-9**
Structural - Minor Structures / Walls	% of A		5.5%	$306,000	**B-10**
Bid Force Accounts	% of A		0.4%	$23,000	**B-11**
Total of Bid Construction Items				**$11,258,000**	**B**
Force Account - Misc.	% of B		6.8%	$766,000	**C-1**
Minor Contract Revisions	% of B		7.7%	$867,000	**C-2**
Total of Bid Construction Items & Force Account Items				**$12,891,000**	**C**
Design Engineering	% of C		10.0%	$1,290,000	**D-1**
Construction Engineering	% of C		17.0%	$2,192,000	**D-2**
Total Design & Construction Cost				**$16,373,000**	**D**
Right-of-Way	199,800	SF	$5	$999,000	**E-1**
Utilities	% of D		8.0%	$1,310,000	**E-2**
Total Project, Design & Construction Cost				**$18,682,000**	**E**
Contingency (Engineering, ROW & Utilities Only)	% of D1, D2, E1, E2		15.0%	**$869,000**	**F**
Total Project Cost Estimate				**$19,551,000**	**G**

SH 7 PEL Study

Estimate of Conceptual Project Costs

Rural Typical Section w/ Roadside Ditches

SH 7 PEL Planning Environmental Linkage Study

Date Prepared: May 8, 2013

	Item		Unit Cost	Quantity	Extended Cost	*Notes*
1	Earthwork	CY	$12.33	51,200	$631,296	
2	Aggregate Base Course (Class 6)	TON	$15.45	17,237	$266,309	12-Inch Depth
3	Hot Mix Asphalt (Grade S)(100)(PG 64-22)	TON	$61.56	21,384	$1,316,399	12" Depth - Widening / 2" Overlay - Existing
4	Concrete Sidewalk	SY	$29.84	12,000	$358,080	10-Foot Shared Use Path
5	Concrete Box Culvert	Each	$500,000.00	1	$500,000	181-Foot Length ($2,700/lf Unit Price)
6	Bridge Widening	SF	$125.00	19,300	$2,412,500	
7	Traffic Signal	Each	$250,000.00	0	$0	
8					$0	
9					$0	
10					$0	
				Total Major Items	**$5,485,000**	

			% of Major Item Cost		
Total Major Items				**$5,485,000**	**A**
Drainage / Utilities	% of A		6.4%	$352,000	**B-1**
Environmental	% of A		9.6%	$527,000	**B-2**
Miscellaneous	% of A		2.7%	$149,000	**B-3**
Mobilization	% of A		15.4%	$845,000	**B-4**
Removals / Resets	% of A		13.0%	$714,000	**B-5**
Roadway	% of A		7.0%	$384,000	**B-6**
Signing and Striping	% of A		5.0%	$275,000	**B-7**
Traffic / Lighting / ITS	% of A		10.8%	$593,000	**B-8**
Traffic Control / Detour	% of A		20.6%	$1,130,000	**B-9**
Structural - Minor Structures / Walls	% of A		5.5%	$302,000	**B-10**
Bid Force Accounts	% of A		0.4%	$22,000	**B-11**
Total of Bid Construction Items				**$10,778,000**	**B**
Force Account - Misc.	% of B		6.8%	$733,000	**C-1**
Minor Contract Revisions	% of B		7.7%	$830,000	**C-2**
Total of Bid Construction Items & Force Account Items				**$12,341,000**	**C**
Design Engineering	% of C		10.0%	$1,235,000	**D-1**
Construction Engineering	% of C		17.0%	$2,098,000	**D-2**
Total Design & Construction Cost				**$15,674,000**	**D**
Right-of-Way	199,800	SF	$5	$999,000	**E-1**
Utilities	% of D		8.0%	$1,254,000	**E-2**
Total Project, Design & Construction Cost				**$17,927,000**	**E**
Contingency (Engineering, ROW & Utilities Only)	% of D1, D2, E1, E2		15.0%	**$838,000**	**F**
Total Project Cost Estimate				**$18,765,000**	**G**

SH 7 PEL Study

Estimate of Conceptual Project Costs

Intersection of SH 7 and Quebec Street

SH 7 PEL Planning Environmental Linkage Study

Date Prepared: May 8, 2013

	Input Factors			Notes
1	Length of Auxiliary Lanes (Combined Western/Eastern Legs)	LF	2,300	
2	Approximate Width of Widening (North Side)	Feet	11	
3	Approximate Width of Widening (South Side)	Feet	10	
4	Approximate Width of Proposed ROW (North Side)	Feet	32	*Ultimate ROW Width*
5	Approximate Width of Proposed ROW (South Side)	Feet	24	*Ultimate ROW Width*
6	Length of Cross Street Widening (Combined Northern/Southern Legs)	LF	0	
7	Approximate Width of Widening (West Side)	Feet	0	*Match Existing*
8	Approximate Width of Widening (East Side)	Feet	0	
9	Approximate Width of Proposed ROW (West Side)	Feet	0	
10	Approximate Width of Proposed ROW (East Side)	Feet	50	
11	Is the Intersection Signalized?	Yes/No	1	

	Output Factors		(In 2012$)	Notes
8	Urban Typical Section Project Costs		$2,155,000.00	
9	Rural Typical Section Project Costs		$2,099,000.00	*Preferred Typical Section*

SH 7 PEL Study

Estimate of Conceptual Project Costs

Urban Typical Section w/ Curb & Gutter

SH 7 PEL Planning Environmental Linkage Study

Date Prepared: May 8, 2013

	Item		Unit Cost	Quantity	Extended Cost	Notes
1	Earthwork	CY	$12.33	4,941	$60,919	
2	Aggregate Base Course (Class 6)	TON	$15.45	3,212	$49,625	12-Inch Depth
3	Hot Mix Asphalt (Grade S)(100)(PG 64-22)	TON	$61.56	3,795	$233,620	10" Depth - Widening / 2" Overlay - Existing
4	Curb and Gutter	LF	$21.30	4,600	$97,980	Includes Outside Edge C&G
5	Concrete Sidewalk	SY	$29.84	2,556	$76,258	10-Foot Shared Use Path (One Side Only)
6	Traffic Signal	Each	$250,000.00	1	$250,000	
7					$0	
8					$0	
9					$0	
10					$0	
				Total Major Items	**$769,000**	

			% of Major Item Cost		
Total Major Items				**$769,000**	**A**
Drainage / Utilities	% of A		8.0%	$62,000	**B-1**
Environmental	% of A		3.0%	$24,000	**B-2**
Miscellaneous	% of A		1.5%	$12,000	**B-3**
Mobilization	% of A		9.3%	$72,000	**B-4**
Removals / Resets	% of A		3.7%	$29,000	**B-5**
Roadway	% of A		0.4%	$4,000	**B-6**
Signing and Striping	% of A		2.1%	$17,000	**B-7**
Traffic / Lighting / ITS	% of A		3.0%	$24,000	**B-8**
Traffic Control / Detour	% of A		9.6%	$74,000	**B-9**
Structural - Minor Structures / Walls	% of A		1.0%	$8,000	**B-10**
Bid Force Accounts	% of A		1.4%	$11,000	**B-11**
Total of Bid Construction Items				**$1,106,000**	**B**
Force Account - Misc.	% of B		2.6%	$29,000	**C-1**
Minor Contract Revisions	% of B		4.0%	$45,000	**C-2**
Total of Bid Construction Items & Force Account Items				**$1,180,000**	**C**
Design Engineering	% of C		8.0%	$95,000	**D-1**
Construction Engineering	% of C		17.0%	$201,000	**D-2**
Total Design & Construction Cost				**$1,476,000**	**D**
Right-of-Way	128,800	SF	$5	$644,000	**E-1**
Utilities	% of D		1.0%	$15,000	**E-2**
Total Project, Design & Construction Cost				**$2,135,000**	**E**
Contingency (Engineering, ROW & Utilities Only)	% of D1, D2, E1, E2		2.0%	**$20,000**	**F**
Total Project Cost Estimate				**$2,155,000**	**G**

SH 7 PEL Study

Estimate of Conceptual Project Costs

Rural Typical Section w/ Roadside Ditches

SH 7 PEL Planning Environmental Linkage Study

Date Prepared: May 8, 2013

	Item		Unit Cost	Quantity	Extended Cost	*Notes*
1	Earthwork	CY	$12.33	12,607	$155,449	
2	Aggregate Base Course (Class 6)	TON	$15.45	3,212	$49,625	12-Inch Depth
3	Hot Mix Asphalt (Grade S)(100)(PG 64-22)	TON	$61.56	3,795	$233,620	10" Depth - Widening / 2" Overlay - Existing
4	Concrete Sidewalk	SY	$29.84	2,556	$76,258	10-Foot Shared Use Path (One Side Only)
5	Traffic Signal	Each	$250,000.00	1	$250,000	
6					$0	
7					$0	
8					$0	
9					$0	
10					$0	
				Total Major Items	**$765,000**	

		% of Major Item Cost		
Total Major Items			**$765,000**	A
Drainage / Utilities	% of A	5.4%	$42,000	B-1
Environmental	% of A	3.0%	$23,000	B-2
Miscellaneous	% of A	1.5%	$12,000	B-3
Mobilization	% of A	9.3%	$72,000	B-4
Removals / Resets	% of A	3.7%	$29,000	B-5
Roadway	% of A	0.4%	$4,000	B-6
Signing and Striping	% of A	2.1%	$17,000	B-7
Traffic / Lighting / ITS	% of A	1.0%	$8,000	B-8
Traffic Control / Detour	% of A	9.6%	$74,000	B-9
Structural - Minor Structures / Walls	% of A	1.0%	$8,000	B-10
Bid Force Accounts	% of A	1.4%	$11,000	B-11
Total of Bid Construction Items			**$1,065,000**	B
Force Account - Misc.	% of B	2.6%	$28,000	C-1
Minor Contract Revisions	% of B	4.0%	$43,000	C-2
Total of Bid Construction Items & Force Account Items			**$1,136,000**	C
Design Engineering	% of C	8.0%	$91,000	D-1
Construction Engineering	% of C	17.0%	$194,000	D-2
Total Design & Construction Cost			**$1,421,000**	D
Right-of-Way	128,800 SF	$5	$644,000	E-1
Utilities	% of D	1.0%	$15,000	E-2
Total Project, Design & Construction Cost			**$2,080,000**	E
Contingency (Engineering, ROW & Utilities Only)	% of D1, D2, E1, E2	2.0%	**$19,000**	F
Total Project Cost Estimate			**$2,099,000**	G

SH 7 PEL Study

Estimate of Conceptual Project Costs

Intersection of SH 7 and Yosemite Street

SH 7 PEL Planning Environmental Linkage Study

Date Prepared: May 8, 2013

	Input Factors			*Notes*
1	Length of Auxiliary Lanes (Combined Western/Eastern Legs)	LF	3,100	
2	Approximate Width of Widening (North Side)	Feet	8	
3	Approximate Width of Widening (South Side)	Feet	10	
4	Approximate Width of Proposed ROW (North Side)	Feet	18	*Ultimate ROW Width*
5	Approximate Width of Proposed ROW (South Side)	Feet	8	*Ultimate ROW Width Avg (East of Yosemite Street)*
6	Length of Cross Street Widening (Combined Northern/Southern Legs)	LF	125	
7	Approximate Width of Widening (West Side)	Feet	12	*North Side Only*
8	Approximate Width of Widening (East Side)	Feet	0	
9	Approximate Width of Proposed ROW (West Side)	Feet	15	
10	Approximate Width of Proposed ROW (East Side)	Feet	32	
11	Is the Intersection Signalized?	Yes/No	1	

	Output Factors		**(In 2012$)**	*Notes*
8	Urban Typical Section Project Costs		$2,246,000.00	
9	Rural Typical Section Project Costs		$2,224,000.00	*Preferred Typical Section*

SH 7 PEL Study

Estimate of Conceptual Project Costs

Urban Typical Section w/ Curb & Gutter

SH 7 PEL Planning Environmental Linkage Study

Date Prepared: May 8, 2013

	Item		Unit Cost	Quantity	Extended Cost	*Notes*
1	Earthwork	CY	$12.33	8,726	$107,591	
2	Aggregate Base Course (Class 6)	TON	$15.45	3,711	$57,330	12-Inch Depth
3	Hot Mix Asphalt (Grade S)(100)(PG 64-22)	TON	$61.56	4,774	$293,887	10" Depth - Widening / 2" Overlay - Existing
4	Curb and Gutter	LF	$21.30	6,200	$132,060	Includes Outside Edge C&G
5	Concrete Sidewalk	SY	$29.84	3,444	$102,782	10-Foot Shared Use Path (One Side Only)
6	Traffic Signal	Each	$250,000.00	1	$250,000	
7					$0	
8					$0	
9					$0	
10					$0	
				Total Major Items	**$944,000**	

		% of Major Item Cost		
Total Major Items			**$944,000**	**A**
Drainage / Utilities	% of A	8.0%	$76,000	**B-1**
Environmental	% of A	3.0%	$29,000	**B-2**
Miscellaneous	% of A	1.5%	$15,000	**B-3**
Mobilization	% of A	9.3%	$88,000	**B-4**
Removals / Resets	% of A	3.7%	$35,000	**B-5**
Roadway	% of A	0.4%	$4,000	**B-6**
Signing and Striping	% of A	2.1%	$20,000	**B-7**
Traffic / Lighting / ITS	% of A	3.0%	$29,000	**B-8**
Traffic Control / Detour	% of A	9.6%	$91,000	**B-9**
Structural - Minor Structures / Walls	% of A	1.0%	$10,000	**B-10**
Bid Force Accounts	% of A	1.4%	$14,000	**B-11**
Total of Bid Construction Items			**$1,355,000**	**B**
Force Account - Misc.	% of B	2.6%	$36,000	**C-1**
Minor Contract Revisions	% of B	4.0%	$55,000	**C-2**
Total of Bid Construction Items & Force Account Items			**$1,446,000**	**C**
Design Engineering	% of C	8.0%	$116,000	**D-1**
Construction Engineering	% of C	17.0%	$246,000	**D-2**
Total Design & Construction Cost			**$1,808,000**	**D**
Right-of-Way	80,600 SF	$5	$403,000	**E-1**
Utilities	% of D	1.0%	$19,000	**E-2**
Total Project, Design & Construction Cost			**$2,230,000**	**E**
Contingency (Engineering, ROW & Utilities Only)	% of D1, D2, E1, E2	2.0%	**$16,000**	**F**
Total Project Cost Estimate			**$2,246,000**	**G**

SH 7 PEL Study

Estimate of Conceptual Project Costs

Rural Typical Section w/ Roadside Ditches

SH 7 PEL Planning Environmental Linkage Study

Date Prepared: May 8, 2013

	Item		Unit Cost	Quantity	Extended Cost	*Notes*
1	Earthwork	CY	$12.33	21,126	$260,483	
2	Aggregate Base Course (Class 6)	TON	$15.45	3,711	$57,330	12-Inch Depth
3	Hot Mix Asphalt (Grade S)(100)(PG 64-22)	TON	$61.56	4,774	$293,887	10" Depth - Widening / 2" Overlay - Existing
4	Concrete Sidewalk	SY	$29.84	3,444	$102,782	10-Foot Shared Use Path (One Side Only)
5	Traffic Signal	Each	$250,000.00	1	$250,000	
6					$0	
7					$0	
8					$0	
9					$0	
10					$0	
				Total Major Items	**$965,000**	

		% of Major Item Cost		
Total Major Items			**$965,000**	**A**
Drainage / Utilities	% of A	5.4%	$53,000	**B-1**
Environmental	% of A	3.0%	$29,000	**B-2**
Miscellaneous	% of A	1.5%	$15,000	**B-3**
Mobilization	% of A	9.3%	$90,000	**B-4**
Removals / Resets	% of A	3.7%	$36,000	**B-5**
Roadway	% of A	0.4%	$4,000	**B-6**
Signing and Striping	% of A	2.1%	$21,000	**B-7**
Traffic / Lighting / ITS	% of A	1.0%	$10,000	**B-8**
Traffic Control / Detour	% of A	9.6%	$93,000	**B-9**
Structural - Minor Structures / Walls	% of A	1.0%	$10,000	**B-10**
Bid Force Accounts	% of A	1.4%	$14,000	**B-11**
Total of Bid Construction Items			**$1,340,000**	**B**
Force Account - Misc.	% of B	2.6%	$35,000	**C-1**
Minor Contract Revisions	% of B	4.0%	$54,000	**C-2**
Total of Bid Construction Items & Force Account Items			**$1,429,000**	**C**
Design Engineering	% of C	8.0%	$115,000	**D-1**
Construction Engineering	% of C	17.0%	$243,000	**D-2**
Total Design & Construction Cost			**$1,787,000**	**D**
Right-of-Way	80,600 SF	$5	$403,000	**E-1**
Utilities	% of D	1.0%	$18,000	**E-2**
Total Project, Design & Construction Cost			**$2,208,000**	**E**
Contingency (Engineering, ROW & Utilities Only)	% of D1, D2, E1, E2	2.0%	**$16,000**	**F**
Total Project Cost Estimate			**$2,224,000**	**G**

SH 7 PEL Study

Estimate of Conceptual Project Costs

Intersection of SH 7 and Havana Street

SH 7 PEL Planning Environmental Linkage Study

Date Prepared: May 8, 2013

	Input Factors			Notes
1	Length of Auxiliary Lanes (Combined Western/Eastern Legs)	LF	2,450	
2	Approximate Width of Widening (North Side)	Feet	13	
3	Approximate Width of Widening (South Side)	Feet	12	
4	Approximate Width of Proposed ROW (North Side)	Feet	14	*Ultimate ROW Width*
5	Approximate Width of Proposed ROW (South Side)	Feet	10	*Ultimate ROW Width Avg (East of Havana Street)*
6	Length of Cross Street Widening (Combined Northern/Southern Legs)	LF	0	*Match Cross Street*
7	Approximate Width of Widening (West Side)	Feet	0	
8	Approximate Width of Widening (East Side)	Feet	0	
9	Approximate Width of Proposed ROW (West Side)	Feet	20	
10	Approximate Width of Proposed ROW (East Side)	Feet	0	
11	Is the Intersection Signalized?	Yes/No	1	

	Output Factors		(In 2012$)	Notes
8	Urban Typical Section Project Costs		$2,079,000.00	
9	Rural Typical Section Project Costs		$2,032,000.00	*Preferred Typical Section*

SH 7 PEL Study

Estimate of Conceptual Project Costs

Urban Typical Section w/ Curb & Gutter

SH 7 PEL Planning Environmental Linkage Study

Date Prepared: May 8, 2013

	Item		Unit Cost	Quantity	Extended Cost	Notes
1	Earthwork	CY	$12.33	5,989	$73,843	
2	Aggregate Base Course (Class 6)	TON	$15.45	4,073	$62,930	12-Inch Depth
3	Hot Mix Asphalt (Grade S)(100)(PG 64-22)	TON	$61.56	5,540	$341,025	10" Depth - Widening / 2" Overlay - Existing
4	Curb and Gutter	LF	$21.30	4,900	$104,370	Includes Outside Edge C&G
5	Concrete Sidewalk	SY	$29.84	2,722	$81,231	10-Foot Shared Use Path (One Side Only)
6	Traffic Signal	Each	$250,000.00	1	$250,000	
7					$0	
8					$0	
9					$0	
10					$0	
				Total Major Items	**$914,000**	

	% of Major Item Cost				
Total Major Items				**$914,000**	A
Drainage / Utilities	% of A		8.0%	$74,000	B-1
Environmental	% of A		3.0%	$28,000	B-2
Miscellaneous	% of A		1.5%	$14,000	B-3
Mobilization	% of A		9.3%	$86,000	B-4
Removals / Resets	% of A		3.7%	$34,000	B-5
Roadway	% of A		0.4%	$4,000	B-6
Signing and Striping	% of A		2.1%	$20,000	B-7
Traffic / Lighting / ITS	% of A		3.0%	$28,000	B-8
Traffic Control / Detour	% of A		9.6%	$88,000	B-9
Structural - Minor Structures / Walls	% of A		1.0%	$10,000	B-10
Bid Force Accounts	% of A		1.4%	$13,000	B-11
Total of Bid Construction Items				**$1,313,000**	B
Force Account - Misc.	% of B		2.6%	$35,000	C-1
Minor Contract Revisions	% of B		4.0%	$53,000	C-2
Total of Bid Construction Items & Force Account Items				**$1,401,000**	C
Design Engineering	% of C		8.0%	$113,000	D-1
Construction Engineering	% of C		17.0%	$239,000	D-2
Total Design & Construction Cost				**$1,753,000**	D
Right-of-Way	58,800	SF	$5	$294,000	E-1
Utilities	% of D		1.0%	$18,000	E-2
Total Project, Design & Construction Cost				**$2,065,000**	E
Contingency (Engineering, ROW & Utilities Only)	% of D1, D2, E1, E2		2.0%	**$14,000**	F
Total Project Cost Estimate				**$2,079,000**	G

SH 7 PEL Study

Estimate of Conceptual Project Costs

Rural Typical Section w/ Roadside Ditches

SH 7 PEL Planning Environmental Linkage Study

Date Prepared: May 8, 2013

	Item		Unit Cost	Quantity	Extended Cost	*Notes*
1	Earthwork	CY	$12.33	14,881	$183,489	
2	Aggregate Base Course (Class 6)	TON	$15.45	4,073	$62,930	12-Inch Depth
3	Hot Mix Asphalt (Grade S)(100)(PG 64-22)	TON	$61.56	5,540	$341,025	10" Depth - Widening / 2" Overlay - Existing
4	Concrete Sidewalk	SY	$29.84	2,722	$81,231	10-Foot Shared Use Path (One Side Only)
5	Traffic Signal	Each	$250,000.00	1	$250,000	
6					$0	
7					$0	
8					$0	
9					$0	
10					$0	
				Total Major Items	**$919,000**	

			% of Major Item Cost		
Total Major Items				**$919,000**	A
Drainage / Utilities	% of A		5.4%	$50,000	B-1
Environmental	% of A		3.0%	$28,000	B-2
Miscellaneous	% of A		1.5%	$14,000	B-3
Mobilization	% of A		9.3%	$86,000	B-4
Removals / Resets	% of A		3.7%	$35,000	B-5
Roadway	% of A		0.4%	$4,000	B-6
Signing and Striping	% of A		2.1%	$20,000	B-7
Traffic / Lighting / ITS	% of A		1.0%	$10,000	B-8
Traffic Control / Detour	% of A		9.6%	$89,000	B-9
Structural - Minor Structures / Walls	% of A		1.0%	$10,000	B-10
Bid Force Accounts	% of A		1.4%	$13,000	B-11
Total of Bid Construction Items				**$1,278,000**	B
Force Account - Misc.	% of B		2.6%	$34,000	C-1
Minor Contract Revisions	% of B		4.0%	$52,000	C-2
Total of Bid Construction Items & Force Account Items				**$1,364,000**	C
Design Engineering	% of C		8.0%	$110,000	D-1
Construction Engineering	% of C		17.0%	$232,000	D-2
Total Design & Construction Cost				**$1,706,000**	D
Right-of-Way	58,800	SF	$5	$294,000	E-1
Utilities	% of D		1.0%	$18,000	E-2
Total Project, Design & Construction Cost				**$2,018,000**	E
Contingency (Engineering, ROW & Utilities Only)	% of D1, D2, E1, E2		2.0%	**$14,000**	F
Total Project Cost Estimate				**$2,032,000**	G

SH 7 PEL Study

Estimate of Conceptual Project Costs

Intersection of SH 7 and Riverdale Road

SH 7 PEL Planning Environmental Linkage Study

Date Prepared: May 8, 2013

	Input Factors			*Notes*
1	Length of Auxiliary Lanes (Combined Western/Eastern Legs)	LF	2,150	
2	Approximate Width of Widening (North Side)	Feet	8	
3	Approximate Width of Widening (South Side)	Feet	14	
4	Approximate Width of Proposed ROW (North Side)	Feet	0	*Match Existing ROW*
5	Approximate Width of Proposed ROW (South Side)	Feet	14	*Ultimate ROW Width*
6	Length of Cross Street Widening (Combined Northern/Southern Legs)	LF	100	
7	Approximate Width of Widening (West Side)	Feet	5	
8	Approximate Width of Widening (East Side)	Feet	5	
9	Approximate Width of Proposed ROW (West Side)	Feet	24	
10	Approximate Width of Proposed ROW (East Side)	Feet	15	
11	Is the Intersection Signalized?	Yes/No	1	

	Output Factors		(In 2012$)	*Notes*
8	Urban Typical Section Project Costs		$1,667,000.00	*Preferred Typical Section*
9	Rural Typical Section Project Costs		$1,650,000.00	

SH 7 PEL Study

Estimate of Conceptual Project Costs

Urban Typical Section w/ Curb & Gutter

SH 7 PEL Planning Environmental Linkage Study

Date Prepared: May 8, 2013

	Item		Unit Cost	Quantity	Extended Cost	*Notes*
1	Earthwork	CY	$12.33	6,370	$78,547	
2	Aggregate Base Course (Class 6)	TON	$15.45	3,145	$48,597	12-Inch Depth
3	Hot Mix Asphalt (Grade S)(100)(PG 64-22)	TON	$61.56	3,837	$236,178	10" Depth - Widening / 2" Overlay - Existing
4	Curb and Gutter	LF	$21.30	4,300	$91,590	Includes Outside Edge C&G
5	Concrete Sidewalk	SY	$29.84	2,389	$71,284	10-Foot Shared Use Path (One Side Only)
6	Traffic Signal	Each	$250,000.00	1	$250,000	
7					$0	
8					$0	
9					$0	
10					$0	
				Total Major Items	**$777,000**	

			% of Major Item Cost		
Total Major Items				**$777,000**	A
Drainage / Utilities	% of A		8.0%	$63,000	B-1
Environmental	% of A		3.0%	$24,000	B-2
Miscellaneous	% of A		1.5%	$12,000	B-3
Mobilization	% of A		9.3%	$73,000	B-4
Removals / Resets	% of A		3.7%	$29,000	B-5
Roadway	% of A		0.4%	$4,000	B-6
Signing and Striping	% of A		2.1%	$17,000	B-7
Traffic / Lighting / ITS	% of A		3.0%	$24,000	B-8
Traffic Control / Detour	% of A		9.6%	$75,000	B-9
Structural - Minor Structures / Walls	% of A		1.0%	$8,000	B-10
Bid Force Accounts	% of A		1.4%	$11,000	B-11
Total of Bid Construction Items				**$1,117,000**	B
Force Account - Misc.	% of B		2.6%	$30,000	C-1
Minor Contract Revisions	% of B		4.0%	$45,000	C-2
Total of Bid Construction Items & Force Account Items				**$1,192,000**	C
Design Engineering	% of C		8.0%	$96,000	D-1
Construction Engineering	% of C		17.0%	$203,000	D-2
Total Design & Construction Cost				**$1,491,000**	D
Right-of-Way	30,100	SF	$5	$151,000	E-1
Utilities	% of D		1.0%	$15,000	E-2
Total Project, Design & Construction Cost				**$1,657,000**	E
Contingency (Engineering, ROW & Utilities Only)	% of D1, D2, E1, E2		2.0%	**$10,000**	F
Total Project Cost Estimate				**$1,667,000**	G

SH 7 PEL Study

Estimate of Conceptual Project Costs

Rural Typical Section w/ Roadside Ditches

SH 7 PEL Planning Environmental Linkage Study

Date Prepared: May 8, 2013

	Item		Unit Cost	Quantity	Extended Cost	*Notes*
1	Earthwork	CY	$12.33	15,289	$188,512	
2	Aggregate Base Course (Class 6)	TON	$15.45	3,145	$48,597	12-Inch Depth
3	Hot Mix Asphalt (Grade S)(100)(PG 64-22)	TON	$61.56	3,837	$236,178	10" Depth - Widening / 2" Overlay - Existing
4	Concrete Sidewalk	SY	$29.84	2,389	$71,284	10-Foot Shared Use Path (One Side Only)
5	Traffic Signal	Each	$250,000.00	1	$250,000	
6					$0	
7					$0	
8					$0	
9					$0	
10					$0	
				Total Major Items	**$795,000**	

			% of Major Item Cost		
Total Major Items				**$795,000**	A
Drainage / Utilities	% of A		5.4%	$43,000	B-1
Environmental	% of A		3.0%	$24,000	B-2
Miscellaneous	% of A		1.5%	$12,000	B-3
Mobilization	% of A		9.3%	$74,000	B-4
Removals / Resets	% of A		3.7%	$30,000	B-5
Roadway	% of A		0.4%	$4,000	B-6
Signing and Striping	% of A		2.1%	$17,000	B-7
Traffic / Lighting / ITS	% of A		1.0%	$8,000	B-8
Traffic Control / Detour	% of A		9.6%	$77,000	B-9
Structural - Minor Structures / Walls	% of A		1.0%	$8,000	B-10
Bid Force Accounts	% of A		1.4%	$12,000	B-11
Total of Bid Construction Items				**$1,104,000**	B
Force Account - Misc.	% of B		2.6%	$29,000	C-1
Minor Contract Revisions	% of B		4.0%	$45,000	C-2
Total of Bid Construction Items & Force Account Items				**$1,178,000**	C
Design Engineering	% of C		8.0%	$95,000	D-1
Construction Engineering	% of C		17.0%	$201,000	D-2
Total Design & Construction Cost				**$1,474,000**	D
Right-of-Way	30,100	SF	$5	$151,000	E-1
Utilities	% of D		1.0%	$15,000	E-2
Total Project, Design & Construction Cost				**$1,640,000**	E
Contingency (Engineering, ROW & Utilities Only)	% of D1, D2, E1, E2		2.0%	**$10,000**	F
Total Project Cost Estimate				**$1,650,000**	G