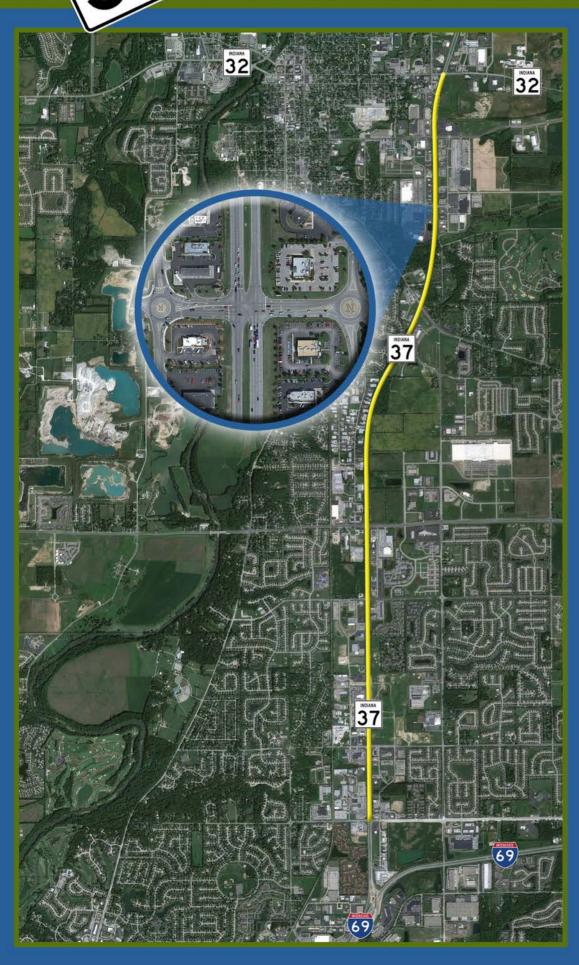
## SR 37 MOBILITY STUDY



INDIANA

## SR 37 AND TOWN & COUNTRY BLVD.

Presented to:











Presented by:





## SR 37 Mobility Study (Study) Town and Country Boulevard at SR 37

## **Description of Proposed Project**

## I. GENERAL

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The Indiana Department of Transportation, the Indianapolis Metropolitan Planning Organization, Hamilton County, Town of Fishers, and City of Noblesville have identified the need to significantly improve the SR 37 corridor from 126<sup>th</sup> Street to SR 32 / SR 38. The Study area also extends along 146<sup>th</sup> Street from Allisonville Road to Cumberland Road. The Study was funded 80% by the Federal Highway Administration through the MPO with the remainder provided by Hamilton County.

## II. PURPOSE

The purpose of the Study was to evaluate whether grade separation of the existing intersections would improve the traffic capacity, efficiency, and safety for the project corridors without the need to add additional travel lanes along this segment of the SR 37 corridor. This includes the basic concept of reconstructing each of the existing and anticipated signalized intersections through this segment of SR 37 to interchanges; thus eliminating the need for added travel lanes along the corridor. If this was shown to be an improvement, then the Study was to further identify a preferred design solution for future improvements along the SR 37 corridor and to identify potential environmental concerns that may be present, and to establish a reliable budget to construct these improvements.

The preferred design solution was defined to a level which will allow officials with the INDOT, MPO, Hamilton County, Town of Fishers, and the City of Noblesville to begin making necessary amendments to their requisite Planning Documents.

## III. EXISTING FACILITY

The subject corridor is located in south central Hamilton County in Delaware and Noblesville Townships, and in the Town of Fishers and City of Noblesville. SR 37 runs south to north through Hamilton County; including the Study area. Additionally, SR 37 is intersected by I-69 immediately south of the Study area. SR 37 is designated as a state highway in central Indiana. Near the Study area SR 37 begins at I-69 and proceeds in a northerly direction before terminating in the City of Marion, Grant County. The items identified in bold below show the existing roadway system at SR 37 and Town and Country Boulevard:



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Table 1 – Existing Roadway System									
Facility	Traffic	Travel	Functional	Speed Limit					
	Control	Lanes	Classification	(MPH)					
SR 37	-	4	Expressway	55					
Town and Country Boulevard	Signal	2	Collector	35					

The following paragraphs give additional details for existing Town and Country Boulevard within the Study area:

## Town and Country Boulevard

Town and Country Boulevard crosses SR 37 at a right angle to form a four way at-grade intersection. SR 37 is classified as an Expressway through the limits of this intersection and has limited access right of way. Through the limits of this intersection, SR 37 is a four lane roadway with two 12-foot travel lanes, a four foot paved inside shoulder and ten foot paved outside shoulder. The northbound and southbound travel lanes are separated by a 50 foot open grass median. The existing pavement is full depth HMA and is in good condition. Next to all SR 37 turn lanes at the intersection, the shoulders are four feet wide.

Town and Country Boulevard is classified as a Collector through the limits of this intersection and is not access controlled. This road runs east to west and connects Clover Road on the west side of SR 37 to Mercantile Road on the east side of SR 37. Clover Road and Mercantile Boulevard run north to north and are used as frontage roads to access numerous retail businesses on each side of SR 37. These two roads intersect Town and Country Boulevard with roundabouts on each side of SR 37. The Clover Road roundabout is approximately 250 feet west of SR 37 and the Mercantile Boulevard roundabout is approximately 300 feet east of SR 37. Town and Country Boulevard is bordered by curb and gutter on the outside on each side of SR 37. On the west side of SR 37, Town and Country Boulevard has a four foot raised center median with light poles and small shrubs in the median. The existing pavement is full depth HMA and is in good condition. There is a six foot sidewalk adjacent to the curb in the two east quadrants of the Clover Road roundabout; however the sidewalk ends at the pedestrian crossing just east of Clover Road and the sidewalk does not extend along Town and Country Boulevard.

The intersection of SR 37 and Town and Country Boulevard is a signalized intersection, operating as an 8 phase signal with protected left turns in each direction. Approaching the intersection, SR 37 has one left turn lane, two through lanes, and one right turn lane on each approach. Town and Country has one left turn lane, two through lanes, and one right turn lane on the eastbound approach; and two left turn lanes, one through lane, and one right turn lane on the westbound approach. The westbound approach to Clover Road has one shared left/through lane and one right turn lane. The east bound approach to Mercantile Boulevard has one left turn lane and a shared right/through lane.

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The intersection is bordered by businesses in each quadrants, which are located in close proximity to the intersection with little setback. For a listing of each business adjacent to the intersection, see the aerial displays.

## *IV.* EVALUATED BUILD ALTERNATIVES

The Study evaluated two primary build alternatives: upgrading the existing SR 37 corridor with either teardrop roundabout interchanges (Alternative 1) or tight diamond interchanges (Alternative 2). Both alternatives will significantly improve traffic operations at the Study intersections.

## V. TRAFFIC OPERATION ANALYSIS

Table 2 shows the results of the Capacity Analysis for the proposed improvements at SR 37 and Town and Country Boulevard for the study year of 2036. A teardrop roundabout interchange is proposed, with a 4-lane bridge crossing SR 37.

Table 2 – Alternative 1 (2036) Capacity Analysis												
	Traffic	Peak	W	est Leg	Ea	ast Leg	So	uth Leg	No	rth Leg	Ū	Overall
Intersection	Control		LOS	Delay (sec)								
SR 37 NB Ramps and Town & Country Blvd	Roundabout	AM	Α	1.8	Α	1.8	Α	1.8			Α	1.8
Sit 37 NB tranips and rown & Country Bive	Roundabout	PM	Α	2.4	Α	3.0	Α	4.2			Α	3.2
SR 37 SB Ramps and Town & Country Blvd	Roundabout	AM	Α	1.8	Α	1.8			Α	2.4	Α	2.0
SIX 57 SB Kamps and Town & Country Bive	Roundabout	PM	Α	8.4	Α	2.4			Α	6.0	Α	5.8

Please see the Traffic Operation Analysis (binder labeled Traffic Operation Analysis) to review the Study area results in their entirety.

### VI. GEOTECHNICAL EVALUATION

The corridor is located in a glaciated area. With the exception of the area near Stony Creek, the alignment is within a typical Central Indiana profile that consists of softer and moderate-plasticity clays overlying hard and low-plasticity clays, and bedrock is over 100 feet deep. The harder clays are usually within 20 feet of the surface. In addition, frequent seams and layers of granular soils can be encountered. This profile typically includes seasonal perched groundwater conditions within a few feet of the surface. From a design and construction perspective, CBR values are commonly in the range of 3 to 4, and subsurface drainage is typically required for pavement and below-grade structures (e.g., cut walls). Because of the perched groundwater and the clayey soils, improvement of the subgrade for support of pavement and construction activities is usually required, particularly in areas of cut. Support of bridges on driven piling and/or spread foundations is anticipated to be viable. In addition, support of MSE walls in these conditions typically includes preparation of the subgrade for the leveling pad and structure fill.

Cut walls over about 12 feet in height are anticipated to required tie-backs in order to control deflections, and the length of tie-backs is typically in the range of 25 to 50 ft.



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In the area of Stony Creek, the soil profile is anticipated to be glacial outwash and/or alluvium (i.e., primarily granular soil), and bedrock could be within 50 to 100 feet of the surface. The issues related to shallow perched groundwater are usually not of concern because of the well-drained profile. However, if the piezometric groundwater level is relatively shallow, a large influx of groundwater can require temporary and permanent dewatering in areas of cut. An additional construction cost of \$500,000 is anticipated for each the Greenfield Avenue and Town and Country intersections to mitigate this condition.

A Geotechnical Evaluation will be required to evaluate the subsurface conditions and to provide the necessary information for a pavement design. This will include soil borings and a formal Geotechnical Report with recommendations that will be approved by INDOT.

## VII. ENVIRONMENTAL INVESTIGATION

Improvements to this intersection will require the completion of an environmental document to qualify for federal funding. A Categorical Exclusion as falling within the guidelines of the National List of Categorical Exclusions will be required for this project. The Categorical Exclusion will need to be prepared in a manner consistent with the latest version of the "Indiana Categorical Exclusion Manual". The paragraphs below highlight the key environmental issues associated with the proposed project.

### Wetland and Stream Impacts

The National Wetland Inventory (NWI) Map shows no wetlands or streams within the project limits. A "Waters of the U.S." report (wetland determination/delineation) will be required to verify the NWI map.

### Historic and Cultural Resources

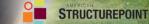
<u>Archeological:</u> The proposed project will result in the acquisition of undisturbed right-of-way. As a result, an Archaeological Records Review and Phase Ia Archaeological Survey will be required to identify potentially significant cultural resources within the preferred alignment.

<u>Historical:</u> The land use in close proximity and within the project area consists of recreational and residential properties. The *Hamilton County Interim Report* shows no historic properties within the probable Area of Potential Effects. However, properties may have become 50 years of age since the publication of the interim report.

At a minimum, this project will require the completion of the following Section 106 documents: Phase Ia Archaeological Survey, Historic Properties Report and a Section 106 Findings and Determinations (36 CFR 800.11).

### **Hazardous Materials**

A search of the red flag indicators revealed underground storage tank and leaking underground storage tank sites in the project vicinity. As a result, further investigation will be required to determine if the project would be impacted by hazardous materials.



## **Regulatory Permits**

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<u>IDEM Rule 5 Permit:</u> Since the project will disturb greater than one acre, Rule 5 administered through the Indiana Department of Environmental Management will apply to this project. The designer shall coordinate all erosion and sediment control measures with the Hamilton County Soil and Water Conservation District.

### VIII. DRAINAGE

The existing drainage on Town and Country Boulevard is conveyed by sheet draining the pavement to the outside curb and gutters. Curb and gutter turnouts are utilized to outlet the storm water into the ditches along SR 37. On mainline SR 37, the existing drainage is conveyed by an open grass median and outside ditches flowing south to Stony Creek about 1440 feet south of the intersection.

The proposed drainage on Town and Country Boulevard will utilize an enclosed storm sewer system consisting of curb and gutter inlets spaced appropriately which will connect to manholes. These manholes will then convey the water to an outside ditch along SR 37 where there is positive drainage from the ditch to Stony Creek approximately 1440 feet south of the intersection. The drainage on SR 37 will be handled similarly. Inlets will be spaced along both sides of the median barrier as well as on the outsides against the walls. The inlets that are within the limits of the depressed profile will be conveyed by manholes to a lift station.

The lift station will be located in the southwest quadrant between the ramp and the wall on SR 37. A 20-inch forcemain is proposed between the wet well and the discharge location approximately 1440 feet south of the intersection out to Stony Creek. The proposed lift station will include two centrifugal submersible pumps for stormwater runoff installed within a precast concrete wet-well. An additional precast concrete valve vault will be installed adjacent to the wet well. An above grade control panel will be mounted on a pedestal at a discrete location near the lift station and a generator will be included for emergency backup power. The lift station will have a firm pumping capacity (one pump out of service) of 6,400 gpm.

## IX. UTILITY COORDINATION

The following paragraphs give details pertaining to the presence of utilities at Town and Country Boulevard and SR 37. This is followed by a discussion of potential impacts resulting from the project.

### **Existing Facilities**

UNITED conducted a site visit to identify existing utilities. Based on observations of above ground facilities (ie, manholes, valve boxes, pedestals, utility markers), we identified likely underground facilities. If more accurate information is required, "Holey Moley" or the individual utilities can be contacted.

There is no evidence of any utilities along Town and Country Boulevard. It appears that facilities for the development on each side of SR 37 are internal and do not cross SR 37.

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Street Lighting: Decorative street lights are located around the eastern roundabout.

#### Impacts

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The preferred alternative has Town and Country Boulevard going over SR 37 and connecting to the existing roundabouts on the west and east side. If there are existing utilities along Town and Country Boulevard, minor relocation work is expected based on relatively small change in profile grade.

All existing utilities appear to be in the existing right-of-way and are not eligible for reimbursement of relocation costs.

#### X. PROPOSED INTERSECTION FACILITY

#### <u>SR 37</u>

Existing SR 37 is a four lane expressway with four 12-foot travel lanes, four foot inside shoulders, and ten foot outside shoulders. The northbound and southbound travel lanes are separated by a 50 foot open grass median (inside travel lane to inside travel lane). The existing right-of-way along SR 37 varies from mostly 85 feet to 95 feet from centerline on both sides. Many businesses line each side of the SR 37 right-of-way throughout the Study limits. The interchanges proposed in this Study require auxiliary lanes, ramp junctions, and ramp lanes adjacent to SR 37 travel lanes approaching each interchange from each side. Additional right-of-way will be required in many locations adjacent to ramp lanes and junctions. In an effort to minimize the amount of right-of-way required and the impacts to existing businesses, it is proposed that the SR 37 median be enclosed with a center median barrier and the SR 37 travel lanes be shifted in to narrow the width of the roadway through the interchange limits.

A 14.5 foot median is proposed, consisting of six foot inside shoulders and a 2.5 foot median barrier wall. Six foot is the desirable inside shoulder width required using Table 53-6 from the Indiana Design Manual (IDM). See the typical cross sections in this Study for full roadway dimensions. If any, one isolated interchange is constructed, the SR 37 travel lanes would shift back out on the north and south sides of the interchange to match the existing travel lanes and median width. As consecutive interchanges are constructed, it will not be feasible to shift lanes out to the existing median width and back in between most interchanges. If all interchanges were built concurrently, the median would remain enclosed from the south side of 126<sup>th</sup> Street to the north side of 146<sup>th</sup> Street, and from the south side of Town & Country Boulevard to the north side of SR 32 / SR 38. As there is sufficient distance between 146<sup>th</sup> Street and Greenfield Avenue, the travel lanes north of 146<sup>th</sup> Street could shift out the existing median width even if the 146<sup>th</sup> Street and Greenfield Avenue interchanges were constructed at the same time or consecutively. Furthermore, because of the layout and surrounding parcels at Greenfield Avenue, it is feasible to maintain the existing open median width through this location even when the proposed interchange is constructed. Where this is cost prohibitive at other locations due to right-of-way and business impacts associated with the wider roadway, it is economically feasible at the Greenfield Avenue Interchange. The travel lanes would shift back into an



enclosed median south of Town and Country Boulevard and remain enclosed to north of SR 32 / SR 38, where the lanes would shift back out to meet the existing pavement.

This Study focuses on the interchanges; however the treatment of SR 37 proper, between the interchanges will be affected by each interchange's traffic and proximity to each other. The geometrics developed for this Study are unique to each area between interchanges according the findings of the Traffic Operations Analysis (TOA) conducted as part of this Study. In each segment between interchanges, in both directions, there will be an entrance ramp junction from one interchange followed by an exit ramp junction to the next interchange. This creates weaving areas between the interchanges, which were analyzed in the TOA. Some weaving areas were acceptable and are recommended. Other weaving areas are not acceptable and have been removed by interconnecting consecutive interchanges with collector distributor lanes. See the TOA for the discussion and results of the weaving analysis conducted between interchanges. Below is a summary of the proposed configuration of SR 37 near Town and Country Boulevard:

## Between Greenfield Avenue and Town and Country Boulevard

Both northbound and southbound weaving segments are acceptable. The northbound entrance ramp from Greenfield Avenue and the northbound exit ramp to Town and Country Boulevard will be conventional entrance and exit ramps. The southbound entrance ramp from Town and Country Boulevard and the southbound exit ramp to Greenfield Avenue will be conventional entrance and exit ramps. There will be a continuous auxiliary lane between interchanges in both directions.

Between these two interchanges, the travel lanes will need to shift inward to transition from the existing open grass median carried through the Greenfield Avenue interchange, to the proposed enclosed median prior to the Town and Country Boulevard interchange.

## Between Town and Country Boulevard and Pleasant Street

The northbound weaving segment is acceptable; however the southbound weaving segment fails. The northbound entrance ramp from Town and Country Boulevard and the northbound exit ramp to Pleasant Street will be conventional entrance and exit ramps. There will be a continuous auxiliary lane between the interchanges in the northbound direction. In the southbound direction, a continuous collector-distributor (CD) lane will be used to interconnect the interchanges. Only the southbound exit to Town and Country Boulevard is proposed, exiting to the CD. Traffic wishing to enter southbound SR 37 from Pleasant Street will travel through the CD and enter south of Town and Country Boulevard.

## Town and Country Boulevard

The preferred alternate for this intersection is to construct a "teardrop" roundabout interchange on Town and Country Boulevard consisting of two closely spaced roundabouts on either side of SR 37, which are tied together through the middle to function as one unit. Town and Country Boulevard will overpass SR 37. SR 37 will be free-flow through this interchange and traffic



traveling through on Town and Country Boulevard will drive through the roundabouts with a yield condition on the roundabout approach.

The layout of the ramps will closely resemble a tight diamond interchange with directional entrance and exit ramps in each quadrant. Beyond the back of the gore area, all four ramps will remain directly adjacent to SR 37 maintaining an approximate 22 foot offset from outside edge of the SR 37 travel lane to the inside edge of the ramp lane(s). This offset allows for the minimum outside mainline shoulder, minimum inside ramp shoulder and the wall in between the mainline and the ramps. This wall is necessary to maintain the elevation difference between the mainline and the ramps as they approach Town and Country Boulevard. Exterior walls will also be necessary in each quadrant to minimize impacts to businesses in these quadrants (See aerial sheets for estimated wall limits).

Town and Country Boulevard will have two lanes in each direction through the east/west portion of the roundabouts. On both approaches there will be one shared left/through lane, and one shared through/right lane. The northbound exit ramp will exit as one lane and develop into two lanes at the roundabout approach, consisting of one shared left/through lane and one right turn lane. The southbound exit ramp will exit as one lane and develop into two lanes at the roundabout approach, consisting of one shared left/through lane and one shared through/right turn lane. The northbound entrance ramp will both be a one lane entrance. The southbound entrance ramp will be a two lane entrance to SR 37. For a diagram of the proposed lane configuration see the Traffic Operations Analysis (binder labeled Traffic Operation Analysis).

One current drive accesses off Town and Country Boulevard will need to be removed due to the close proximity to the interchange and the vertical difference of proposed Town and Country Boulevard in the area of the drive. This drive is a right-in only access to the BP gas station in the northwest quadrant. This business will maintain access to Town and Country Boulevard by way of an existing drive on Clover Road.

Because of the length necessary to develop entrance and exit ramp junctions, and gain vertical separation between the SR 37 and the Town and Country Boulevard, the south side of the interchange is expected to extend across the existing SR 37 bridge over Stony Creek. This will require widening of this existing bridge to accommodate the width necessary for the tapers and ramp auxiliary lane development.

## XI. PROPOSED BRIDGE FACILITY

The bridge will be designed to meet or exceed the current "AASHTO LRFD Bridge Design Specifications" as supplemented by INDOT design standards. The minimum vertical clearance for roadways crossing over SR 37 is 16'-6".

The proposed bridge over SR 37 at Town and & Country Boulevard is anticipated to be a two span, 118 foot long, prestressed reinforced concrete I beam structure built with no skew to the roadway. The bridge will be a four lane roundabout facility with a clear roadway width of 202'-10" and an out to out coping of 206'-2". The bridge will be designed to span the four lane SR 37 divided highway with the interior pier placed in the median of SR 37. It is anticipated that the



## SR 37 MOBILITY STUDY

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proposed structure will be constructed with integral end bents on piles and a concrete interior wall pier on piles. The structure will also have reinforced concrete approach slabs to provide a smooth transition from the approach roadway to the bridge and to protect the ends of the bridge from settlement and erosion. The proposed bridge will include common height concrete bridge rail with transitions, approach guardrail and end treatments to meet current minimum standards.

## XII. MAINTENANCE OF TRAFFIC

The following is a logical basic MOT plan for the construction of the Town and Country Boulevard interchange:

**Phase 1** – The southbound SR 37 travel lanes will be widened to the inside with temporary widening. Temporary cross-overs will be constructed in the median to the north and south of the interchange.

**Phase 2** – All SR 37 traffic will run on the southbound side with two travel lanes in each direction. The southbound travel lanes will be shifted west to run on the existing outside shoulder. The northbound traffic will be switched over to the southbound side to run on the temporary widening constructed in phase 1.

The northbound half of mainline SR 37 will be constructed. A temporary cut wall will be constructed "top down" between the existing southbound lanes and the proposed northbound lanes through the interchange area where SR 37 will be depressed.

The northbound exit and entrance ramps will be constructed up to the proposed roundabout. A temporary connection will be constructed across the proposed roundabout area connecting the top of the northbound exit ramp and the top of the northbound entrance ramp.

The east end bent for the proposed bridge will also be constructed in this phase.

The east segment of Town and Country Boulevard will be closed, with no access to SR 37. The east segment of Town and Country Boulevard and roundabout approaches will be constructed.

The west segment of the Town and Country Boulevard will maintain access to SR 37. This could be set up as right-in/right-out access to and from Town and Country Boulevard with SR 37 traffic remaining free-flow through the intersection. Alternatively, a temporary signal could be utilized to allow the west Town and Country Boulevard protected access to and from both directions of SR 37.

**Phase 3** – All SR 37 traffic will run on the proposed northbound lanes and shoulders constructed in phase 2, with two lanes in each direction. The southbound lanes will be switched over to the northbound side to run on the proposed northbound lanes constructed in phase 2. The northbound lanes will run up the proposed northbound exit ramp, across the temporary connection, and back down the proposed northbound entrance ramp all constructed in phase 2.

The southbound half of mainline SR 37 will be constructed, as well as the west segment of Town and Country Boulevard and the west roundabout. Both sides of Town and Country Boulevard will have no access to or from SR 37 in this phase. However, temporary connections



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could be constructed on the east side between the portion of the east Town and Country Boulevard segment constructed in phase 2 and the northbound SR 37 travel lanes. If desired, this could be done to keep access to and from northbound SR 37 and the east side of Town and Country Boulevard in this phase.

## XIII. LAND ACQUISITION

Approximately 19 parcels would be impacted by the construction of the teardrop roundabout interchange at the intersection of SR 37 and Town and Country Boulevard. Total permanent right of way acquisition required for construction of these improvements would be approximately 2.0 acres.

Because the project would likely utilize federal aid, future land acquisition would need to adhere to the *Uniform Relocation Assistance and Real Property Acquisition Policies for Federal and Federally Assisted Programs Act*. This process includes title research, right-of-way engineering, appraisal problem analysis (APA), an appraisal, a review appraisal and negotiations/buying with the property owner.

All existing right-of-way would be verified during the land acquisition process, which may reveal the need for additional parcels. If recorded documents do not exist, it may be necessary to reacquire portions of the apparent existing right-of-way, which could also increase the anticipated number of parcels and costs affiliated with those additional parcels.

## XIV. PROJECT PRIORITIES

Table 3 below indicates the priority for construction of the proposed improvements. The ranking as shown generally flows south to north but can be revised without affecting the integrity of constructing methodologies.

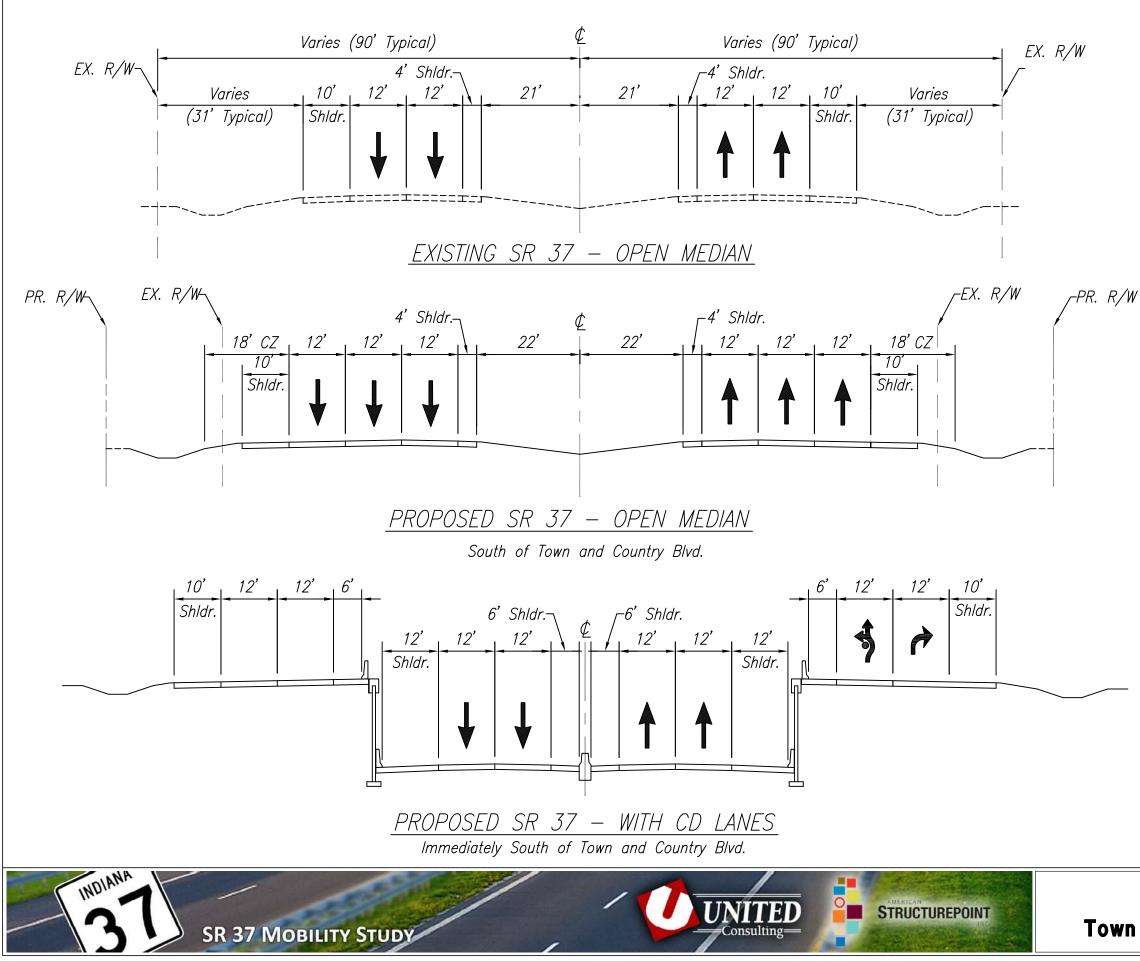
	Table 3 – Construction Priorities							
Priority Rank	Binder Number	Intersection						
1.	5	SR 37 at 146 <sup>th</sup> Street						
2.	10	146 <sup>th</sup> Street at Allisonville Road						
3.	1	SR 37 at 126 <sup>th</sup> Street						
4.	2	SR 37 at 131 <sup>st</sup> Street						
5.	3	SR 37 at 135 <sup>th</sup> Street						
6.	4	SR 37 at 141 <sup>st</sup> Street						
7.	6	SR 37 at Greenfield Avenue						
8.	7	SR 37 at Town and Country						
		Boulevard						
9.	8	SR 37 at Pleasant Street						
10.	9	SR 37 at SR 32 / SR 38						

## SR 37 MOBILITY STUDY

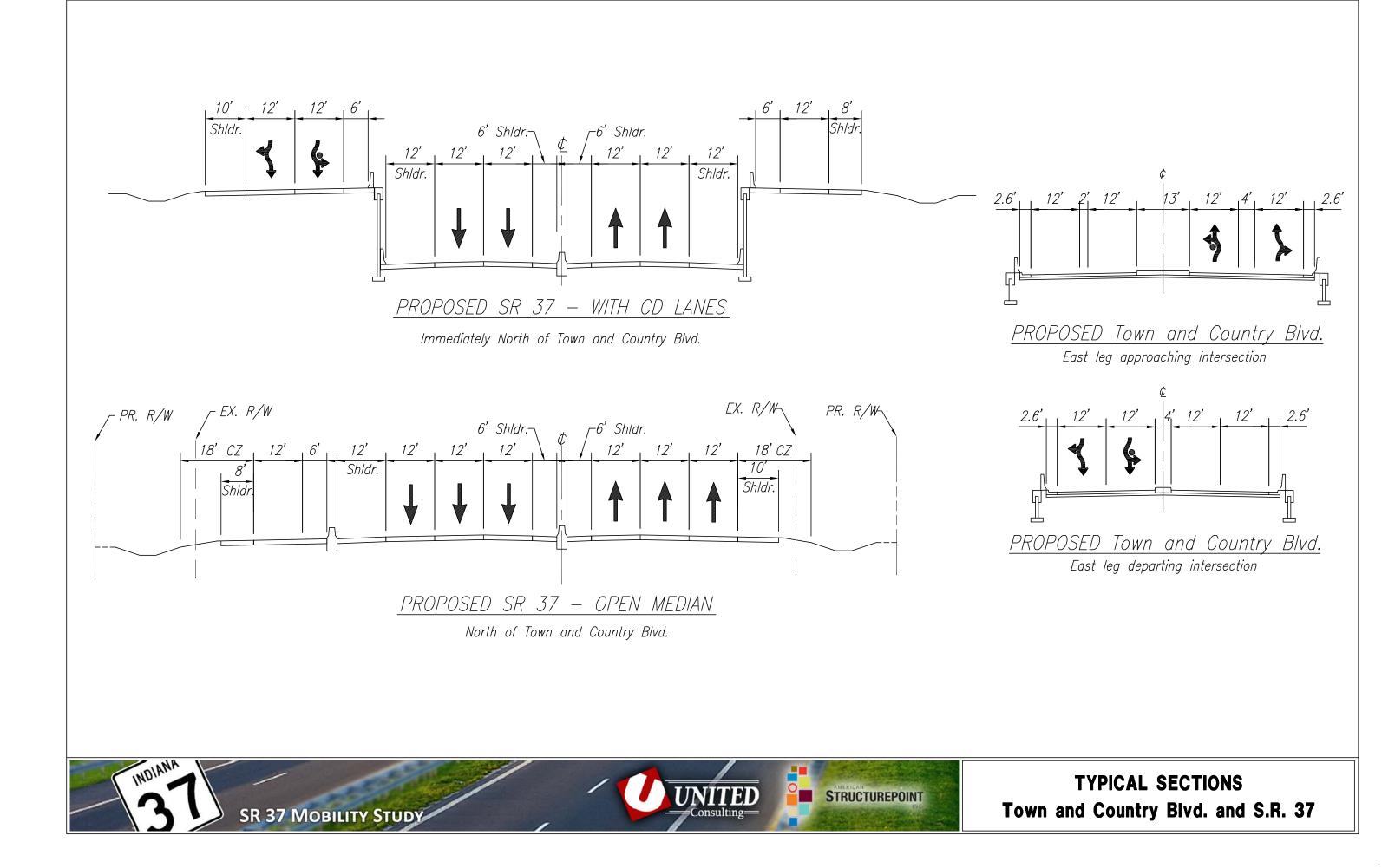
## XV. PROJECT BUDGET

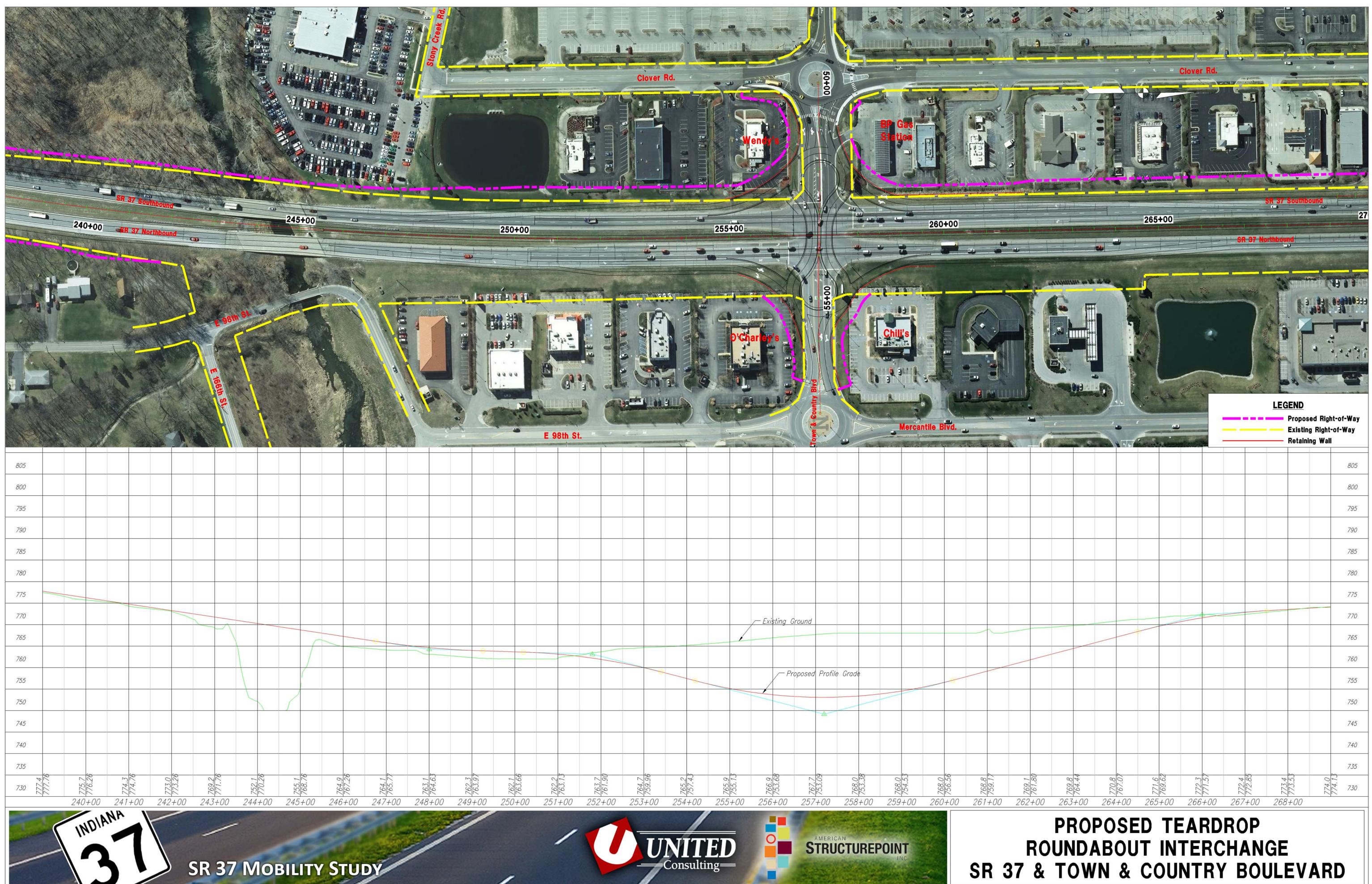
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At the intersection of SR 37 and Town and Country Boulevard, a teardrop roundabout interchange is proposed, with a 4-lane bridge crossing SR 37. In order to construct these improvements, it is anticipated that construction cost will be \$25,933,795 in year 2025.



## **TYPICAL SECTIONS** Town and Country Blvd and S.R. 37

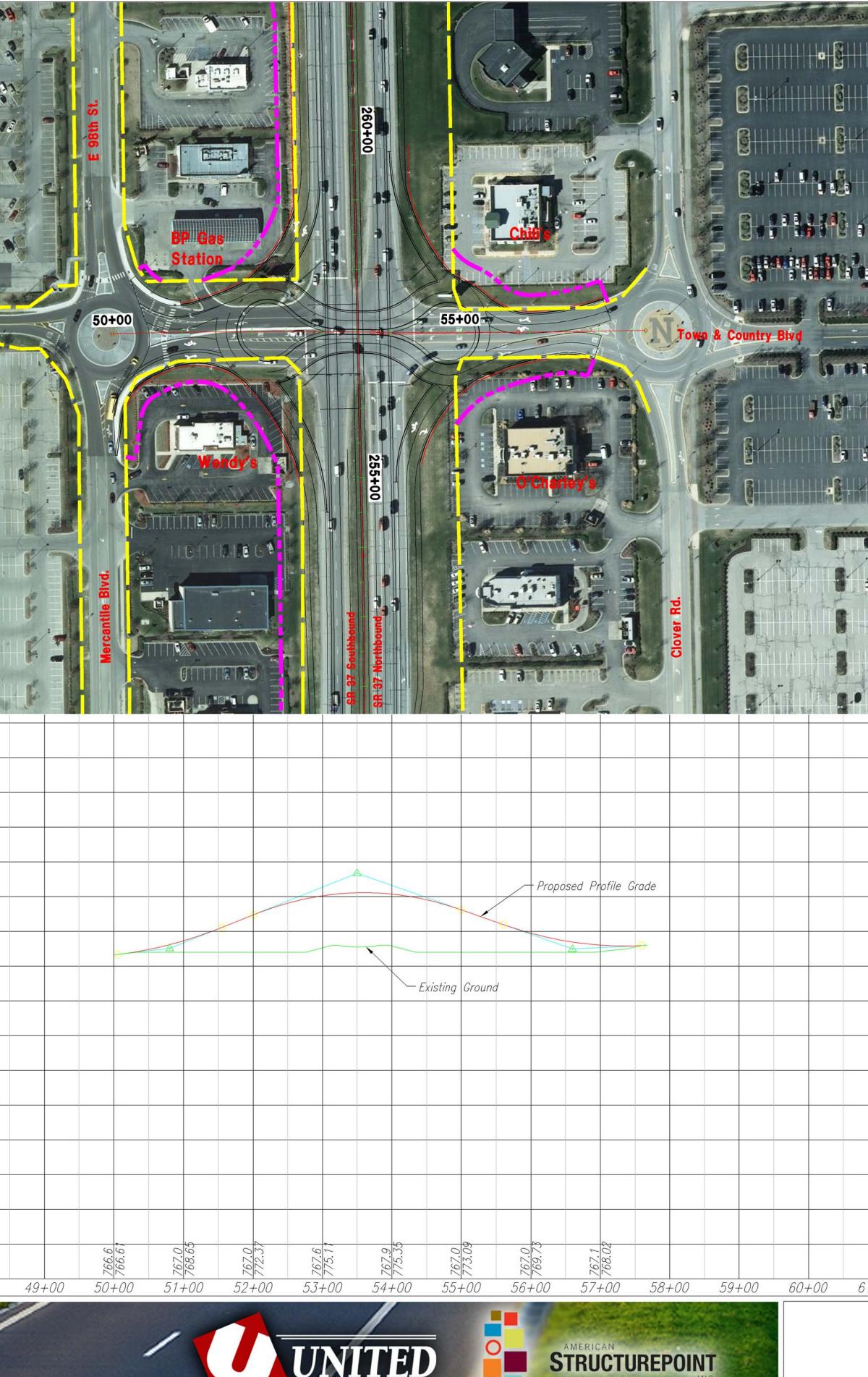




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UNITED Consulting

AMERICAN STRUCTUREPOINT

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## Town & Country Boulevard Project Development Cost Summary

## SR 37 MOBILITY STUDY

Hamilton County, Town of Fishers and City of Noblesville S.R. 37 from South of 126th Street to North of SR 38/32

## **PROJECT ITEMS:**

### PROJECT COST (IN YEAR OF EXPENDITURE)

Engineering Costs	\$ 3,698,159	
Construction Costs	\$ 25,933,795	
Construction Cost Contingencies	\$ 2,593,380	
Construction Inspection Costs	\$ 3,890,069	
Utility Relocation Cost	\$ -	
Land Cost	\$ 2,844,590	
Subtotal Town & Country Boulevard Interchange		\$35,261,834

\* The Town & Country Blvd Interchange is projected to be constructed in 2025. An inflation factor of 1.513 has been applied to obtain the construction cost shown in this table

TOTAL INTERCHANGE COST:

\$35,261,834



## Town & Country Boulevard Avenue Construction Cost Summary SR 37 MOBILITY STUDY

Hamilton County, Town of Fishers and City of Noblesville S.R. 37 from South of 126th Street to North of SR 38/32

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MAJOR ELEMENT	BASE YEAR CONSTRUCTION COST (2012)			
ROADWAY	\$	11,330,645		
GEOTECHNICAL MITIGATION	\$	500,000		
BRIDGE (Town & Country Boulevard Over S.R. 37)	\$	2,750,000		
BRIDGE (S.R. 37 Over Stony Creek)	\$	1,000,000		
LIFT STATION	\$	1,560,000		
TOTAL CONSTRUCTION COST:	\$	17,140,645		

## **ROAD ESTIMATE**

## **PRICING REPORT**

				0-703 (7) / / State: IN SR 37
Sect Pay Item	Description	Quantity Unit	Bid Price	Extension_Alt
100 105-06845	construction engineering	1.000 L.S.	303,499.41	303,499.41
100 110-01001	mobilization and demobilization	1.000 L.S.	505,832.35	505,832.35
GEN	IERAL PROVISIONS SUBTOTALS			809,331.76 7.1%
200 201-52370	clearing right of way	1.000 L.S.	159,910.46	159,910.46
200 202-02273	center curb, concrete, remove	71.000 SYS	16.61	1,179.31
200 202-02279	curb and gutter, remove	703.000 L.F.	4.62	3,247.86
200 202-52710	sidewalk, concrete, remove	120.000 SYS	7.88	945.60
200 202-93999	signal pole, remove	4.000 EACH	495.00	1,980.00
200 203-02000	excavation, common	77,013.000 C.Y.	7.88	606,862.44
200 205-06931	temporary check dam, revetment riprap	325.000 TON	38.84	12,623.00
200 205-06937	temporary silt fence	500.000 L.F.	1.74	870.00
200 207-08263	subgrade treatment, type ia	41,892.000 SYS	6.24	261,406.08
200 211-09194	b borrow	31,398.000 TON	34.00	1.067.532.00
200 211-09264	structural backfill, type 1	829.000 C.Y.	23.88	19,796.52
200 211-09266	structural backfill, type 3	25,506.000 C.Y.	21.27	542,512.62
EAR	THWORK SUBTOTALS			2,678,865.89 23.6%
300 301-07448	compacted aggregate, no. 53, base	3,125.000 TON	15.66	48,937.50
300 302-06464	subbase for pccp	10,473.000 C.Y.	28.39	297,328.47
300 303-01180	compacted aggregate, no. 53	2,089.000 TON	17.20	35,930.80
300 306-08034	milling, asphalt, 1 1/2 in	1,007.000 SYS	1.30	1,309.10
AGO	GREGATE PAVEMENT AND BASES SUBTOT	ALS		383,505.87 3.4%
400 401-07328	qc/qa-hma, 3, 70, surface, 9.5 mm	83.000 TON	72.77	6,039.91
400 402-10084	hma for temporary pavement, b	5,192.000 TON	50.00	259,600.00
	PHALT PAVEMENT SUBTOTALS			265,639.91 2.3%
500 501-06266	profilograph, pccp	1.000 L.S.	15,000.00	15,000.00
500 501-06323	qc/qa-pccp, 12 in	44,362.000 SYS	70.00	3,105,340.00
500 503-05240	d-1 contraction joint	22,181.000 L.F.	9.19	203,843.39
CON	ICRETE PAVEMENT SUBTOTALS			3,324,183.39 29.3%
600 601-01522	guardrail, transition type tob	3.000 EACH	1,978.24	5,934.72
600 601-94689	guardrail end treatment, os	3.000 EACH	2,530.55	7,591.65
600 601-99105	quardrail, w-beam, 6 ft 3 in spacing	1.668.000 L.F.	17.42	29.056.56
600 602-06729	barrier delineator	51.000 EACH	12.49	636.99
600 602-08603	concrete barrier, 45 in	1,991.000 L.F.	91.00	181,181.00
600 603-06040	fence, farm field, 47 in	5,418.000 L.F.	5.50	29,799.00
600 604-07569	pavers {pavers}	491.000 SYS	827.77	406,435.07
600 605-06120	curb, concrete	619.000 L.F.	23.58	14,596.02
600 605-06140	curb and gutter, concrete	1,398.000 L.F.	14.29	19,977.42
600 605-06145	curb and gutter, b, concrete	846.000 L.F.	14.17	11,987.82
600 605-06255	center curb, d, concrete	422.000 SYS	48.55	20,488.10
600 615-06510	monument, c	5.000 EACH	419.32	2,096.60

Project: SR 37 Mobility Study - Town and Country			Project ID:1	
Location: <i>Town and Country Interchange</i> County: <i>HAMILTON</i>				// State:/
	brdsville			5K 57
Sect Pay Item	Description	Quantity Unit	Bid Price	Extension Alt
600 615-06515	monument, d	20.000 EACH	141.25	2,825.00
600 616-02320	geotextiles	446.000 SYS	2.51	1,119.46
600 616-06405	riprap, revetment	251.000 TON	29.36	
600 621-01004	mobilization and demobilization for seeding	4.000 EACH	382.61	1,530.44
600 621-06545	fertilizer	4.000 TON	327.69	1,310.76
600 621-06554	seed mixture, u	864.000 LBS	5.62	
600 621-06557	seed mixture, t	381.000 LBS	2.15	819.15
600 621-06565	mulching material	16.000 TON	305.97	
600 621-06567	water	12.000 M.G.	3.74	
600 621-06574	sodding	2,857.000 SYS	3.12	
600 628-09403	field office, c	18.000 MONTH		
600 628-11068	cellular telephone/radio	2.000 EACH	150.38	
600 628-11068	cellular telephone/radio service, anytime	36.000 EACH		
000 020-11009	minutes {cell phone}	36.000 MONTH	112.11	4,035.96
INC	IDENTAL CONSTRUCTION SUBTOTALS			805,285.68 7.1%
700 701-90386	temporary sheet piling	1.000 L.S.	308,925.00	308,925.00
700 706-08496	reinforced concrete moment slab, 12 in	2,982.000 SYS	87.86	261,998.52
700 706-09545	coarse aggregate, no 8	746.000 C.Y.	61.00	45,506.00
700 706-09959	railing, concrete, ft	6,706.000 L.F.	60.00	402,360.00
700 715-05048	pipe, type 4 circular 6 in	12,099.000 L.F.	3.24	39,200.76
700 715-05053	pipe, underdrain, outlet 6 in	270.000 L.F.	11.77	3,177.90
700 715-05149	pipe, type 2 circular 12 in	5,593.000 L.F.	29.00	
700 715-09064	video inspection for pipe	5,593.000 L.F.	1.48	
700 718-06528	outlet protector, 1	10.000 EACH	519.56	
700 718-06532	video inspection for underdrains	3,000.000 L.F.	0.94	
700 718-52610	aggregate for underdrains	1,089.000 C.Y.	32.72	
700 718-99153	geotextiles for underdrain	8,291.000 SYS	0.98	
700 720-07300	inlet, type h, with slotted drain	12.000 EACH	4,502.79	
700 720-07302	inlet, type ha, with slotted drain	12.000 EACH	1,757.88	
700 720-45410	manhole, c4	12.000 EACH	2,000.00	
700 720-98174	inlet, b15	12.000 EACH	2,189.87	
700 720-98174	inlet, c15	12.000 EACH	2,163.07	
700 731-93945	face panels, concrete	58,984.000 S.F.	11.99	
	-	58,984.000 S.F.		
700 731-93946	wall erection		5.56	
700 731-93947	leveling pad, concrete	4,336.000 L.F.	22.00	
STI	RUCTURES SUBTOTALS			2,565,324.60 22.6%
800 801-01093	temporary worksite speed limit sign assembly	4.000 EACH	723.00	2,892.00
800 801-03290	construction sign, c	2.000 EACH	199.19	398.38
800 801-04308	road closure sign assembly	4.000 EACH	308.61	1,234.44
800 801-06625	detour route marker assembly	18.000 EACH	98.84	
800 801-06640	construction sign, a	24.000 EACH	160.87	
800 801-06645	construction sign, b	4.000 EACH	58.33	

## **PRICING REPORT**

Location: <i>Town a</i> County: <i>HAMIL</i>	Mobility Study - Town and Country and Country Interchange TON ordsville		2.0.20.0.	P-703 (7) / State: R 37
Sect Pay Item	Description	Quantity Unit	Bid Price	Extension Alt
800 801-06710	flashing arrow sign	510.000 DAY	8.52	4,345.20
800 801-06775	maintaining traffic	1.000 L.S.	202,332.94	202,332.94
800 801-07024	energy absorbing terminal, cz, tl-3	1.000 EACH	7,316.67	7,316.67
800 801-07118	barricade, iii-a	228.000 L.F.	13.17	3,002.76
800 801-07119	barricade, iii-b	48.000 L.F.	14.08	675.84
800 801-08400	temporary traffic barrier, type 1	3,009.000 L.F.	16.86	50,731.74
800 801-08507	temporary traffic barrier, type 1, anchored	296.000 L.F.	34.09	10,090.64
300 801-08508	temporary traffic barrier, type 2, anchored	3,009.000 L.F.	25.00	75,225.00
300 801-09133	temporary changeable message sign	2.000 EACH	6,193.01	12,386.02
300 801-52817	temporarv crossover, b	2.000 EACH	25.000.00	50.000.00
300 802-05701	sign post, square, type 1, reinforced anchor base	340.000 L.F.	12.95	4,403.00
300 802-07057	sian, panel, with leaend	429.000 S.F.	14.81	6.353.49
300 802-07138	wide flange sign post support foundation, ix	2.000 EACH	242.00	484.00
300 802-07159	cantilever sign support foundation, ii	2.000 EACH	3.349.33	6.698.66
300 802-09840	sign, sheet, with legend 0.100 in thickness	115.000 S.F.	17.27	1,986.05
300 802-76095	structural steel, breakaway	681.000 LBS	2.68	1,825.08
800 802-76135	overhead sign structure, cantilever single arm	1.000 EACH	20,672.20	20,672.20
300 804-06770	delineator post	10.000 EACH	43.14	431.40
800 805-02087	transportation of salvageable signal equipment	1.000 L.S.	495.57	495.57
800 808-10031	line, multi-component, broken, white, 4 in	2,528.000 L.F.	0.43	1,087.04
800 808-10033	line, multi-component, solid, white, 4 in	9,695.000 L.F.	0.46	4,459.70
800 808-10034	line, multi-component, solid, yellow, 4 in	9,328.000 L.F.	0.46	4,290.88
800 808-10037	line, multi-component, solid, white, 8 in	3,816.000 L.F.	1.04	3,968.64
800 808-75071	pavement message marking, preformed plastic, lane indication arrow	8.000 EACH	187.00	1,496.00
800 808-75510	transverse markings, preformed plastic, crosshatch line, white, 24 in	538.000 L.F.	12.09	6,504.42
300 808-75998	snowplowable raised pavement marker	352.000 EACH	19.45	6,846.40
TRA	AFFICE CONTROL DEVICES AND LIGHTING SU	JBTOTALS		498,507.48 4.4%

TOTALS

11,330,644.58 100.0%

## BRIDGE ESTIMATE

## PRICING REPORT

Project:	Town&Country over SR 37 - Concrete Bridge Option
Location:	Hamilton County
County:	HAMILTON
District:	Greenfield

Date: 11/26/2012 Time: 15:24:04

Project ID: 10-703-TOWN&COUNTRY Bid Date: // State: IN Route:

Pay Item	Description	Quantity Unit	Bid Price	Extension Alt
105-06845	construction engineering	1.000 L.S.	75,361.00	75,361.00
110-01001	mobilization and demobilization	1.000 L.S.	125,601.00	125,601.00
203-02020	excavation, unclassified	557.000 C.Y.	20.83	11,602.31
211-02050	b borrow	557.000 C.Y.	27.42	15,272.94
302-07455	dense graded subbase	156.000 C.Y.	62.94	9,818.64
609-06259	reinforced concrete bridge approach 12 in	939.000 SYS	83.33	78,246.87
701-06011	dynamic pile load test	3.000 EACH	1,651.34	4,954.02
701-08122	pile, steel pipe, 0.375", 14	5,580.000 L.F.	42.87	239,214.60
701-09559	test pile, dynamic, restrike	3.000 EACH	1,317.82	3,953.46
701-09690	test pile, dynamic, 14 in non-production	210.000 L.F.	42.87	9,002.70
702-51005	concrete, a, substructure	300.000 C.Y.	584.17	175,251.00
702-51015	concrete, b, footings	206.000 C.Y.	307.53	63,351.18
703-06028	reinforcing bars	61,660.000 LBS	0.91	56,110.60
703-06029	reinforcing bars, epoxy coated	443,858.000 LBS	0.95	421,665.10
704-51002	concrete, c, superstructure	1,696.000 C.Y.	560.34	950,336.64
706-09959	railing, concrete, ft	236.000 L.F.	64.42	15,203.12
707-05983	structural member, concrete i-beam, 36 in x 12 in	2,680.000 L.F.	160.01	428,826.80
709-51821	surface seal	1.000 L.S.	29,198.00	29,198.00
Γ	TOTALS			2,712,969.98

## PRICING REPORT

JTB 11/26/12 JEC "126/12

Project:	SR 37 over Stoney Creek - Widening
Location:	Hamilton County
County:	HAMILTON
District:	Greenfield

Project ID:	10-703-SR37	OVER STO
Bid Date:	11	State: IN
Route:		

Pay Item	Description	Quantity Unit	Bid Price	Extension_Alt
105-06845	construction engineering	1.000 L.S.	16,508.00	16,508.00
110-01001	mobilization and demobilization	1.000 L.S.	41,270.00	41,270.00
202-51328	present structure, remove portions	1.000 L.S.	40,000.00	40,000.00
206-51220	excavation, wet	118.700 C.Y.	100.00	11,870.00
302-07455	dense graded subbase	51.100 C.Y.	62.94	3,216.23
609-06257	reinforced concrete bridge approach, 10 in	306.000 SYS	89.10	27,264.60
701-91792	pile tip, steel h	12.000 EACH	119.00	1,428.00
701-95782	pile, steel h, hp 12 x 84	180.000 L.F.	72.00	12,960.00
702-51005	concrete, a, substructure	90.300 C.Y.	584.17	52,750.55
702-51015	concrete, b, footings	32.400 C.Y.	307.53	9,963.97
702-51110	grates, basins, and fittings, cast iron	1,734.000 LBS	4.50	7,803.00
702-92857	concrete, c, substructure	56.900 C.Y.	560.00	31,864.00
703-06028	reinforcing bars	15,303.000 LBS	0.91	13,925.73
703-06029	reinforcing bars, epoxy coated	97,845.000 LBS	0.95	92,952.75
704-51002	concrete, c, superstructure	250.400 C.Y.	560.00	140,224.00
706-09960	railing, concrete, fc	392.000 L.F.	70.00	27,440.00
709-51821	surface seal	1.000 L.S.	12,705.00	12,705.00
711-51038	structural steel	1.000 L.S.	223,616.00	223,616.00
724-51925	structural expansion joint, ss	263.200 L.F.	170.00	44,744.00
726-11448	bearing assembly, expansion, type 1	15.000 EACH	500.00	7,500.00
726-11451	bearing assembly, fixed, type 1	5.000 EACH	500.00	2,500.00
801-06203	temporary pavement marking, 4 in	1,533.000 L.F.	0.46	705.18
801-06710	flashing arrow sign	480.000 DAY	9.00	4,320.00
801-06775	maintaining traffic	1.000 L.S.	20,000.00	20,000.00
801-08508	temporary traffic barrier, type 2, anchored	933.000 L.F.	38.20	35,640.60
	TOTALS		99 MERE HIR OFFICE ACT	992 474 64

TOTALS

883,171.61

## LIFT STATION ESTIMATE

## Town & Country Boulevard Lift Station Cost Summary

#### **GENERAL INFORMATION**

Intersection	Town & Country Boulevard and S.R. 37
Station (of Lift Station)	257+09.73

### **DESIGN INFORMATION**

Storm Sewer Inflow Elev	749.1
Length to Outfall (ft)	1442.0
Outfall Elevation	750.00
High Point Station	226+74.43
High Point Elevation	794.77
Revised Outfall Elevation	790.77
Revised Distance to Outfall	3035.0
Drainage Area (ac)	2.44
10-Year Flow $Q_{10}$ (cfs)	10.50
50-Year Flow $Q_{50}$ (cfs)	13.04
100-Year Flow $Q_{100}$ (cfs)	14.12

## **CONSTRUCTION COST**

Estimated Lift Station Construction Cost	Ċ.	050.000.00
Estimated Lift Station Construction Cost	\$	950,000.00
Estimated Force Main Construction Cost	\$	610,000.00
Total Estimated Construction Cost	\$	1,560,000.00

## **OPERATION & MAINTENANCE COST**

Operation	\$ 10,000.00
Maintenance	\$ 15,000.00
Equipment Replacement	\$ 15,000.00
Total Annual OM&R Cost	\$ 40,000.00

## **ROAD QUANTITIES**

				10	-703	
				SR 37 MOB	ILITY STUL	DY
				Town and Co		
By:	BWS	3/27/12		Checked By:	ATW	11/24/12
105-06845	CO	NSTRUCTION	ENGINEERIN	G		1
						LS
						LS
ENTIRE PROJEC						1.0
	Assume 3% of Total	i Project Cost				
		l	l			
L	1	1	1			1

	10-703					
By: 110-01001				SR 37 MOB		
				Town and Con		
By:	BWS	3/27/12	-	Checked By:	ATW	11/24/12
110 01001						4
110-01001	MOBIL	IZATION AND	DEMOBILIZA	TION		1 LS
						LS
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ENTIRE PROJEC						1.0
	Assume 5% of Total	i Project Cost	<u> </u>			
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	10-703					
			SR 37 MOB			
			Town and Con	intry Boulev	pard	
By: BWS	3/27/12		Checked By:	ATW	11/24/12	
·		-	-			
201-52370	CLEARING RI	CHT OF WAY			1	
	CLEAKING M	oni or war			LS	
					LS	
					1.0	
ENTIRE PROJECT Assume a Li	ump Sum amount of \$15k				1.0	
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By: 202-02273				SR 37 MOB Town and Cou		
By:	srs	11/16/12		Checked By:	BWS	11/24/12
202-02273						
				length	width	Area (sys)
				( <i>ft</i> )	( <i>ft</i> )	
West of Sr 37				158	4	70.2
mesi oj Sr 57				130	4	/0.2

		10-703					
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		10-703				
				SR 37 MOBI Town and Cot		
By:	srs	11/19/12		Checked By:	BWS	11/24/12
202-52710	SIDI	SIDEWALK, CONCRETE, REMO				120 SYS
				length	width	Area (sys)
				(lft)	(lft)	
West of SR 37				90.00	6	60.0
				90.00	6	60.0
					TOTAL	120.0

		10-703				
				CD 27 MOD	Η ΗΤΧ ΟΤΗΓ	V
				SR 37 MOB		
				Town and Co	untry Boulev	ard
By.	DIZ	4/17/12		Checked By:	BWS	11/24/12
25.	202	1/1//12	-	checked by:	2115	11/21/12
202-93999						4
202-93999		SIGNAL POL	E, REMOVE			
						EACH
Description						Each
-						
Line "S-2-A"						
1 at each corner						4.0
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## SR 37 MOBILITY STUDY Town and Country Boulevard

By: BWS 10/30/12

## Checked By: \_\_\_\_\_ srp

203-02000

## **EXCAVATION, COMMON**

77,013 CYS

11/26/12

STATION	CUT AREA	CUT VOLUME	FILL AREA	FILL VOLUME	CUM. CUT VOLUME	CUM. FILL VOLUM
	(sft)	(cys)	(sft)	(cys)	(cys)	(cys)
Line ''A''						
238+33.71	200.89		28.28			
238+86.38	200.89	391.88	28.28	55.17	391.88	55.17
240+40.00	196.39	1130.19	38.87	191.03	1522.07	246.20
245+54.43	213.97	3909.29	9.61	461.84	5431.36	708.04
250+46.46	214.28	3902.07	47.44	519.82	9333.43	1227.86
254+51.34	1744.01	14682.82	894.04	7059.01	24016.25	8286.87
259+68.44	1745.72	33417.40	747.78	15721.95	57433.65	24008.82
263+73.31	214.28	14695.28	47.44	5962.24	72128.93	29971.05
268+42.63	219.09	3766.47	39.83	758.47	75895.40	30729.52
					Earthwork Balance =	45165.87
Line ''S-2-A''						
50+53.29	364.31		0.00			
50+99.00	46.62	347.84	53.86	45.59	347.84	45.59
52+23.21	39.10	197.17	967.56	2349.46	545.02	2395.05
52+95.00	38.94	103.75	573.85	2049.22	648.77	4444.27
52+95.00	0.00	0.00	0.00	0.00	648.77	4444.27
54+11.60	0.00	0.00	0.00	0.00	648.77	4444.27
54+11.60	38.94	0.00	573.85	0.00	648.77	4444.27
54+83.37	39.10	103.72	967.56	2048.65	752.49	6492.91
55+99.00	46.62	183.55	53.86	2187.16	936.04	8680.08
57+04.00	46.62	181.30	53.86	209.46	1117.34	8889.53
					Earthwork Balance =	-7772.19
				То	tal Earthwork Balance =	37393.68
	The Earthwo	ork Balance indicate	s this is a WASTI	E job and no BORR	OW will be required.	
		Common Excav	ation = Cumula	tive Cut Volume =	77012.74	
				<u> </u>	TOTAL =	77013.0

				10-7	03	
				SR 37 MOBIL Town and Coun		
By:	MAC	5/29/12		Checked By:	JPS	11/21/12
205-06931	TEMPORAL	RY CHECK DA	AM, REVETMEN	T RIPRAP		325 TON
Begin Sta.	End Sta.	Spacing	Number of Dams	Weight Tons/Dam		TON

				Tons/Dam	
Line ''A''	Northbound				
238+33.95	255+20.80	100.0	17.0	6.5	110.5
259+68.44	268+42.63	100.0	9.0	6.5	58.5
· · · · · · · · · · · · · · · · · · ·	Consthe and				
Line "A"	Southbound	100.0	17.0	6.5	110.5
238+33.71	254+91.91	100.0	17.0	6.5	110.5
261+95.00	268+42.63	100.0	7.0	6.5	45.5
	┨────┤			+ +	
	┨────┤			+ +	
				+ + + - + - + - + - + - + - + - + - + -	
					TOTAL = 325.0

	10-703					
By: 205-06937						
				SR 37 MOB		
				Town and Con	untry Boulev	vard
By:	MAC	5/10/12		Checked By:	JPS	11/21/12
			-			
205-06937						500
		TEMPORARY	SILI FENCE			LFT
		•		1		LFT
Use as areas fall av	way from jobsite.					500.0
				1		

10-703						
				SR 37 MOBIL	ΤΤΥ ΩΤΙΙΝ	7
				Town and Coun	itry Bouleva	rd
By:	BWS	4/13/12		Checked By:	ATW	11/25/12
			_	_		
207-08263	SUB	GRADE TREA	TMENT, TYPI	E IA		41,892 SYS
Descire Startions		Desin Width		A		A
Begin Station	End Station pied from 501-06323	Begin Width	End Width	Area (sft)		Area (sys) 44361.3
Line ''S-2-A''	neu jrom 501-00525	): 				44301.3
Line ''A''						
238+33.71	240+22.16	Rt	2.00	376.90		41.9
240+22.16	245+01.18	Rt Rt	2.00	958.04		106.4
245+01.18	245+54.43	Rt Rt	2.00	106.50		11.8
245+54.43	249+91.75	Rt Rt	2.00	874.64		97.2
249+91.75	250+38.72	Rt	2.00	93.94		10.4
250+38.72	263+73.31	Rt	2.00	2669.18		296.6
263+73.31	266+70.35	Rt	2.00	594.08		66.0
266+70.35	268+42.63	Rt	2.00	344.56		38.3
238+33.71	240+22.57	Lt	2.00	377.72		42.0
240+22.57	245+54.43	Lt	2.00	1063.72		118.2
245+54.43	246+03.03	Lt	2.00	97.20		10.8
246+03.03	247+49.27	Lt	2.00	292.48		32.5
247+49.27	250+46.46	Lt	2.00	594.38		66.0
250+46.46	263+81.00	Lt	2.00	2669.08		296.6
263+81.00	268+42.63	Lt	2.00	923.26		102.6
Line ''TC_SE''						
10+00.00	10+60.24	Rt	2.00	120.48		13.4
10+60.24	11+59.99	Rt	2.00	199.50		22.2
11+59.99	14+56.18	Rt	2.00	592.38		65.8
14+56.18	14+89.01	Rt	2.00	65.66		7.3
14+89.01	16+11.02	Rt	2.00	244.02		27.1
Line ''TC_SW''						
20+00.00	21+62.90	Lt	2.00	325.80		36.2
21+62.90	22+04.64	Lt	2.00	83.48		9.3
22+04.64	23+07.67	Lt	2.00	206.06		22.9
23+07.67	26+07.64	Lt	2.00	599.94		66.7
Line "TC_NW"						
40+00.00	44+54.18	Lt	2.00	908.36		100.9
44+54.18	44+87.02	Lt	2.00	65.68		7.3
44+87.02	46+09.02	Lt	2.00	244.00		27.1
<i>Line ''TC_NE''</i>	21 + 54.71	D.	2.00	200.42		211
<u>30+00.00</u> <u>31+54.71</u>	31+54.71 32+04.64	Rt Rt	2.00	309.42 99.86		<u> </u>
31+34.71 32+04.64	32+04.04 36+09.51	Rt Rt	2.00	809.74		90.0
32+04.04	50+09.51	Κl	2.00	009.74		90.0
ļ		<del> </del>		+ +		
		<u> </u>		+ +		
				+ +		
		<u> </u>		+ +		
1		L	I	SUDTOTAL /TH		1()10)

					OBILITY STUDY Country Boulevard
B	y:	SRS	11/16/12	Checked By:	srp
211-09194			<b>B BORROW</b>		

10-703

Station from	Station to	Area	VOLUME	VOLUME
		(sft)	(cft)	(cys)
Borrow f	or behind both inside and o	outside walls. Area calculated in Auto	CAD in "Typicals3.dwg". Areas fo	r two scenarios.
	h walls at tallest point: 278			
Area benina insia	e wall, no outside wall pres	ent: 550.29 sjt		
NB Wall				
12 11 111				
250+38.72	255+17.78	336.29	161103.09	5966.78
255+17.78	256+31.81	278.23	31726.57	1175.06
256+31.81	257+81.13	336.29	50214.82	1859.81
257+81.13	259+78.30	278.23	54858.61	2031.80
259+78.30	263+73.31	336.29	132837.91	4919.92
SB Wall				
250+46.46	254+88.45	336.29	148636.82	5505.07
254+88.45	256+38.65	278.23	41790.15	1547.78
256+38.65	257+88.23	336.29	50302.26	1863.05
257+88.23	261+85.66	278.23	110576.95	4095.44
261+85.66	263+81.00	336.29	65690.89	2433.00
	1			

*TOTAL* = 31397.7

11/26/12

31,398 TON

			10-2	703	
			SR 37 MOBIL Town and Cour		
By:	BWS	11/19/12	Checked By:	BWC	11/24/12
211-09264	ST	RUCTURAL BAC	KFILL, TYPE 1		829 CYS

	Depth	Length	Width	Volume
				(cys)
um from Item 715-05149	Assume 2'		Assume 2'	
5593.00	2.0	5593.0	2.0	828.59
			_	
			1 1	

TOTAL =828.6

			10-703		
			SR 37 MOBILIT Town and Country		
<i>By</i> :	SRS	10/22/12	Checked By:	srp	11/26/12

STRUCTURAL BACKFILL, TYPE 3

211-09266

25,506 CYS

Segment	Length	gth Begin Height	End Height	Structur	e Backfill	Volume
Ū	( <i>ft</i> )	(ft)	( <i>ft</i> )	Width	Volume	(cys)
	- <u>-</u> -		-	( <i>ft</i> )	(cft)	
Since the wall is c	urved and extends b	etween two alignment.	s (mainline and ram	), all lengths m	easured in AutoCAL	for better accuracy
Segments measure	ed in the direction of	f travel. Not every wall	has all 3 segments.	Assumptions m	ade on lengths depe	nding on what the
	= measured directly					
	sition from 4 ft to 7	ft				
Segment $2 = 7 ft$ (						
Segment 3 = Tran	sition from 7 ft to 4	ft				
NE Wall	435.44					
Segment 1	108.86	4	11	5.25	4286.36	159
Segment 2	217.72	4	11	7.70	18440.88	683
Segment 2 Segment 3	108.86	11	4	5.25	4286.36	159
Segment S	100.00	11	7	5.25	4200.50	157
SE Wall	321.35					
Segment 1						
Segment 2	148.80	11	11	7.70	12602.94	467
Segment 3						
SW Wall	389.48					
a 1	100.02			5.0.5	5111.02	100
Segment 1	129.83	4	11	5.25	5111.93	189
Segment 2	259.65	11	11	7.70	21992.64	815
Segment 3					+ +	
NW Wall	519.81				+ +	
iv w waa	517.01					
Segment 1						
Segment 2	228.47	11	11	7.70	19351.41	717
Segment 3	291.34	11	4	5.25	11471.51	425
					1 1	
					<u> </u>	
					<u> </u>	
					+ +	
					+	
					+ +	
					TOTAL -	2612 7

			10-1	703		
			SR 37 MOBILITY STUDY Town and Country Boulevard			
<i>By:</i>	SRS	10/22/12	Checked By:	srp	11/22/12	

211-09266

## STRUCTURAL BACKFILL, TYPE 3

CYS

Station From	Station To	Station To Begin Height	End Height	Structure Backfill		Volume
		( <i>ft</i> )	( <i>ft</i> )	Width	Volume	(cys)
Inside Wall				( <i>ft</i> )	( <i>cft</i> )	
			ion from 3.98 ft to 2 3.98 ft. Heights in A			the way through
NB Wall						
250+38.72	256+31.81	4	27	10.84	99614.25	3689
256+31.81	257+81.13	27	27	18.90	76198.00	2822
257+81.13	263+73.31	27	4	10.84	99461.41	3684
SB Wall						
250+46.46	256+38.65	4	27	10.85	99591.55	3689
256+38.65	257+88.23	27	27	18.90	76330.67	2827
257+88.23	263+81.00	27	4	10.84	99560.51	3687
Additional Area for Area by AutoCAD i		:1 slope out under re ' = 15.12 sft	pad)			
	i Typicaisolaing	- 10.12 SJV	Length	Area	Volume	
NB Wall			(ft)	(sft)	(cft)	
250+38.72	263+73.31		1335	15.12	20179.00	747
SB Wall						
250+46.46	263+81.00		1335	15.12	20178.24	747
					++	

TOTAL this page =

TOTAL =

25505.8

			10-7	03	
			SR 37 MOBIL Town and Coun		
<i>By:</i>	BWS	4/23/12	Checked By:	BWC	11/24/12
301-07448	COMP	ACTED AGGREG	ATE, NO. 53, BASE		3,125 TON
Description		Longth (ft)	Width (ft) Donth (ft)	Factor	Waight (Tons)

Description		Length (ft)	Width (ft)	Depth (ft)	Factor	Weight (Tons)
					(tons/cys)	
Assumptions: Used	MOT Plan for 126th	h and Keystone as e:	xample MOT Plan	•		
Use 165#/sys of Sur	face and 825#/sys of	(Base)				
	place Existing Inside	Shoulders and inst	all crossovers			
Line ''A''	NB Inside					
t Beginning		300.00	19.00	0.50	2	211
At End		570.00	19.00	0.50	2	401
Line "A"	SB Inside					
Beginning to Bridge		473.00	20.00	0.50	2	350
Bridge over Stony C		1130.00	20.00	0.50	2	837
North of S-Line (exi		548.00	2.00	0.50	2	41
North of ex. Turn la	nes	512.00	20.00	0.50	2	379
Line "A"						
Median crossover a		400.00	22.00	0.50	2	326
Median crossover a	t begin project	400.00	22.00	0.50	2	326
	stall Temporary Pav	ement across S-Line	e for NB Ph IV tra	ffic.		
Line ''A''						
At S-line for traffic	on ramp Ph IV	360.00	19.00	0.50	2	253
					TOTAL =	3124.7

			10-703			
			SR 37 MOBII Town and Cour		-	
<i>By</i> :	BWS	4/11/12	Checked By:	ATW	11/25/12	
302-06464		SUBBASE FOR PCCP			10,473	

CYS

Begin Station	End Station	Side	Width	Area (sft)	Depth (ft)	Volume (cys)
Pavement Area cop	ied from 501-06323	multiplied by 9:		399251.39	0.75	11090.3
Outside Area (2' on	either side):					
Line ''A''						
238+33.71	240+22.16	Rt	2.00	376.90	0.75	10.5
240+22.16	245+01.18	Rt	2.00	958.04	0.75	26.6
245+01.18	245+54.43	Rt	2.00	106.50	0.75	3.0
245+54.43	249+91.75	Rt	2.00	874.64	0.75	24.3
249+91.75	250+38.72	Rt	2.00	93.94	0.75	2.6
250+38.72	263+73.31	Rt	2.00	2669.18	0.75	74.1
263+73.31	266+70.35	Rt	2.00	594.08	0.75	16.5
266+70.35	268+42.63	Rt	2.00	344.56	0.75	9.6
238+33.71	240+22.57	Lt	2.00	377.72	0.75	10.5
240+22.57	245+54.43	Lt	2.00	1063.72	0.75	29.5
245+54.43	246+03.03	Lt	2.00	97.20	0.75	2.7
246+03.03	247+49.27	Lt	2.00	292.48	0.75	8.1
247+49.27	250+46.46	Lt	2.00	594.38	0.75	16.5
250+46.46	263+81.00	Lt	2.00	2669.08	0.75	74.1
263+81.00	268+42.63	Lt	2.00	923.26	0.75	25.6
Line "TC_SE"						
10+00.00	10+60.24	Rt	2.00	120.48	0.75	3.3
10+60.24	11+59.99	Rt	2.00	199.50	0.75	5.5
11+59.99	14+56.18	Rt	2.00	592.38	0.75	16.5
14+56.18	14+89.01	Rt	2.00	65.66	0.75	1.8
14+89.01	16+11.02	Rt	2.00	244.02	0.75	6.8
Line "TC_SW"						
20+00.00	21+62.90	Lt	2.00	325.80	0.75	9.1
21+62.90	22+04.64	Lt	2.00	83.48	0.75	2.3
22+04.64	23+07.67	Lt	2.00	206.06	0.75	5.7
23+07.67	26+07.64	Lt	2.00	599.94	0.75	16.7
Line "TC_NW"						
40+00.00	44+54.18	Lt	2.00	908.36	0.75	25.2
44+54.18	44+87.02	Lt	2.00	65.68	0.75	1.8
44+87.02	46+09.02	Lt	2.00	244.00	0.75	6.8
Line "TC_NE"						
30+00.00	31+54.71	Rt	2.00	309.42	0.75	8.6
31+54.71	32+04.64	Rt	2.00	99.86	0.75	2.8
32+04.64	36+09.51	Rt	2.00	809.74	0.75	22.5
				SUBTOTAL (T		11560.0

SUBTOTAL (THIS PAGE) = 11560.0

				10-	-703	
				SR 37 MOBI Town and Cot	LITY STUD Intry Bouleva	
By:	BWS	4/12/12		Checked By:	ATW	11/25/12
302-06464		SUBBASE F	OR PCCP			CYS
Begin Station	End Station	Begin Width	End Width	Area (sft)	Depth (ft)	Volume (cys)
Additional Width U	Under Curbs	Length	2.00	000.00	0.55	24.0
SW Ramp		449	2.00	898.00	0.75	24.9
NW Ramp		239	2.00	478.00	0.75	13.3
NE Ramp SE Ramp		384 326	2.00 2.00	768.00 652.00	0.75 0.75	21.3 18.1
					0.75	16.1
Posurfacing Areas	- Subtract from Lin	10.4				
238+33.71	240+22.16	24.00	24.00	4522.80	0.75	-125.6
230+33.71	240+22.10	24.00	24.00	4322.80	0.75	-125.0
238+33.71	240+22.57	24.00	24.00	4532.64	0.75	-125.9
200100001	21012207	21100	21100		0170	1201/
Subtract from brid	ge area:					
5				6046.99	0.75	-168.0
Subtract pavement	from moment slab					
NE Wall				7816.83	0.75	-217.1
SE Wall	ļ	ļ		5753.00	0.75	-159.8
	ļ	<b> </b>	l	6550.00	0.55	102 -
SW Wall				6578.99	0.75	-182.7
NW Wall	1	1		6686.53	0.75	-185.7
					-	
	l	Ì				

-1087.3

*TOTAL* = 10472.8

				10-	703	
				SR 37 MOBI Town and Cou		
By:	BWS	4/17/12	_	Checked By:	ATW	11/25/12
303-01180	COM	IPACTED AGO	GREGATE, NO	. 53		2,089 TON
Begin Station	End Station		Area (sft)	Volume	Factor	Tons
Degin Station	Linu Station		nicu (sji)	(cys)	(T/cys)	10115
Line "A"				(0,5)	(1/033)	
238+33.71	239+39.58	Rt	5.4	21.17	2.000	42.35
239+39.58	240+39.58	Rt	5.4	20.00	2.000	40.00
240+39.58	245+01.18	Rt	5.4	92.32	2.000	184.64
245+01.18	250+38.72	Rt	5.4	107.51	2.000	215.02
262 52 21	266 70 25		5.4	50.41	2 000	110.00
263+73.31	266+70.35	<u>Rt</u>	5.4	59.41	2.000	118.82
266+70.35	268+42.54	Rt	5.4	34.44	2.000	68.88
238+33.71	247+49.27	Lt	5.4	183.11	2.000	366.22
247+49.27	250+46.02	Lt	5.4	59.35	2.000	118.70
217 ( 17.27	230110.02	<u> </u>	5.1	57.55	2.000	110.70
263+81.00	268+42.54	Lt	5.4	92.31	2.000	184.62
Line ''TC_SE''						
10+00.00	10+60.24	Rt	5.4	12.05	2.000	24.10
10+60.24	11+59.99	Rt Rt	5.4	12.05	2.000	39.90
10+00.24 11+59.99	14+35.65	Rt Rt	5.4	55.13	2.000	110.26
Line ''TC_SW''						
20+00.00	23+07.67	Lt	5.4	61.53	2.000	123.07
23+07.67	26+07.64	Lt	5.4	59.99	2.000	119.99
Line ''TC_NW''	14.22.64	τ.	5.4	96.72	2 000	172.46
10+00.00	14+33.64	Lt	5.4	86.73	2.000	173.46
Line ''TC_NE''						
12+14.13	16+09.51	Rt	5.4	79.08	2.000	158.15
			ļ	ļļ		

TOTAL =

				10-2	703	
				SR 37 MOBII Town and Cour		
By:	ATW	11/24/12	-	Checked By:	BWS	11/24/12
306-08034	I	MILLING, ASP	HALT, 1 1/2 IN			1,007 SYS
Begin Sta.	End Sta.	Side	Width (ft)	Area (sys)		SYS
238+33.71	240+22.16	Rt	24.00			502.5
238+33.71	240+22.57	Lt	24.00			503.6
				1		
				+		
				+		
				1 1		
				+		
				+		
					TOTAL =	1006 1

TOTAL =

				10-	-703	
				SR 37 MOBI Town and Cou		
By:	ATW	11/24/12	_	Checked By:	BWS	11/24/12
401-07328	QC/0	QA-HMA, 3, 70,	SURFACE, 9.5	mm		83 TON
Begin Sta.	End Sta.	Side	Width (ft)	Area (sys)	Factor	Weight (Tons)
					(#/SYS)	
238+33.71	240+22.16	Rt	24.00	502.53	165	41.5
238+33.71	240+22.57	Lt	24.00	503.63	165	41.5
		+	+			
					TOTAL =	83.0

		10-703				
				SR 37 MOB Town and Cou		
By:	BWS	4/23/12		Checked By:	BWC	11/24/12
402-10084	HMA F	TOR TEMPORA	ARY PAVEME	NT, B		5,192 TON
Description		Length (ft)	Width (ft)	Area (sys)	Factor	Weight (Tons)
					(#/SYS)	
	d MOT Plan for 126t		example MOT Plar	<i>ı</i> .		
Use 165#/sys of Su	rface and 825#/sys oj	t Base)				
MOT Phase I · Pa	surface Existing Out	side Shouldors		1		
Line "A"	NB Outside	sine shoulders				
From Begin to End		3009.00	10.00	3343.33	165	276
Line "A"	SB Outside	2007.00	10.00	0010.00	100	2,0
From Begin to End		3009.00	10.00	3343.33	165	276
	place Existing Inside	e Shoulders and ins	tall crossovers			
Line ''A''	NB Inside					
At Beginning		300.00	19.00	633.33	990	314
At End		570.00	19.00	1203.33	990	596
Line ''A''	SB Inside					
	e over Stony Creek	473.00	20.00	1051.11	990	520
Bridge over Stony		1130.00	20.00	2511.11	990	1243
North of S-Line (ex		548.00	2.00	121.78	990	60
North of ex. Turn la	anes	512.00	20.00	1137.78	990	563
Line "A"		100.00				10.1
Median crossover a		400.00	22.00	977.78	990	484
Median crossover a	at begin project	400.00	22.00	977.78	990	484
MOT Dlana III. L	nstall Temporary Pav		to for ND DL IV 4			
	isiaii Temporary Pav	emeni across 5-Lii	ie jor INB Ph IV ird	<i>ijjic</i> .		
Line ''A'' At S-line for traffic	con ramp Ph IV	360.00	19.00	760.00	990	376
Ai S-une for truffu		300.00	19.00	700.00	990	570
				1		
				1		
				SUBTOTAL (T	HIS PAGE) -	5191.8

*TOTAL* = 5191.8

		10-703	
		SR 37 MOBILITY STU Town and Country Boul	
By: BWS	4/17/12	Checked By: <u>ATW</u>	11/24/12
501-06266	PROFILOGRAPH, I	РССР	1 LS
Description			LS
Assume 1 lump Sum for entire p	roject at \$15k		1.0
		SUBTOTAL (THIS PAGE)	= 1.0

*TOTAL* = 1.0

					10-703	
					BILITY STUD Country Bouleva	
By:	SRS	5/15/12	_	Checked By:	ATW	11/24/12
501-06323		QC/QA-P	CCP, 12 IN			44,362 SYS
Begin Station	End Station	Side	Begin Width	End Width	Area (sft)	Area (sys)
Line "A"		-	<b>5</b> 0.00		0.400 - 0	10.1-
238+33.71	240+22.16	Rt	50.00	50.00	9422.50	1047
240+22.16	245+01.18	Rt Rt	50.00	50.00	23951.00	2661
245+01.18	245+54.43	Rt Dt	50.00	53.55	2757.02	306
245+54.43	249+91.75	Rt Rt	55.56	71.50	27782.94	3087
249+91.75	250+38.72	Rt	71.50	71.50	3358.36	373
250+38.72	263+73.31	Rt	45.50	45.50	60723.85	6747
263+73.31	266+70.35	Rt	71.50	52.00	18342.22	2038
266+70.35	268+42.63	Rt	52.00	52.00	8958.56	995
220 22 71	240 22 57	¥ .	50.00	10.10	0201.01	1030
238+33.71	240+22.57	Lt	50.00	48.40	9291.91	1032
240+22.57	245+54.43	Lt	48.40	49.77	26106.35	2901
245+54.43	246+03.03	Lt	51.77	50.00	2473.01	275
246+03.03	247+49.27	Lt	50.00	50.00	7312.00	812
247+49.27	250+46.46	Lt	50.00	71.54	18060.24	2007
250+46.46	263+81.00	Lt	45.50	45.50	60721.57	6747
263+81.00	268+42.63	Lt	83.50	83.50	38546.11	4283
Line "TC_SE"						
	10,60.24	D.(	26.00	26.00	1566.24	174
10+00.00	10+60.24	Rt Rt	26.00	26.00	1566.24	174
10+60.24	11+59.99	Rt Dt	26.00	38.00	3192.00	355
11+59.99	14+56.18	Rt Pt	38.00	38.00	11255.22	1251
14+56.18	14+89.01	Rt Pt	32.00	27.51	976.86	<u> </u>
14+89.01 Line ''TC_SW''	16+11.02	Rt	27.51	31.53	3601.74	400
20+00.00	21 + 62 00	I 4	20.54	26.79	1671 16	519
	21+62.90 22+04.64	Lt	30.56 26.79	32.00	4671.16	136
21+62.90 22+04.64	22+04.64 23+07.67	Lt	38.00	32.00	1226.95	435
22+04.04 23+07.67	25+07.67	Lt Lt	38.00	29.54	3915.14 10129.99	435
23+07.07	20+07.04	Ll	30.00	29.34	10129.99	1120
Line "TC_NW"						
40+00.00	44+54.18	Lt	38.00	38.00	17258.84	1918
44+54.18	44+87.02	Lt	38.00	27.70	1078.79	120
44+87.02	46+09.02	Lt	27.70	31.53	3613.03	401
Line "TC_NE"	10102	<i>L</i> 1	20	51.55	2012.02	.01
30+00.00	31+54.71	Rt	17.30	13.50	2382.53	265
31+54.71	32+04.64	Rt Rt	13.50	20.00	836.33	93
32+04.64	36+09.51	Rt Rt	26.00	26.00	10526.62	1170
Roundabout	50+07.51	- Mi	20.00	20.00	10520.02	11/0
Outside area	subtract inside area	7		┼───┼		
62694.29	15544.17	~		┼───┼	47150.12	5239
02027.27	13377.17	<u> </u>		┼───┼	7/150.12	5459
	1	1	1			

					10-703	
					BILITY STUD Country Bouleve	
By:	SRS	5/15/12		Checked By:	ATW	11/24/12
501-06323		QC/QA-PC	CP, 12 IN			SYS
Begin Station	End Station	Begin Width	End Width		Area (sft)	Area (sys)
Subtract pavement	t from moment slab					
NE Wall					7816.83	-869
SE Wall					5753.00	-639
SW Wall					6578.99	-731
NW Wall					6686.53	-743
Subtract from brid	l ge area:				6046.99	-672
	- Subtract from Lin					
238+33.71	240+22.16	24.00	24.00		4522.80	-502.53
238+33.71	240+22.57	24.00	24.00		4532.64	-503.63

-4659.8

*TOTAL* = 44361.3

				10	-703	
				SR 37 MOBI Town and Cou		
<i>By:</i>	srs	11/19/12		Checked By:	ATW	11/24/12
503-05240		D-1 CONTRAC	TION JOINT			22,181 LFT
Description			Pavement Area	Spacing		Length (ft)
Total Area	as taken from 501	-06323	(sft)	( <i>ft</i> )		
		44,362	399258.00	18.00		22181

SUBTOTAL	(THIS	PAGE) =	22181.0

*TOTAL* = 22181.0

				10	-703	
By: 601-01522				SR 37 MOB Town and Co	ILITY STUL	
By:	SRS	11/24/12			BWS	
601-01522						3 EACH
						EACH
SW Quadrant						1.0
NW Quadrant						1.0
SE Quadrant						1.0
			}			
			ļ			
					TOTAL	2.0

				10	-703	
				SR 37 MOB	Η ΙΤΥ ΟΤΗ	V
				Town and Co	untry Boulev	pard
By:	SRS	11/24/12		Checked By:	BWS	11/25/12
			-			
601-94689						3
001-74007	GUA	RDRAIL END	TREATMENT,	OS		EACH
						EACH
SW Quadrant						1.0
NW Quadrant						1.0
						1.0
SE Quadrant						1.0
					ΤΟΤΑΙ	

				10	-703	
<i>Ву:</i> <b>601-99105</b>						
				SR 37 MOB		
				Town and Co	untry Boulev	pard
By:	SRS	11/24/12	_	Checked By:	BWS	11/25/12
			-			
601-99105	GUARD	RAIL, W-BEAN	<b>A. 6 FT 3 IN SP</b>	ACING		1,668
	0011112	, , , ,	-, • • - • • • • • •			LFT
						LFT
SW Quadrant						588.0
NW Quadrant						650.0
SE Quadrant		<u> </u>				430.0
		<u> </u>				

				10	-703	
				SR 37 MOBI Town and Cou		
By:	BWS	4/20/12	-	Checked By:	ATW	11/24/12
602-06729		BARRIER DE	LINEATOR			51 EACH
Begin Station	End Station	Length (ft)	Spacing			Each
Line "A"						
245+54.43	255+61.35	1006.92	40.00			26
Bridge - Pavement						
258+58.68	268+42.63	983.95	40.00			25
				-		
		<u> </u>				
		<del> </del>				
		+		+		
		+				
		<u> </u>		+		
	}	+		+		

*TOTAL* = 51.0

				10-	-703	
				SR 37 MOBI Town and Cot		
By:	BWS	4/13/12		Checked By:	ATW	11/24/12
602-08603		CONCRETE BA	ARRIER, 45 IN			1,991 LFT
Begin Station	End Station					Length (ft)
Line "A"						
245+54.43	255+61.35					1007
Bridge - Pavement	Exception					
258+58.68	268+42.63					984
	1		1			
	<u> </u>		<u> </u>			
				CURTOTAL /T		1000.0

SUBTOTAL (THIS PAGE) = 1990.9

				10-2	703	
				SR 37 MOBII Town and Cour		
By:	BWS	11/20/12	_	Checked By:	BWC	11/24/12
603-06040		FENCE, FARM	FIELD, 47 IN			5,418 LFT
Begin Station	End Station			# of Sides		Length (ft)
Line "A" 238+33.71 259+00.00						
				SUBTOTAL (TH		5417.8

*TOTAL* = 5417.8

				10-	-703	
				SR 37 MOBI Town and Cou		
By:	JPS	11/21/12	-	Checked By:	BWS	11/24/12
604-07569		PAVI	ERS			491 SYS
Begin Station	End Station					SYS
Line "S-2-A"						490.8
				SURTOTAL (T		/00.8

SUBTOTAL (THIS PAGE) = 490.8

*TOTAL* = 490.8

				10	-703	
				SR 37 MOB Town and Co		
By:	JPS	11/21/12		Checked By:	BWS	11/24/12
605-06120		CURB, CO	NCRETE			619 LFT
Begin Station	End Station					LFT
Line ''S-2-A''						
West Side						310
East Side						310
						610.0

SUBTOTAL (THIS PAGE) = 619.0

*TOTAL* = 619.0

				10	-703	
				SR 37 MOB Town and Cou		
By:	BWS	4/12/12		Checked By:	ATW	11/25/12
605-06140	CU	RB AND GUTT	ER, CONCRET	Έ		1,398 LFT
Begin Station	End Station			# of Sides		Length (ft)
SW Ramp						449
NW Ramp						239
NE Ramp						384
SE Ramp						326
						1209.0

SUBTOTAL (THIS PAGE) = 1398.0

*TOTAL* = 1398.0

		10-703					
	SR 37 MOBILITY STUDY Town and Country Boulevard						
By:	JPS	11/21/12		Checked By:	BWS	11/24/12	
605-06145 CURB AND GUTTER, B, CONCRETE						846 LFT	
Begin Station	End Station					LFT	
Line "S-2-A"						845.7	
				SUBTOTAL (TH	(IS PAGE) =	845.7	

*TOTAL* = 845.7

				10-2	703	
				SR 37 MOBII Town and Cou		
By:	BWS	4/13/12		Checked By:	JPS	11/21/12
605-06255	C	ENTER CURB,	D, CONCRETE			422 SYS
Begin Station	End Station			Area (sft)		Area (sys)
Line ''S-2-A''						
	approaching round	labout		1874.2		208
Area of Center curl	departing roundab	out		1917.99		213
				SUBTOTAL (TH	HSPAGE =	421.4

01/1E (111151/10E) = 4

			10-7			
			SR 37 MOBIL Town and Cour			
<i>By</i> :	BWS	4/17/12	Checked By:	BWC	11/24/12	_
615-06510		MONUMENT, C			5 EACH	
Alignment	Station	Description	Inside Pavement?		Each	-

Г

Alignment	Station	Description	Inside Pavement?	Each
Line "S-2-A"				
	10+00.00	Begin Project	Yes	
	13+53.23	PI	Yes	
	13+62.18	PI	Yes	
	17+76.64	End Project	Yes	
T . 11 A 11				
Line "A"	238+33.71	Destin Destinat	No	1
		Begin Project		1
	246+11.03	Between Begin and PT	Yes	
	253+88.35	PT PT	Yes	
	261+15.49	Between PT and End Project	Yes	
	268+42.63	End Project	Yes	
SW Ramp				
	00+00.00	Begin Project	Yes	
	02+96.19	PC	Yes	
	04+05.10	PI	No	1
	04+46.88	End Project	Yes	
NW Ramp				
	00+43.88	Begin Project	Yes	
	01+09.20	PI	No	1
	02+43.77	PT	Yes	
	06+48.63	End Project	Yes	
NE Ramp				
NE Kamp	00+00.00	Begin Project	Yes	
	04+54.18	PC	Yes	
	05+63.22	PI	No	1
	06+04.87	End Project	Yes	1
	00+04.07		100	
SE Ramp				
	00+61.18	Begin Project	Yes	
	01+41.41	PI	No	1
	02+61.44	PT	Yes	
	06+64.43	End Project	Yes	
			SURTOTAL (THIS PAGE	<sup>()</sup> - 50

SUBTOTAL (THIS PAGE) = 5.0

TOTAL = 5.0

			SR 37 MOBILITY STUDY Town and Country Boulevard			
By:	BWS	4/17/12	Checked By:	BWC	11/24/12	
615-06515		MONUMENT, D			20 EACH	

Alignment	Station	Description	Inside Pavement?	Each
T: 110 2 A 11				
Line ''S-2-A''	10 00 00			
	10+00.00	Begin Project	Yes	1
	13+53.23	PI	Yes	1
	13+62.18	PI	Yes	1
	17+76.64	End Project	Yes	1
Line ''A''				<u> </u>
	238+33.71	Begin Project	No	
	246+11.03	Between Begin and PT	Yes	1
	253+88.35	PT	Yes	1
	261+15.49	Between PT and End Project	Yes	1
	268+42.63	End Project	Yes	1
CIW D				
SW Ramp	00.00.00	Ducto Ductory	- V.	7
	00+00.00	Begin Project	Yes	1
	02+96.19	PC	Yes	1
	04+05.10	PI	No	
	04+46.88	End Project	Yes	1
NW Ramp				
÷	00+43.88	Begin Project	Yes	1
	01+09.20	PI	No	
	02+43.77	PT	Yes	1
	06+48.63	End Project	Yes	1
NE Ramp				
NE Kump	00+00.00	Begin Project	Yes	1
	04+54.18	PC	Yes	1
	05+63.22	PI	No	1
	06+04.87	End Project	Yes	1
SE Ramp				
	00+61.18	Begin Project	Yes	1
	01+41.41	PI	No	
	02+61.44	PT	Yes	1
	06+64.43	End Project	Yes	1
				<u> </u>
			SURTOTAL (THIS PAGE	() - 200

TOTAL =

				10-2	703	
By: <b>616-02320</b>				SR 37 MOBII Town and Cour	ntry Bouleva	urd
By:	STS	11/19/12	-	Checked By:	BWS	11/24/12
616-02320		GEOTE	XTILES			446 SYS
Begin Station	End Station	Side Slope X:1	Slope Length (FT)	<b>Bottom</b> Perimeter(FT)		Area SYS
Assume 10% of pro	pject			+ +		
Ditch Linings						
Line "A" 238+33.71	268+42.63	3	3.16	13.3		4453.2
238+33.71	208+42.03	3	5.10	15.5		4433.2
				+ +		
				+ +		
				+ +		
				+		
				+		
				+ +		
				+ +		
			<u> </u>			
				+		
				+		
				+ +		
				+ +		
				$\downarrow$		
				+	Take 10%	4453.2
				+		
	1		1		TOTAL =	445.3

				10-	-703	
<i>Ву:</i> <b>616-06405</b>				SR 37 MOBI Town and Cou	LITY STUDY Intry Bouleva	
By:	DJZ	4/11/12		Checked By:	BWS	11/24/12
616-06405		RIPRAP, RE	VETMENT			251 TON
Begin Station	End Station	Side Slope (3:1)	Area (sys)	Volume (cys)	Factor (tons/cys)	<b>Weight</b> Tons
Assume 10% of pro	oject					
Ditch Linings						
Line "A" 238+33.71	268+42.63	3	1.7	1671.6	1.5	250.7
			ļ			
	1	1	1			
				_		
					TOTAL =	250.7

	10-703					
<i>By:</i> <b>621-01004</b>						
				SR 37 MOB	ILITY STUL	DY
				Town and Con	untry Boulev	vard
Dave	D 17	4/11/12				
by.	DJL	4/11/12		Спескей Бу.	DWS	11/24/12
621-01004	MOBILIZ	ATION AND D	EMOBILIZATI	ON FOR		4
021-01004		SEED				- EACH
						Liten
Station						EACH
Use a Total of 4 for	r Entire Proiect					4.0
	l					I

				10-7	703	
				SR 37 MOBII Town and Cour		
By:	DJZ	4/25/12	_	Checked By:	BWS	11/25/12
621-06545		FERTI	LIZER			4 TON
Description		Area		Application Rate		Ton
				(lb/ac)		
Area of Permanent	Seeding =	5.08	ас	800		2.0
Area of Temporary	Seeding =	2.54	ac	800		1.0
				+		
					TOTAL =	3.0

				10-70	03	
By <b>621-06554</b>	D.17	4/25/12		SR 37 MOBILI Town and Count	try Boulevard	
Ву	v: DJZ	4/25/12	-	Checked By:	BWS	11/24/12
621-06554		SEED MIX	XTURE, U			864 LBS
Description			Area	Units		LBS
NE	Area from AutoCAD		54907.22	sft		
NW	Area from AutoCAD		52711.24	sft		
SE	Area from AutoCAD		67254.78	sft		
SW	Area from AutoCAD		71997.97	sft		
	Total Seeding		27430.13	sys		
			5.67	ac		
	Total Sodding		2857.00	sys		
			0.59	ac		
	Total Seed Area		5.08	ac		
	Application Rate		170	#/ac		863.1
	<u> </u>			<u> </u>		
				<u> </u>		
	<u> </u>			<u>                                      </u>		
	+ +			+		
	1					
	+ +			+		
	•				TOTAL =	863.1

				10	-703	
By: <b>621-06557</b>				SR 37 MOB Town and Co	untry Boule	vard
By:	DJZ	4/25/12	_	Checked By:	BWS	11/24/12
621-06557		SEED MIX	XTURE, T			381 LBS
Description		Area		Application Rate		LBS
Entire Project		2.54	ac	150	#/ac	380.8
			-			
					<b> </b>	
					1	
					ļ	
					<b> </b>	
					<del> </del>	
					TOTAL =	380.8

				10-	-703	
				SR 37 MOBI Town and Cou	intry Boulevo	ard
By:	DJZ	4/25/12		Checked By:	BWS	11/24/12
621-06565		MULCHING	MATERIAL			16 TON
Description			Area	Application Rate		LBS
Entire Project						
Seed Mixture, T			2.54			
Seed Mixture, U			5.08			
			7.62	2.00	Tons/ac	15.2
t					TOTAL =	15.2

				10	-703	
<i>By:</i> <b>621-06567</b>				SR 37 MOB Town and Co	ILITY STUD untry Boulevo	
By:	DJZ	4/25/12		Checked By:	BWS	11/24/12
621-06567		WAT	ER			12 kGAL
Description					Rate (kGAL/sys)	kGAL
Area of Sodding =		2857.00	sys		0.004	11.4
				_		
				_		
		I	l		TOTAL =	11.4

				10-70	)3	
<i>By:</i> <b>621-06574</b>	DJZ	4/25/12		SR 37 MOBILI Town and Count Checked By:	try Boulevar	d
621-06574		SODD	DING			2,857 SYS
Begin Station	End Station		Width	Factor		<b>Area</b> SYS
NB	2(0, 12		2.(7			80 <b>2</b> (
238+34 SB	268+43		2.67			892.6
238+32	268+43		2.67			893.2
NB						
238+34 	268+43		16	0.1		534.9
238+32	268+43		16	0.1		535.2
					TOTAL =	2856.0

		10-	703
			LITY STUDY antry Boulevard
<i>By</i> :	DJZ 4/17/12	Checked By:	
628-08520	2 EACH		
Description			Each
A market a local day of the second			2.0
Assume 2 for the entire pro	yect.	+ +	2.0
		+ +	
<u> </u>			
		SUBTOTAL (TH	HIS PAGE) = 2.0

				10-703	
				SR 37 MOBILITY STU Town and Country Boule	
By:	DJZ	4/17/12		Checked By:BWS	11/24/12
628-08521	CELLUI	LAR TELEPHO	NE/RADIO SEI	RVICE	36 MOS
Description				ļ	Months
Assume 2 phones f	or the entire project	with a project durat	tion of 18 months		36.0
					+
					-
					+
					<b></b>
				SUBTOTAL (THIS PAGE) =	= 36.0

*TOTAL* = 36.0

				10-	-703	
				SR 37 MOBI Town and Cou		
By:	DJZ	4/17/12		Checked By:	BWS	11/24/12
628-09403		FIELD OF	FFICE, C			18 MOS
Description						Months
Assume a project d	uration of 18 month	·S.				18.0
				SUBTOTAL (T	HIS PAGE) =	18.0

TOTAL =

18.0

	10-703					
				SR 37 MOB	ILITY STUL	DY
				Town and Con	untry Boulev	vard
	DUIG	(12.2) (1.2)			DUIG	11/0//10
By:	BWS	4/23/12		Checked By:	BWC	11/24/12
701-90386	т	EMPORARY S	HEET PILING			1
	1	EMI OKAKI S				LS
Description						Area (sft)
Assumptions: Used	MOT Plan for 126	th and Keystone as e	example MOT Plan.	Will need wall fo	or Phase III.	
For the Under opti	on, assume 14.5 fee	t of elevation change	e for SR 37 and rem	aining grade by	S-line.	
Assume 485' at 3%	to get back to grad	e on either side of th	e bridge, and 200' o	of 14.5' wall.		
			Total =	12357.00	sft	
SR 37 will go over	Town and Country					
Use 12375 sft at \$2	5/sft for a lump sum	unit cost of \$308,9	25			1.0
		<b>3</b> · · · ·				
			<u> </u>			

				10	703	
				SR 37 MOBI Town and Cou		
By:	STS	11/19/12		Checked By:	ATW	11/25/12
706-08496 REINFORCED CONCRETE MOMENT SLAB, 12 IN						2,982 SYS
Description	Area					
	(sft)					
All areas measured i	in AutoCAD, ''SRS	S Working.dwg'' on	layer ''Moment Slab	"		
NE Wall	7816.83					869
SE Wall	5753.00					639
SW Wall	6578.99					731
NW Wall	6686.53					743
+						
<u> </u>						
<b> </b>						
┢─────╄						
				SUBTOTAL (TI		2981.7

				10	-703	
				SR 37 MOBI Town and Cou		
By:	srs	11/19/12	-	Checked By:	ATW	11/25/12
706-09545	(	COARSE AGGR	REGATE, NO 8			746 CYS
Description				Area (sft)	Depth(ft)	Volume (cys)
All areas measured	in AutoCAD, ''SRS	Working.dwg'' on t	layer ''Moment Slab	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
NE Wall				7816.83	0.75	217
SE Wall				5753.00	0.75	160
SW Wall				6578.99	0.75	183
NW Wall				6686.53	0.75	186

*TOTAL* = 745.4

				10-7	03	
			1	SR 37 MOBIL Fown and Coun		
By:	srs	11/24/12		Checked By:	BWS	11/25/12
706-09959		RAILING, CONCR	ETE, FT			6,706 LFT
Description	Length	1				
	( <i>ft</i> )					
RAMP TOP RIGH						10.5
NE Wall	435.44					435
SE Wall	321.35					321
SW Wall	389.48					389
NW Wall	519.81					520
RAMP TOP LEFT	T RAILING					
NB Wall						
250+38.72	256+31.81					593
257+81.13	263+73.31					592
SB Wall						
250+46.46	256+38.65					592
257+88.23	263+81.00					593
INSIDE WALL BO	OTTOM RAILING					
NB Wall						
250+38.72	263+73.31					1335
SB Wall						
250+46.46	263+81.00					1335
		+ + + + + + + + + + + + + + + + + + + +				
				SURTOTAL /TH		6705 4

SUBTOTAL (THIS PAGE) = 6705.4

*TOTAL* = 6705.4

				10-7	703	
				SR 37 MOBIL	JTY STUD	Y
				Town and Coun		
By:	srs	11/19/12		Checked By:	BWS	11/24/12
715-05048	P	PIPE, TYPE 4 Cl	IRCULAR 6 IN			12,099
	_	,				LFT
Begin Sta.	End Sta.	1				LFT
Degin Sta.	Enu Sta.					
Line ''A''		Assu	me both sides and m	edian		
238+33.71	268+42.63					9026.8
				Ļ		
Line "S-2-A" 50+00.00	57+67.82	Assume	both sides outside an	d median		3071.3
30+00.00	37+07.82					5071.5
				<u>├</u>		
				ļ		
				<u>├</u>		
L				├		
				<u> </u>		
					TOTAL =	12098.0

*TOTAL* = 12098.0

				10-703	
By:	SFS	11/19/12		SR 37 MOBILITY STU Town and Country Boul Checked By: <u>BWS</u>	levard
			_		
715-05053	PIP	E, UNDERDRA	IN, OUTLET 6	IN	270 LFT
Begin Station	End Station	Interval	Outlet Length		LFT
Line "A"					
238+33.71	268+42.63	400	27.00		216.0
Line ''S-2-A'' 50+00.00	57+67.82	400	27.00		54.0
	-				
				TOTAL	= 270.0

				10-703	
				SR 37 MOBILITY STUL Jown and Country Bouley	
By:	BWS	11/19/12		Checked By: <u>BWC</u>	11/24/12
715-05149			RCULAR 12 IN		5,593 LFT
Station					Lft
					-
Use 300' inlet spac	cing				
Line "A"	Median Inlets				
					80
	ļ ļ		ļ		92
	┦────┤		<b>├</b> ──── <b>│</b>		38
					296
	┨────┤				296 296
					290
					240
					240
					290
					296
					38
Line "A"	Outside Wall Inlets				
	Rt				54
	Lt				54
	Rt				66
	Lt				54
	Rt				38
	Lt				38
	Rt				38
	Lt				38
	Rt				66
	Lt				66
	Rt		ļļ		54
	Lt		<b>├</b> ──── <b>├</b>		66
<i>Line ''S-2-A''</i>					
50+50.00	┼───┤		├		157
51+50.00			<u>├</u>		137
52+70.00	┨────┤		├		182
53+50.00	+ +				173
54+50.00			<u>                                     </u>		556
58+50.00			<u>                                     </u>		651
59+50.00	1 1		<u> </u>		172
60+50.00					167
61+50.00					167
62+50.00					67
				SUBTOTAL (THIS PAGE) =	5592.4

*TOTAL* = 5592.4

				10-	-703	
				SR 37 MOBI Town and Cou		
By:	BWS	11/19/12		Checked By:	BWC	11/24/12
715-09064	V	DEO INSPECT	ION FOR PIPE			5,593 LFT
Station						Lft
Total Length of Pi	pe Item # 715-05149					
10tul Dengin of 14						5593
				SURTOTAL (T		5503.0

SUBTOTAL (THIS PAGE) = 5593.0

*TOTAL* = 5593.0

				10-2	703	
				SR 37 MOBII Town and Cour	ntry Boulev	ard
By:	STS	11/19/12		Checked By:	BWS	11/24/12
718-06528		OUTLET PRO	DTECTOR, 1			10 EACH
Begin Station	End Station	Interval				EACH
Line ''A''						
238+33.71	268+42.63	400				8
Line ''S-2-A''						
50+00.00	57+67.82	400		+ $$		2
				+		
				+ +		
				+ +		
				+		
				+ +		
				++		
				+ +		
				+		
				+ +		
					TOTAL =	10.0

				10-2	703	
				SR 37 MOBII	LITY STUD	Y
				Town and Cour	ntry Boulev	ard
D		11/10/10				
By:	STS	11/19/12		Checked By:	BWS	11/24/12
718-06532						2 000
/18-00552	VIDEO	<b>INSPECTION I</b>	FOR UNDERDI	RAINS		3,000 L ET
						LFT
Begin Station	End Station	Interval				LFT
			1000000			
Total length of und	lerdrain from 715-0.	5 <i>048</i>	12099.00	<u>├</u>		
Rofi	er to IDM Figure 52-	-10B I or	 1gth>3000 and <30,	000		3000
						2000
				T		
				<u>├</u>		
				<u>├</u>		
				† †		
				<b>  </b>		
				┼───┼		
				<u> </u>		
				<u>†                                    </u>		
				<b>  </b>		
				<u> </u>		
				†		
				<b>├</b> ──── <b>├</b>		
				<u> </u>		
				<u> </u>		
				<u>†                                    </u>		
	-	-	•	- I	TOTAL =	3000.0

*TOTAL* = 3000.0

				10-	703	
				SR 37 MOBL	LITY STUL	)Y
				Town and Cou	ntry Boulev	ard
Byr	CPC	11/10/12		Checked By:	BWS	11/24/12
Dy.	STS	11/19/12		checked by.	DWS	11/24/12
718-52610						1,089
	AGO	GREGATE FOR	<b>K UNDERDRAL</b>	NS		CYS
		<b>T</b> - 4 -	- 1 I 41 6 I I d		<b>F</b> = = 4 = =	Valaria (ana)
		1 010	ul Length of Underd	IDM Fig 17-4A	Factor (cys/lft)	Volume (cys)
Total length of und	lerdrain from 715-0:	5048	(ft) 12099.00	IDM T Ig 17-4A	0.090	1088.9
						ļ
						<u> </u>
	1					<u> </u>
						ļ
						ļ
				]		
						ļ
					TOTAL =	1088.9

*TOTAL* = 1088.9

				10-	703	
				SR 37 MOBL	LITY STUL	DY
				Town and Cou		
By:	STS	11/19/12		Checked By:	BWS	11/24/12
718-99153	GEO	<b>DTEXTILES FO</b>	R UNDERDRA	IN		8,291
						SYS
		Tota	l Length of Underd	rain	Factor	Area (sys)
			( <i>ft</i> )	IDM Fig 17-4A	(sft/lft)	
Total length of und	erdrain from 715-0	5048	12099.00	Ŭ	6.17	8290.1
						<u> </u>
	1					<u> </u>
				T		
	<u> </u>		l			<u> </u>
						<u> </u>
	1		1		TOTAL =	8290.1

				10-	-703	
				SR 37 MOBI Town and Cou		
By	v: <u>BWS</u>	5/11/12		Checked By:	BWC	11/24/12
720-07300 INLET, TYPE H. WITH SLOTTED DRAIN 1					12 EACH	
Station						Each
Ugo 2001 inlat and						
Use 300' inlet spo Line "A"	Median Inlets					
	hiteditant intens					1
						1
	+ +					<u> </u>
	Sag					1
	Sag					1
						<u> </u>
						1
Line "A"	Outside Wall Inlets					
	<u>Rt</u>					1
	Lt Rt					<u> </u>
	Lt					1
	+ +					
				SURTOTAL (T		12.0

				10-7	03	
				SR 37 MOBIL Town and Coun		d
Ву	w: BWS	5/11/12		Checked By:	BWC	11/24/12
720-07302	INLET, 7	TYPE HA, WII	TH SLOTTED D	DRAIN		12 EACH
Station						Each
Use 200/ imlet and						
Use 300' inlet spo Line "A"	Outside Wall Inlets					
Line A	Lt Outside Wall					1
	Lt Inside Wall					1
	Rt Outside Wall					1
	Rt Inside Wall					1
	I the state West					1
	Lt Inside Wall Rt Inside Wall			<u>├</u>		<u> </u>
	Lt Inside Wall					1
	Rt Inside Wall					1
	Lt Outside Wall					1
	Lt Inside Wall					1
	Rt Outside Wall Rt Inside Wall					1
	Ki Inside wali					1
	+					
	+ +			<u>├</u>		
	+ +					
	+					
				<u>├</u> ───┤─		
	+ +					
	+ +					
				SUBTOTAL (TH	IS PAGE) =	12.0

				10-	-703	
				SR 37 MOBI Town and Cou		
By:	BWS	11/19/12		Checked By:	BWC	11/24/12
720-45410		MANHO	DLE, C4			12 EACH
Station						Each
Use 100' inlet spac	aina					
Line "S-2-A"	Outside Curb and C	Gutter Inlets				
50+50	Lt					1
51+50	Lt					1
52+70	Lt					1
53+50	Lt					1
54+50	Lt					1
55+24	Lt					1
57+23	Lt					1
58+50	Lt					1
59+50	Lt					1
60+50	Lt					1
61+50	Lt					1
62+50	Lt					1
		1				
B				SURTOTAL (T		12.0

				10-	703	
				SR 37 MOBI Town and Cou		
By:	BWS	11/19/12		Checked By:	BWC	11/24/12
720-98174		INLET	, B15			12 EACH
Station						Each
Use 100' inlet spac	ing					
Line "S-2-A"	Outside Curb and C	Gutter Inlets				
50+50	Rt					1
51+50	Rt					1
52+70	Rt					1
53+50	Rt					1
54+50	Lt					1
54+50	Rt					1
58+50	Lt					1
58+50	Rt					1
59+50	Rt Rt					1
60+50	Rt Rt					1
61+50	Rt					1
62+50	Rt					1
				+		
					_	
				<u>├</u> ──── <u></u>		
				+		
	Ì					
				SURTOTAL (TI		12.0

SR 37 MOBILITY STUDY Town and Country Boulevard           By:         BWS         11/19/12         Checked By:         BWC         11/24/12           720-98555         INLET, C15         12 EACH           Station         Each         12 EACH           Station         Each         12 EACH           Station         Each         12 EACH           Station         Inter, C15         12 Inter, Station           Station         Inter, C15         11 Inter, Station         11 Inter, Station           Station         Inter, C15         11 Inter, Station         11 Inter, Station         11 Inter, Station           Station         Inter, C15         Inter, Station         Inter, C15         Inter, Station           Station         Inter, C15         Inter, Station         Inter, C15	
720-98555       INLET, C15       12 EACH         Station         Each         Station             Use 100' inlet spacing             Line "S-2-A"       Outside Curb and Gutter Inlets $50+50$ Lt          1 $50+50$ Lt         1 $51+50$ Lt         1       1 $52+70$ Lt         1       1 $53+50$ Lt         1       1 $54+50$ Rt         1       1 $58+50$ Rt         1       1 $59+50$ Lt         1       1 $60+50$ Lt         1       1 $61+50$ Lt         1       1	
Station       Each         Station       Each         Use 100' inlet spacing       Image: Curb and Gutter Inlets       Image: Curb and Gutter Inlets         Line "S-2-A"       Outside Curb and Gutter Inlets       Image: Curb and Gutter Inlets       Image: Curb and Gutter Inlets         50+50       Lt       Image: Curb and Gutter Inlets       Image: Curb and Gutter Inlets       Image: Curb and Gutter Inlets         50+50       Lt       Image: Curb and Gutter Inlets       Image: Curb and Gutter Inlets       Image: Curb and Gutter Inlets         50+50       Lt       Image: Curb and Gutter Inlets       Image: Curb and Gutter Inlets       Image: Curb and Gutter Inlets         51+50       Lt       Image: Curb and Gutter Inlets       Image: Curb and Gutter Inlets       Image: Curb and Gutter Inlets         52+70       Lt       Image: Curb and Gutter Inlets         53+50       Lt       Image: Curb and Gutter Inlets         54+50       Lt       Image: Curb and Gutter Inlets         58+50       Rt       Image: Curb and Gutter Inlets	4/12
Use 100' inlet spacing         Outside Curb and Gutter Inlets         Image: Constraint of the space of th	
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	uch (
$\begin{array}{ c c c c c c c c } \hline Line "S-2-A" & Outside Curb and Gutter Inlets & & & & & & & & & & & & & & & & & & &$	
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	1
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	
58+50         Rt         1           59+50         Lt         1           60+50         Lt         1           61+50         Lt         1	1
58+50         Rt         1           59+50         Lt         1           60+50         Lt         1           61+50         Lt         1	1
59+50         Lt         1           60+50         Lt         1           61+50         Lt         1	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	
	l
62+50     Lt     1       Image: Constraint of the second	l
Image: set of the	1
Image: set of the	
Image: section of the section of th	
Image: section of the section of th	
Image: state of the state of	
Image: state of the state	
Image: second	
Image: second	
SURTOTAL (THIS PACE) - 12.0	

				10-7	'03	
			2	SR 37 MOBIL Town and Coun		
By:	SRS	11/24/12		Checked By:	srp	11/26/12
731-93945		FACE PANELS,	CONCRETE			58,984 SFT

Segment	Length	Begin Height	End Height		
	<i>(ft)</i>	( <i>ft</i> )	( <i>ft</i> )		
Since the wall is cu		tween two alignment	s (mainline and ram	p), all lengths measured	l in AutoCAD for better accura
					n lengths depending on what th
0			= measured directl		0 1 0
Segment 1 = Trans	ition from 4 ft to 7 ft				
Segment $2 = 7$ ft (a)					
Segment 3 = Trans	ition from 7 ft to 4 ft	•			
NE Wall	435.44				
Segment 1	108.86	4	11		816
Segment 2	217.72	11	11		2395
Segment 3	108.86	11	4		816
SE Wall	321.35				
				1 1	
Segment 1				1	
Segment 2	148.80	11	11	1	1637
Segment 3					1007
Jegmenn e					
SW Wall	389.48				
	00,110				
Segment 1	129.83	4	11		974
Segment 2	259.65	11	11		2856
Segment 3	239.05				2050
Segmeni S					
NW Wall	519.81				
VVV VVall	517.01				
Segment 1					
Segment 2	228.27	11	11		2511
Segment 3	228.27	11	4		2311
segment s	291.34	11	4		2107
INSIDE WALLAR	EAS COPIED ER	I OM STRUCTURE B	ACKEILL AREAS	(211-00226)	
NSIDE WALLAN	LAS COLIED FR			(211-09220)	
vD wan					
250+38.72	256+31.81	4	27	+ + + + + + + + + + + + + + + + + + + +	9187
256+31.81	257+81.13	27	27	+	4032
	263+73.31	27	4	+	9173
257+81.13	203+/3.31	27	4	<u>├</u>	91/3
SB Wall				<u> </u>	
				+	
250 . 46 46	256 . 20.65	4	27	+	0170
250+46.46	256+38.65	4	27	┥───┤──	9179
256+38.65	257+88.23	27	27	$\downarrow$ $\downarrow$	4039
257+88.23	263+81.00	27	4	SUBTOTAL (THIS F	9182

TOTAL =

				10-7	03	
				SR 37 MOBIL Town and Coun		
By:	SRS	11/24/12		Checked By:	srp	11/26/12
731-93946		WALL ER	ECTION			58,984 SFT
Segment	Length	Begin Height	End Height			

Segment	Length	Begin Height	End Height		
	( <i>ft</i> )	( <i>ft</i> )	( <i>ft</i> )		
				p), all lengths measured in A	-
Segments measur	ed in the direction of	f travel. Not every wa	all has all 3 segment	s. Assumptions made on len	gths depending on what th
		wall looks like. *	= measured directly	y in AutoCAD.	
Segment 1 = Trans	ition from 4 ft to 7 ft				
Segment $2 = 7$ ft (a	round curve)				
Segment 3 = Trans	ition from 7 ft to 4 ft				
NE Wall	435.44				
Segment 1	108.86	4	11		816
Segment 2	217.72	11	11		2395
Segment 3	108.86	11	4		816
0					
SE Wall	321.35				
Segment 1					
Segment 2	148.80	11	11		1637
Segment 3					
segment s					
SW Wall	389.48				
	007110				
Segment 1	129.83	4	11		974
Segment 2	259.65	11	11		2856
Segment 3					2030
begmeni 5					
NW Wall	519.81				
in the second seco	517.01				
Segment 1					
Segment 2	228.27	11	11		2511
Segment 3	220.27	11	4		2187
Segmeni S	291.34	11	7		2107
INSIDE WALL AD	REAS COPIED FRO	M STRUCTURE D	ACKEILI ADEAS	(211-09226)	
NB Wall			AND ARLAS		
				<u>├</u>	
250+38.72	256+31.81	1	27		9187
		4 27			
256+31.81	257+81.13	27	27		4032
257+81.13	263+73.31	27	4		9173
SB Wall				<b>├</b> ───	
0.50 14 14	<b>0</b> 57 00 75		2=	<b>├</b> ───	
250+46.46	256+38.65	4	27		9179
256+38.65	257+88.23	27	27		4039
257+88.23	263+81.00	27	4	SUBTOTAL (THIS PAGI	9182 E) = <b>58983.1</b>

				10-703			
				SR 37 MOBILIT Town and Country			
By:	SRS	11/24/12		Checked By:	srp 1	1/26/12	
731-93947							
Description	Length						
	( <i>ft</i> )						
NE Wall	435.44					435	
SE Wall	321.35					321	
SW Wall	389.48					389	
NW Wall	519.81					520	
INSIDE WALL AF	REAS COPIED FRO	M STRUCTURE R	ACKEILL ADEAS (	211_00226)			
NSIDE WALLAR NB Wall	LAS COI ILD FRO	W SIKUCIUKE D	ACKFILL AKLAS (	211-09220)			
250+38.72	256+31.81					593	
256+31.81 257+81.13	257+81.13 263+73.31					149 592	
SB Wall							
52 1144							
250+46.46	256+38.65					592	
256+38.65	257+88.23					150 593	
257+88.23	263+81.00					393	
				SURTATAL (THIS P		1335 2	

SUBTOTAL (THIS PAGE) = 4335.2

*TOTAL* = 4335.2

				10-	703	
				SR 37 MOBI Town and Cou		
By:	BWS	4/24/12		Checked By:	BWC	11/24/12
801-01093	TEMPOR	ARY WORKSI ASSEM	FE SPEED LIMI IBLY	IT SIGN		4 EACH
Description						Each
A		1 1 17 /				
Assumptions: Used	MOT Plan for 1261	h and Keystone as e	xample MOT Plan.			
Use 2 at each end o	of SR 37 for every pl	ase of MOT				4
	1			SUBTOTAL (TE	HS PAGE =	4.0

*TOTAL* = 4.0

				10-	-703	
				SR 37 MOBI Town and Cou		
By:	BWS	4/24/12		Checked By:	BWC	11/24/12
801-03290		CONSTRUCT	ION SIGN, C			2 EACH
Description						Each
Assumptions: Used	MOT Plan for 126	h and Keystone as e	xample MOT Plan.			
			1			2
Use 1 at each end a	f SR 37 for every pl	use of MOI				
<u> </u>						
				SUBTOTAL (T	HIS PAGE) = -	2.0

				10-	-703	
				SR 37 MOBI Town and Cou		
<i>By:</i>	BWS	4/24/12		Checked By:	BWC	11/24/12
801-04308	ROAD C	LOSURE S	IGN ASSEMBL	ΔY		4 EACH
Description						Each
Assumptions: Used MOT	Plan for 126th and	Keystone as ex	cample MOT Plan.			
MOT Phase III						
Use one at each end of the	s-Line					2
MOT Phase IV						
Use one at each end of the	s-Line					2
MOT Phase V						
Use one at each end of the	e S-Line					4
				H	ighest Total =	4
				SURTATAL (T		4.0

*TOTAL* = 4.0

				10	-703	
				SR 37 MOB Town and Co	ILITY STUDY untry Bouleva	
By:	BWS	4/24/12		Checked By:	BWC	11/24/12
801-06625	DETO	UR ROUTE MA	ARKER ASSEM	BLY		18 EACH
Description						Each
Assumptions: Used	MOT Plan for 126	th and Keystone as e	example MOT Plan.			
MOT Phase III						
MOT Phase IV					Total =	18
MOT Phase V					<i>Total</i> =	18
					Total =	18
				Н	lighest Total =	18
				SUDTOTAL /T		18.0

				10	-703	
					ILITY STUDY untry Boulevar	
<i>By:</i>	BWS	4/24/12		Checked By:	BWC	11/24/12
801-06640		CONSTRUCT	ION SIGN, A			24 EACH
Description						Each
Assumptions: Used M	OT Plan for 12	6th and Keystone as e	example MOT Plan.			
MOT Phase I						
Begin Project						8
Midde of project						4
End Project						8
					Total =	20
MOT Phase II						8
Begin Project Midde of project						2
End Project						8
					Total =	18
MOT Phase III						
Begin Project						8
Midde of project						1
End Project					Total =	<u>8</u> 17
MOT Phase IV					10101 -	17
Begin Project						8
Midde of project						8
End Project						8
					Total =	24
MOT Phase V						0
Begin Project Midde of project						8 2
End Project						8
					Total =	18
<u>├</u>						
┣────┤─			<u> </u>	<u> </u>	├	
					<u>├</u>	
				H	ighest Total =	24
<b>├</b> ────					<b>├</b> ─── <b>│</b>	
╞────┼─					├	
			1	SUBTOTAL (T	HIS PAGE) =	24.0

TOTAL =

24.0

			10-703	
			SR 37 MOBILITY ST Town and Country Bou	
<i>By</i> :	BWS	4/24/12	Checked By:	
801-06645		CONSTRUCTION SIGN	N, B	4 EACH

Description			Each
ssumptions: Used MOT Plan for 126th and Keyston	e as example MOT Plan.		
AOT Phase I			
			2
Begin Project			2 0
Midde of project End Project			2
		Total =	4
MOT Phase II		10101 -	Ŧ
Begin Project			2
Midde of project			0
End Project			2
		Total =	4
MOT Phase III			
Begin Project			3
Midde of project			1
End Project			0
		Total =	4
MOT Phase IV			
Begin Project			2
Midde of project			0
End Project			0
		Total =	2
MOT Phase V			
Begin Project			0
Midde of project			0
End Project			0
		Total =	0
		<b> </b>	
		Highest Total =	4
			7
		BTOTAL (THIS PAGE) =	4.0

TOTAL =

4.0

		10-703					
			SR 37 MOBILITY STUDY Town and Country Boulevard				
By:	BWS	4/24/12		Checked By:	BWC	11/24/12	
801-06710		FLASHING AI	RROW SIGN			510 DAY	
Description						Day	
Assumptions: Used M	10T Plan for 126t	h and Keystone as e	xample MOT Plan.				
MOT Phase I							
Begin Project						45	
Midde of project						0	
End Project						45	
MOT Phase II					Total =	90	
Begin Project						0	
Midde of project						0	
End Project						0	
					Total =	0	
MOT Phase III							
Begin Project						105	
Midde of project End Project						<u> </u>	
Lhu I Tojeci					Total =	210	
MOT Phase IV							
Begin Project						105	
Midde of project						0	
End Project					Total =	<u>105</u> 210	
MOT Phase V					Iotal =	210	
Begin Project						0	
Midde of project						0	
End Project						0	
					Total =	0	
<b>├</b>							
++							
				<b> </b>			
<u>├</u>					Total =	510	
+					1 0 mi –	510	
<u> </u>							

*TOTAL* = 510.0

		10-703				
			SR 37 MOBILITY STUDY Town and Country Boulevard			
By: BWS	4/24/12		Checked By:	BWC	11/24/12	
801-06775	MAINTAININ	G TRAFFIC			1 LS	
Description					LS	
Assumptions: Used MOT Plan for 126	th and Keystone as e	example MOT Plan.				
ENTIRE PROJECT					1	
Assume 2% of Tota	l Project Cost					
			SUPTOTAL (T		1.0	

			10-703					
			SR 37 MOBILITY STUDY Town and Country Boulevard					
By:	BWS	4/24/12		Checked By:	BWC	11/24/12		
801-07024 ENERGY ABSORBING TERMINAL, CZ, TL-3					1 EACH			
Description						Each		
Assumptions · Used	MOT Plan for 126t	h and Keystone as e	erample MOT Plan					
Use at begin projec	t for MOT Phase III	(north end of cross-	over)			1		
						7		
				H	ighest Total =	1		
				SURTOTAL (T		1.0		

		10-703					
				SR 37 MOBI Town and Cou			
<i>By</i> :	BWS	4/24/12		Checked By:	BWC	11/24/12	
801-07118		BARRICA	DE, III-A			228 LFT	
Description						Length (ft)	
Assumptions: Used M	OT Plan for 126t	h and Keystone as e	xample MOT Plan.				
MOT Phase I							
Begin Project						0	
Midde of project						0	
End Project						0	
					Total =	0	
MOT Phase II							
Begin Project						0 0	
Midde of project End Project						0	
					Total =	0	
MOT Phase III							
Begin Project						36	
Midde of project						156	
End Project						36	
MOT Phase IV					Total =	228	
MOT Phase IV Begin Project							
Midde of project						72	
End Project						96	
Linu Project					Total =	168	
MOT Phase V							
Begin Project						12	
Midde of project						132	
End Project					T : 1	12	
					Total =	156	
				<i>и</i>	ighest Total =	228	
				11	ignesi 10iui –	220	

SUBTOTAL (THIS PAGE) = 228.0

*TOTAL* = 228.0

				10	-703	
				SR 37 MOB Town and Cou		
By:	BWS	4/24/12		Checked By:	BWC	11/24/12
801-07119		BARRICA	DE, III-B			48 LFT
Description						Length (ft)
Assumptions: Used	MOT Plan for 126	th and Keystone as e	xample MOT Plai	<i>n</i> .		
	5		1			
<b>MOT Phase I</b> Begin Project						0
Midde of project						0
End Project						0
MOT Phase II					Total =	0
Begin Project						0
Midde of project						0
End Project					T ( 1	0
MOT Phase III					Total =	0
Begin Project						24
Midde of project						0
End Project					Total =	24 48
MOT Phase IV					Iotat =	40
Begin Project						24
Midde of project						0
End Project					Total =	<u> </u>
MOT Phase V					10101 -	40
Begin Project						0
Midde of project						0
End Project					Total =	<u> </u>
					10101 -	0
				H	lighest Total =	48

SUBTOTAL (THIS PAGE) = 48.0

*TOTAL* = 48.0

	10-703						
				SR 37 MOB Town and Co	ILITY STUD untry Boulevo		
By:	BWS	4/23/12		Checked By:	BWC	11/24/12	
801-08400	ТЕМРО	RARY TRAFFI	C BARRIER, T	YPE 1		3,009 LFT	
Description						Length (ft)	
Assumptions: Used	l MOT Plan for 1261	th and Keystone as e	xample MOT Plan.				
Use length of SR 37	for MOT Phase III					3009	
This phase requires	more that Phase IV	, therefore will use P	hase III quantity		., .		
Phase III has temp	traffic barrier, type .	l between NB and SI	3 traffic, all traffic or	n SB lanes and w	idening.		
					+ +		
					<b>├</b> ───┤		
				Ŀ	lighest Total =	3009	
					<u>∤</u>		
				<i></i>			
				SUBTOTAL (T	HIS PAGE =	3009.0	

SUBTOTAL (THIS PAGE) =
------------------------

*TOTAL* = 3009.0

				10	-703		
				SR 37 MOBI Town and Cou			
By:	BWS	4/23/12		Checked By:	BWC	11/24/12	
801-08507	801-08507 TEMPORARY TRAFFIC BARRIER, TYPE 1, ANCHORED						
Description						Length (ft)	
Assumptions: Used	MOT Plan for 126	h and Keystone as e	xample MOT Plan				
Will need at the end	l of the project for M	OT Phase III				168	
will need at the end	l of the project for M	01 Phase IV				296	
				Н	ighest Total =	296	
L				<u> </u>			

				10	-703			
				SR 37 MOBI Town and Cou				
By:	BWS	4/23/12		Checked By:	BWC	11/24/12		
801-08508	801-08508 TEMPORARY TRAFFIC BARRIER, TYPE 2, ANCHORED							
Description						Length (ft)		
Assumptions: Used	MOT Plan for 1261	h and Keystone as e	xample MOT Plan.					
Will need for the len	ngth of the project fo	r MOT Phase III				<u>3009</u> 355		
will need at the end	l of the project for M	01 Fnase IV				333		
				Н	ighest Total =	3009		
						2000.0		

SUBTOTAL (THIS PAGE) = 3009.0

*TOTAL* = 3009.0

	10-703					
				SR 37 MOBI Town and Cou		
By:	BWS	4/24/12		Checked By:	BWC	11/24/12
801-09133	TEMPOR	ARY CHANGE	ABLE MESSAG	GE SIGN		2 EACH
Description						Each
Assumptions, Used	MOT Plan for 126t	h and Vaystone as a	wample MOT Plan			
Assume one at each	h end of the project o	on SR 37 for the du	ration of the project.			2
ļ						
	l			SUBTOTAL (T	HIS PAGE) =	2.0

onne (nnis moe) -

*TOTAL* = 2.0

			10-	-703	
			SR 37 MOBI Town and Cot		
By:	BWS	4/23/12	Checked By:	BWC	11/24/12
801-52817	2 EACH				
Description					Each
1 at a set and af SI	27 for MOT Disease	111			2.0
1 at each ena of Sk	37 for MOT Phase	<i>111</i>			2.0
			SURTOTAL (T		2.0

SUBTOTAL (THIS PAGE) = 2.0

*TOTAL* = 2.0

				10-703	
				SR 37 MOBILITY Town and Country B	
<i>By:</i>	JPS	11/28/12	-	Checked By:BW	C 12/5/12
802-05701	SIGN POS	ST, SQUARE, 7 ANCHOI	TYPE 1, REINF R BASE	ORCED	340 LFT
Description		Post Length	Posts per Sign	No. of Signs	
One-way Sign		10.0	1	4	40.0
RAB Ahead Sign		10.0	1	4	40.0
Yield Sign		10.0	1	4	40.0
Street Name Sign		10.0	2	4	80.0
Speed Limit Sign		15.0	2	2	60.0
State Route Marker		10.0	1	8	80.0
				SUBTOTAL (THIS PA	GE) = 340.0

SUBTOTAL (THIS PAGE) =

				10-2	703	
				SR 37 MOBII Town and Cour		
By:	JPS	11/28/12		Checked By:	BWC	12/5/12
802-07057	S	IGN, PANEL, V	VITH LEGENI	)		429 SFT
Description		Height (in)	Width (in)	No. of Signs		
1/2 Mile Ahead		150	132	2		275.0
Exit Street Name		132	84	2		154.0
				+		
				+ +		
				1 1		
				+		
				SUBTOTAL (TH	(IS PAGE) =	429.0

SUBTOTAL (THIS PAGE) =

TOTAL =

429.0

	10-703						
	SR 37 MOBILITY STUDY Town and Country Boulevard						
By:	JPS	11/28/12	-	Checked By:	BWC	12/5/12	
802-07138	WIDE FLANG	GE SIGN POST IX		UNDATION,		2 EACH	
Description							
Exit Street Name						2.0	
Exil Street Name						2.0	
	<u>_</u>		<u>_</u>				
	<u> </u>		<u> </u>				
	1	I	1	SUBTOTAL (T	HIS PAGE) =	2.0	

TOTAL = 2.0

				10-	-703	
				SR 37 MOBI Town and Cot		
By:	JPS	11/28/12		Checked By:	BWC	12/5/12
802-07159 CANTILEVER SIGN SUPPORT FOUNDATION, II						2 EACH
Description						
1/2 Mile Ahead						2.0
		1		SUBTOTAL (T	HIS PAGE) =	2.0

*TOTAL* = 2.0

				10-2	703	
				SR 37 MOBIL		7
				Town and Cour	ntry Bouleva	rd
By:	JPS	11/28/12	-	Checked By:	BWC	12/5/12
802-09840	SIGN, SHEE	F, WITH LEGI	END 0.100 IN T	HICKNESS		115 SFT
Description		Width (in)	Height (in)	No. of Signs		
One-way Sign		36	12	4		12.0
RAB Ahead Sign		30	30	4		25.0
Yield Sign		36	36	4		18.0
Street Name Sign		36	12	4		12.0
Speed Limit Sign		36	48	2		24.0
State Route Marker						
	Route Sign	24	24	4		16.0
	Direction	24	12	4		8.0
				<b>  </b>		
				+		
			 	+		
				+ +		
				+ +		
				SUBTOTAL (TH	IS PACE) -	115.0

TOTAL =

115.0

				10-	703	
				SR 37 MOBII Town and Cou		
By:	JPS	11/28/12	_	Checked By:	BWC	12/5/12
802-76095	STRU	UCTURAL STE	EL, BREAKAV			681 LBS
Description	LI	L2	WI	W2		
Exit w/ Street Nam W8x13	20.00	25.00	307.58	372.58		680.2
				+		
				+		
				+		
				+ +		
				+		
				+ +		
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		1		+		
				+ +		
				1 1		
		1	1	SUBTOTAL (TH	IIS PAGE) =	680.2

*TOTAL* = 680.2

				10-	703	
				SR 37 MOBL Town and Cou		
<i>By:</i>	JPS	11/28/12	-	Checked By:	BWC	12/5/12
802-76135	OVERHEA	AD SIGN STRU SINGLE	CTURE, CANT E ARM	TLEVER		1 EACH
Description						
1/2 Mile Ahead						1.0
-						
┠────┼				}		
				<b></b>		
┠────┼				}		
+		<u> </u>				
				SUBTOTAL (TH	US PACE) =	1.0

				10	-703	
					ILITY STUDY untry Boulevar	
By:	srs	11/19/12		Checked By:	BWS	11/24/12
804-06770		DELINEAT	OR POST			10 EACH
						Each
Total # of Outlets f	rom 715-05053					10.0
				_		
				SURTOTAL (T		10.0

SUBTOTAL (THIS PAGE) = 10.0

*TOTAL* = 10.0

				10-7	03	
				SR 37 MOBIL Town and Coun		
By:	DJZ	4/17/12		Checked By:	BWS	11/24/12
805-02087	805-02087 TRANSPORTATION OF SALVAGEABLE SIGNAL EQUIPMENT					
Description						LS
Assume 1 lump sur	n for the intersection	ı of Town and Coun	ntry and S.R. 37			1
				<u> </u>		
				<u> </u>		
				<u> </u>		
				<u>├</u>		
				SUBTOTAL (TH	IS PAGE =	1.0

*TOTAL* = 1.0

				10-:	703	
				SR 37 MOBI Town and Cou		
By:	DJZ	5/8/12		Checked By:	BWS	11/24/12
808-10031	LINE, MULT	I-COMPONEN	T, BROKEN, V	VHITE, 4 IN		2,528 LFT
Begin Station	End Station	Begin Offset	End Offset		Factor	Length (ft)
0				<u>₹</u>		V - /
Line "A"	NB			+ +		
238+33.71	268+42.63	38.62	19.25		0.25	752
240+39.58	245+69.21	50.00	31.25		0.25	132
266+42.33	268+42.63	31.25	31.25		0.25	50
	SB					
238+33.71	268+42.63	-38.35	-19.25		0.25	752
238+33.71	247+77.32	-50.35	-31.25		0.25	236
268+18.50	268+42.63	-31.25	-31.25		0.25	6
241+46.03	247+49.27	-57.86	-43.25		0.25	151
247+49.27	250+46.02	-43.25	-64.75		0.25	74
263+81.00	264+31.24	-64.75	-64.75		0.25	13
<i>Line</i> ''S-2-A''						
10+17.22	10+36.66	16.00	16.00		0.25	5
14+85.82	15+17.79	59.66	54.26		0.25	8
11+97.62	12+29.98	-54.26	-59.62		0.25	8
Lines within Round	-A-Bout (Total Leng	th)	235.82		0.25	59
RAMPS	SE					
11+59.99	14+45.86	12.00	12.00		0.25	71
10 1/10	SW	10.00			â <b>85</b>	
12+14.13	16+07.65	12.00	0.00		0.25	98
	NW					
10+00.00	14+43.86	12.00	12.00		0.25	111
10+00.00	14+45.60	12.00	12.00		0.23	111
				┼───┼		
				+ +		
				+ +		
				+ +		
				+ +		
				+ +		
				<u> </u>		

2527.8

				10-7	703	
				SR 37 MOBIL Town and Cour		
<i>By</i> :	DJZ	5/8/12		Checked By:	BWS	11/24/12
808-10033	LINE, MUL	TI-COMPONE	NT, SOLID, W	/HITE, 4 IN		9,695 LFT
Begin Station	End Station	Begin Offset	End Offset			Length (ft)
Line "A"	NB Outside			+ +		
238+33.71	239+39.58	50.62	50.62			106
239+39.58	240+39.58	50.62	62.00			101
240+39.58	245+01.18	62.00	45.21			462
245+01.18	250+38.46	45.21	64.75			538
250+38.72	263+73.31	31.25	31.25			1335
263+73.74	266+70.35	64.75	43.25			297
266+70.35	268+42.54	43.25	43.25			172
	SB Outside			+		
238+33.71	241+46.03	-62.35	-69.87			312
241+46.03	245+48.05	-69.87	-55.25			402
245+48.05	247+48.84	-55.25	-55.25			201
247+48.84	250+45.58	-55.25	-76.75			298
250+46.46	263+81.00	-31.25	-31.25			1335
263+81.00	268+42.63	-76.75	-76.75			462
Line ''S-2-A''		Right		+		
10+36.66	11+51.19	16.00	20.85			115
12+20.91	17+05.14	59.96	21.60			486
		Left				
10+17.22	14+94.12	-16.00	-59.97			479
15+45.62	17+21.61	-32.39	-29.19			176

DANG	<b>67</b>			
RAMPS	SE			
10+00.00	10+60.24	0.00	12.00	61
10+60.24	11+59.99	12.00	24.00	100
11+59.99	14+35.65	24.00	24.00	276
14+35.65	14+89.13	24.00	27.71	54
14+45.86	16+11.01	12.00	12.00	165
	NE			
11+54.55	12+14.13	13.50	12.00	60
12+14.13	16+09.51	12.00	12.00	395
	SW			
10+00.00	12+14.13	12.00	12.00	214
11+62.67	16+07.65	26.80	24.00	445
	NW			
10+00.00	14+33.64	24.00	24.00	434
14+33.64	14+84.52	24.00	27.52	51
14+43.86	16+09.00	12.00	12.00	165

TOTAL =

9694.9

				10-703	
				SR 37 MOBILIT Town and Country	
By:	DJZ	5/8/12		Checked By:	<i>BWS</i> 11/24/12
808-10034	LINE, MULT	TI-COMPONEN	T, SOLID, YE	LLOW, 4 IN	9,328 LFT
Begin Station	End Station	Begin Offset	End Offset	<u> </u>	Length (ft)
Line "A"	NB Inside				
238+33.72	240+21.94	26.62	26.62	+	188
238+35.72 240+21.94	240+21.94 245+54.57	26.62	7.25	+ +	533
240+21.94 245+54.57	255+61.08	7.25	7.25	+	1007
Pavement Exceptio		1.23	1.43	+	1007
258+58.68	268+42.63	7.25	7.25		984
Line "A"	SB Inside				
238+33.72	240+21.94	-26.35	-26.35		188
240+21.94	245+47.17	-26.35	-20.33		526
245+47.17	255+61.63	-20.33	-7.25		1014
Pavement Exceptio		7.25	7.25		1017
258+58.95	268+42.63	-7.25	-7.25		984
200100000	200112100	,	,		
SE Ramp					
10+00.00	16+10.98	0.00	0.00		611
NE Ramp					
10+00.00	16+09.51	0.00	0.00		610
NW Ramp					
10+00.00	16+09.01	0.00	0.00		609
SW Ramp					
10+00.00	16+07.65	0.00	0.00	<u> </u>	608
				<u> </u>	
Line ''S-2-A''	EB			<b>↓</b>	
10+17.22	10+36.66	4.00	4.00	┥──┤	19
10+36.66	11+00.48	4.00	-1.02	<u> </u>	64
11+00.48	11+24.64	-1.02	-1.89	+	24
11+24.64	11+48.29	-1.89	3.06	+	24
11+78.23	11+87.53	0.00	27.40	+	29
11+78.23	11+87.55 12+22.95	27.40	45.00	+	40
12+22.95	12+22.95	45.00	33.43		33
12+53.35	12+35.55	33.43	13.72	+	38
12+35.35	12+30.20 13+24.05	13.72	7.80	+ +	38
13+24.05	13+62.18	7.80	7.80		38
13+62.18	13+91.07	0.00	0.85	1 1	29
13+91.07	14+28.42	0.85	9.36		38
14+28.42	14+59.83	9.36	31.28		38

SUBTOTAL (THIS PAGE) = 8313.8

10-703

### SR 37 MOBILITY STUDY Town and Country Boulevard

*By: BWS* 4/19/12

Checked By:

808-10034

### LINE, MULTI-COMPONENT, SOLID, YELLOW, 4 IN

LFT

Begin Station	End Station	Begin Offset	End Offset	Length (ft)
Line ''S-2-A''	<b>EB</b> (con't)	21.20	45.00	25
14+59.83	14+92.20	31.28	45.00	35
14+92.20	15+26.72	45.00	28.84	38
15+26.72	15+37.18	28.84	0.00	31
15+45.91	16+26.64	26.70	7.41	83
16+26.64	16+64.60	7.41	2.42	38
16+64.60	16+88.88	2.42	1.84	24
16+88.88	17+12.74	1.84	6.42	24
Line ''S-2-A''	WB			
10+17.22	10+36.66	-4.00	-4.00	19
10+36.66	10+94.51	-4.00	-8.21	58
10+94.51	11+51.15	-8.21	-20.74	58
				0
11+78.23	11+88.33	0.00	-28.41	30
11+88.33	12+23.51	-28.41	-45.00	39
12+23.51	12+55.78	-45.00	-31.07	35
12+55.78	12+87.05	-31.07	-8.94	38
12+87.05	13+24.35	-8.94	-0.19	38
13+24.35	13+54.13	-0.19	0.00	30
13+54.13	13+91.32	-7.25	-7.15	37
13+91.32	14+29.13	-7.15	-13.31	38
14+29.13	14+61.85	-13.31	-33.24	38
14+61.85	14+92.17	-33.24	-45.00	33
14+92.17	15+26.93	-45.00	-28.59	38
15+26.93	15+37.18	-28.59	0.00	30
15+51.35	15+77.44	-10.00	-0.16	28
15+77.44			2.08	28
16+05.16	16+05.16 16+46.37	-0.16 2.08	-0.38	41
16+05.10 16+46.37		-0.38	-0.38 -5.34	41 41
16+86.97	16+86.97 17+26.64	-0.38 -5.34	-5.34 -15.28	41 41
10+00.9/	17+20.04	-3.34	-13.20	41
				+ +
				+ +
				+ +
				+ +
				+ +
				+ +
			<u> </u>	+ + + + + + + + + + + + + + + + + + + +

				10-703	
				SR 37 MOBILITY ST Town and Country Bou	
By:	DJZ	5/8/12		Checked By: <u>BWS</u>	11/24/12
808-10037	LINE, MUI	LTI-COMPONEN	NT, SOLID, W	VHITE, 8 IN	3,816 LFT
Begin Station	End Station	Begin Offset	End Offset		Length (ft)
Line "A"	NB Outside	Exit Gore			
245+69.21	250+38.72	31.25	31.25		470
243+69.21 250+38.72	250+38.72	31.25	52.75	+ +	22
245+69.21	245+69.21	31.25	35.25	+ +	4
245+69.21	250+38.72	35.25	52.75	1 1	470
2.0.07.21	200.00.72	Entrance Gore	22.70	1 1	
263+73.31	263+73.17	31.25	52.75	1 1	22
263+73.17	266+42.33	52.75	33.25		270
266+42.33	266+42.33	33.25	31.25		2
263+73.31	266+42.33	31.25	31.25		269
Line "A"	SB Outside	Entance Gore			
247+77.32	250+46.46	-31.25	-31.25		269
250+46.46	250+46.46	-31.25	-52.75		22
247+77.32	247+77.32 250+46.46	-31.25 -33.25	-33.25		2 270
247+77.32	230+40.40	-55.25 Exit Gore	-52.75		270
263+81.00	268+18.50	-31.25	-31.25		438
268+18.50	268+18.50	-31.25	-35.25		4
263+81.00	263+81.00	-31.25	-52.75		22
263+81.00	268+18.50	-52.75	-35.25		438
264+31.24	268+42.63	-62.75	-46.29		412
264+31.24	264+31.24	-62.75	-64.75	_	2
264+31.24	268+42.63	-64.75	-64.75		411
					- 3815 7

TOTAL = 3815.7

				10	-703	
SR 37 MOBILITY STUDY Town and Country Boulevard						
By:	DJZ	5/8/12	_	Checked By:	BWS	11/24/12
808-75071	PAVEMEN PLAS	T MESSAGE M TIC, LANE INI	IARKING, PRE DICATION ARF	FORMED ROW		8 EACH
Alignment						Each
SE Ramp						
Line ''S-2-A''	WB					2
NW Ramp						2
						2
Line "S-2-A"	EB					2
		1				
		+				
		+				
				CUDTOTAL /T		8.0
				SUBTOTAL (T	IIIS FAGE) =	0.0

TOTAL =	8.0
- •	

				10-703	
				SR 37 MOBILITY S Town and Country Bo	
By:	DJZ	5/8/12		Checked By: BWS	11/24/12
808-75510	538 LFT				
Begin Station	End Station	Begin Offset	End Offset		Length (ft)
T :	ND Ordeile	En:t Care			
<i>Line</i> "A"	NB Outside	Exit Gore	25.20		
245+69.21	245+73.38	31.25	35.38		6
246+09.21 246+49.21	246+14.64	31.25 31.25	36.68 38.03		8 10
246+89.21	246+55.93 246+97.25	31.25	39.43		10
240+39.21	240+97.25	31.25	40.87		13
247+69.21	247+79.95	31.25	42.37		15
248+09.21	248+21.35	31.25	43.90		18
248+49.21	248+62.74	31.25	45.49		20
248+89.21	249+04.16	31.25	47.12		22
249+29.21	249+45.60	31.25	48.80		24
249+69.21	249+87.06	31.25	50.53		26
250+09.21	250+28.53	31.25	52.31		29
Line "A"	SB Outside	Exit Gore			
264+00.27	264+21.00	-51.98	-31.25		29
264+41.94	264+61.00	-50.31	-31.25		27
264+83.60	265+01.00	-48.65	-31.25		25
265+25.27	265+41.00	-46.98	-31.25		22
265+66.94	265+81.00	-45.31	-31.25		20
266+08.34	266+21.00	-43.66	-31.25		18
266+50.27	266+61.00	-41.98	-31.25		15
266+91.94	267+01.00	-40.31	-31.25		13
267+33.60	267+41.00	-38.65	-31.25		10
264+67.50	264+71.09	-64.75	-61.16		5
265+07.50	265+12.76	-64.75	-59.49		7
265+47.50	265+54.43	-64.75	-57.82		10
265+87.50	265+95.83	-64.75	-56.17		12
266+27.50	266+37.76	-64.75	-54.49		15
266+67.50	266+79.43	-64.75	-52.82		17
267+07.50 267+47.50	267+21.09 267+62.76	-64.75 -64.75	-51.16 -49.49	┥───┤───	<u> </u>
267+87.50	267+02.70	-64.75	-49.49	+	22
267+87.50	268+46.09	-04.75	-47.82 -46.16	┥───┤───	24
200727.30	200740.09	-04.73	-40.10		20
		1			
		<u> </u>			
		1		+ +	
		1		1 1	
		1			
		1	ł	+	

SUBTOTAL (THIS PAGE) = 537.2

TOTAL =

537.2

	10-703							
			rd					
By:	DJZ	5/8/12		Checked By:	BWS	11/24/12		
808-75998	SNOWPLO	WABLE RAISE	D PAVEMENT	MARKER		352 EACH		
Begin Station	End Station	Begin Offset	End Offset	Length	Spacing	Each		
Line "A"	NB	-	ne-way white markers at broken white lane lines)					
238+33.72	240+22.16	38.62	38.62	188.44	80	3		
240+22.16	245+54.79	38.62	19.25	532.98	80	7		
245+54.79	255+60.63	19.25	19.25	1005.84	80	13		
Pavement Exceptio								
258+57.95	268+42.63	19.25	19.25	984.68	80	13		
240+39.58	245+55.01	50.00	31.25	515.77	80	7		
245+55.01	245+69.21	31.25	31.25	14.20	80	1		
T · // / //	SB							
<i>Line</i> "A"		20.25	20.25	100.45	0.0	2		
238+33.71	240+22.16	-38.35	-38.35	188.45	80	3		
240+22.16	245+47.39	-38.35	-19.25	525.58	80	7		
245+47.39	255+62.08	-19.25	-19.25	1014.69	80	13		
Pavement Exceptio		10.25	10.25	002.22		12		
258+59.40	268+42.63	-19.25	-19.25	983.23	80	13		
238+33.71	240+22.38	-50.35	-50.35	188.67	80	3		
240+22.38	245+47.61	-50.35	-31.25	525.58	80	7		
245+47.61	247+77.32	-31.25	-31.25	229.71	80	3		
241+46.03	245+47.83	-57.86	-43.25	402.07	80	6		
245+47.83	247+49.27	-43.25	-43.25	201.44	80	3		
247+49.27	250+46.02	-43.25	-64.75	297.53	80	4		
SE Ramp								

12.00

15.08

16.00

12.00

15.08

11+60.00

14+45.86

15+34.01

*NW Ramp* 10+00.00

14+43.86

15+32.01

SW Ramp 10+00.00

11+01.00

12+14.13

14+45.86

15+34.01

16+11.01

14+43.86

15+32.01

16+05.00

11+01.00

12+14.13

16+07.65

12.00

12.00

15.08

12.00

12.00

2 15.08 15.80 72.99 40 15.30 14.50 101.00 40 3 14.50 12.00 113.16 40 3 12.00 12.00 393.52 40 10

285.86

88.20

77.01

443.86

88.20

40

40

40

40

40

SUBTOTAL (THIS PAGE) =

152.0

8

3

2

12

3

10-703

### SR 37 MOBILITY STUDY Town and Country Boulevard

*By: BWS* 4/20/12

Checked By:

808-75998

### SNOWPLOWABLE RAISED PAVEMENT MARKER

EACH

Begin Station	End Station	Begin Offset	End Offset	Length	Spacing	Each
Line ''S-2-A''	EB		ankong at galidkit-	lano linos there		
		, <b>,</b>	arkers at solid white		ounaadout)	
10+17.22	10+36.66	16.00	16.00	19.44		
10+36.66	10+94.33	16.00	12.00	57.81		
10+94.33	11+23.41	12.00	12.26	29.08		
11+23.41	11+51.19	12.26	20.85	29.08		
11+69.50	11+63.88	-26.70	-8.79	18.77		
11+63.88	11+63.23	-8.79	0.00	8.81		
11+63.23	11+69.66	0.00	27.03	27.78		
11+69.66	11+80.04	27.03	41.65	17.93		
12+20.91	12+43.33	60.00	56.53	22.69		
12+43.33	12+62.89	56.53	45.00	22.71		
12+62.89	12+95.43	45.00	25.60	37.88		
12+95.43	13+32.75	25.60	20.14	37.72		
13+32.75	13+81.54	20.14	12.56	49.38		
13+81.54	14+18.38	12.56	20.80	37.75		
14+18.38	14+49.52	20.80	42.20	37.78		
14+49.52	14+66.16	42.20	54.00	20.40		
14+66.16	14+85.82	54.00	59.70	20.47		
14+85.82	15+02.20	59.70	59.20	16.39		
15+02.20	15+17.80	59.20	54.30	16.35		
15+17.80	15+71.44	54.30	33.50	57.53		
15+71.44	16+24.13	33.50	21.20	54.11		
16+24.13	16+48.56	21.20	17.23	24.75		
16+48.56	16+77.11	17.23	16.00	28.58		
16+77.11	17+07.52	16.00	22.38	31.07		
10177.11	WB	10.00	Total Length =	724.26	40	19
10+17.22	10+26.90	-16.00	-16.00	9.68		- /
10+26.90	11+12.81	-16.00	-25.33	86.42		
11+12.81	11+97.62	-25.33	-54.26	89.61		
11+97.62	12+29.98	-54.26	-59.62	32.80		
12+29.98	12+29.90	-59.62	-53.90	20.44		
12+49.60	12+66.16	-53.90	-41.91	20.44		
12+49.00	12+00.10	-41.91	-20.36	37.76	<u> </u>	
12+00.10 12+97.17	13+33.95	-41.91	-11.84	37.75	<u> </u>	
13+33.95	13+53.23		-11.04	19.29	+ +	
		-11.84			<u>├</u>	
13+53.23	13+82.53	-11.11	-19.43	30.46	<u> </u>	
13+82.53	14+19.82	-19.43	-25.40	37.76	<u> </u>	
14+19.82	14+52.23	-25.40	-44.77	37.76	<b>↓</b>	
14+52.23	14+71.71	-44.77	-56.40	22.69	<b>↓</b>	
14+71.71	14+94.12	-56.40	-59.97	22.69		
			Total Length =	505.56	40	13
					1	

### SR 37 MOBILITY STUDY Town and Country Boulevard

By: \_\_\_\_\_BWS 4/20/12

Checked By:

808-75998

### SNOWPLOWABLE RAISED PAVEMENT MARKER

EACH

Begin Station	End Station	Begin Offset	End Offset	Length	Spacing	Each
Line ''S-2-A''	WB (con't)	(One-way white ma	urkers at solid white	lane lines thru 1	oundabout)	
15+45.62	15+76.54	-32.39	-15.94	35.02		
15+76.54	16+11.24	-15.94	-11.15	35.03	1 1	
16+11.24	16+28.04	-11.15	-11.80	16.81		
16+28.04	16+75.45	-11.80	-17.10	47.71	1 1	
16+75.45	17+21.61	-17.10	-29.19	47.72		
10+75.15	17 121.01	17.10	Total Length =	182.29	40	5
		(One-way white ma	arkers at solid white			U U
Line "A"	NB Outside	Exit Gore	incers at some made	une unes ui goi		
245+69.21	250+38.72	31.25	31.25	469.51		
250+38.72	250+38.72	31.25	52.75	21.50		
245+69.21	245+69.21	31.25	35.25	4.00		
245+69.21	250+38.72	35.25	52.75	469.84	1 1	
210107.21	200100.72	Entrance Gore	Total Length =	964.85	40	25
263+73.31	263+73.17	31.25	52.75	21.50	10	20
263+73.17	266+42.33	52.75	33.25	269.87		
266+42.33	266+42.33	33.25	31.25	2.00		
263+73.31	266+42.33	31.25	31.25	269.02		
203 175.51	200112.55	51.25	Total Length =	562.39	40	15
Line "A"	SB Outside	Entance Gore	10tul Lengin –	502.57	10	15
247+77.32	250+46.46	-31.25	-31.25	269.14		
250+46.46	250+46.46	-31.25	-52.75	209.14		
247+77.32	247+77.32	-31.25	-33.25	2.00		
247+77.32	250+46.46	-33.25	-52.75	269.85		
247177.32	250 + 40.40	Exit Gore	Total Length =	562.49	40	15
263+81.00	268+18.50	-31.25	-31.25	437.50	40	15
268+18.50	268+18.50	-31.25	-35.25	4.00		
263+81.00	263+81.00	-31.25	-52.75	21.50		
263+81.00	268+18.50	-52.75	-35.25	437.85		
203+01.00	200+10.50	-52.75	Total Length =	900.85	40	23
264+31.24	268+42.63	-62.75	-46.29	411.72	40	25
264+31.24	264+31.24	-62.75	-64.75	2.00		
264+31.24	268+42.63	-64.75	-64.75	411.39		
204+31.24	200+42.03	-04.75	Total Length =	825.11	40	21
			10iui Lengin –	023.11	40	21
					┨───┤──	
					+	
					+ +	
					+ +	
					+ +	
					+ +	
		-	L			

SUBTOTAL (THIS PAGE) = 104.0

### SR 37 MOBILITY STUDY Town and Country Boulevard

*By: BWS* 4/20/12

Checked By:

808-75998

### SNOWPLOWABLE RAISED PAVEMENT MARKER

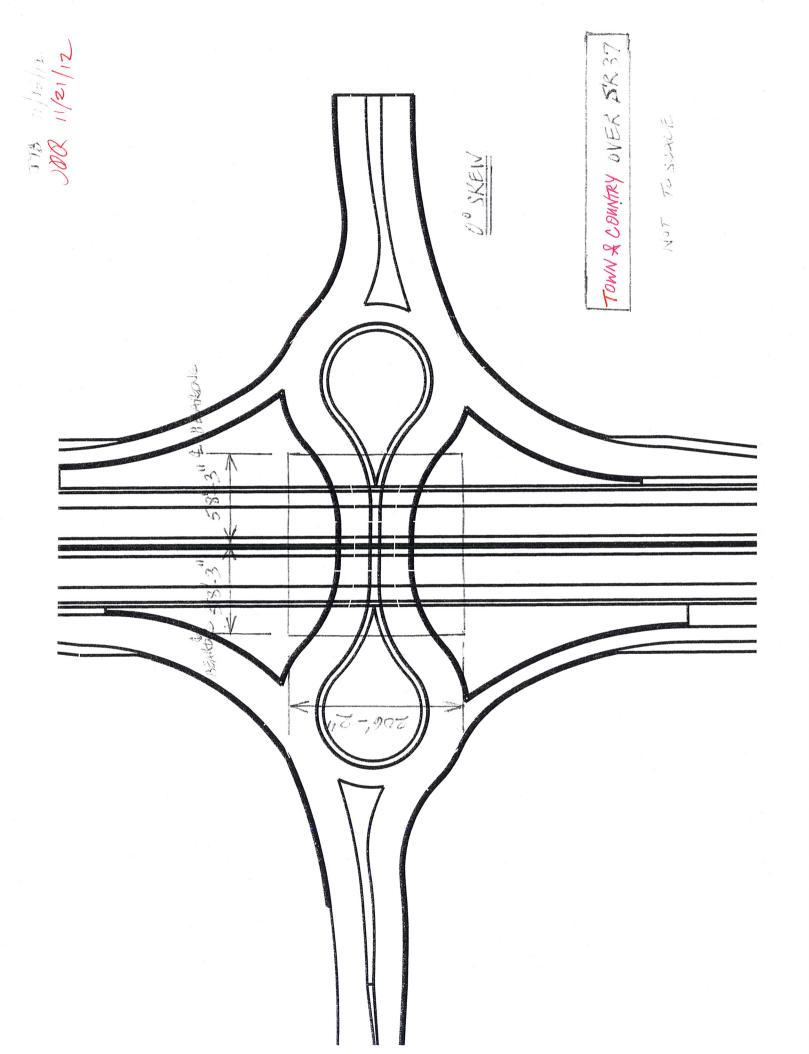
EACH

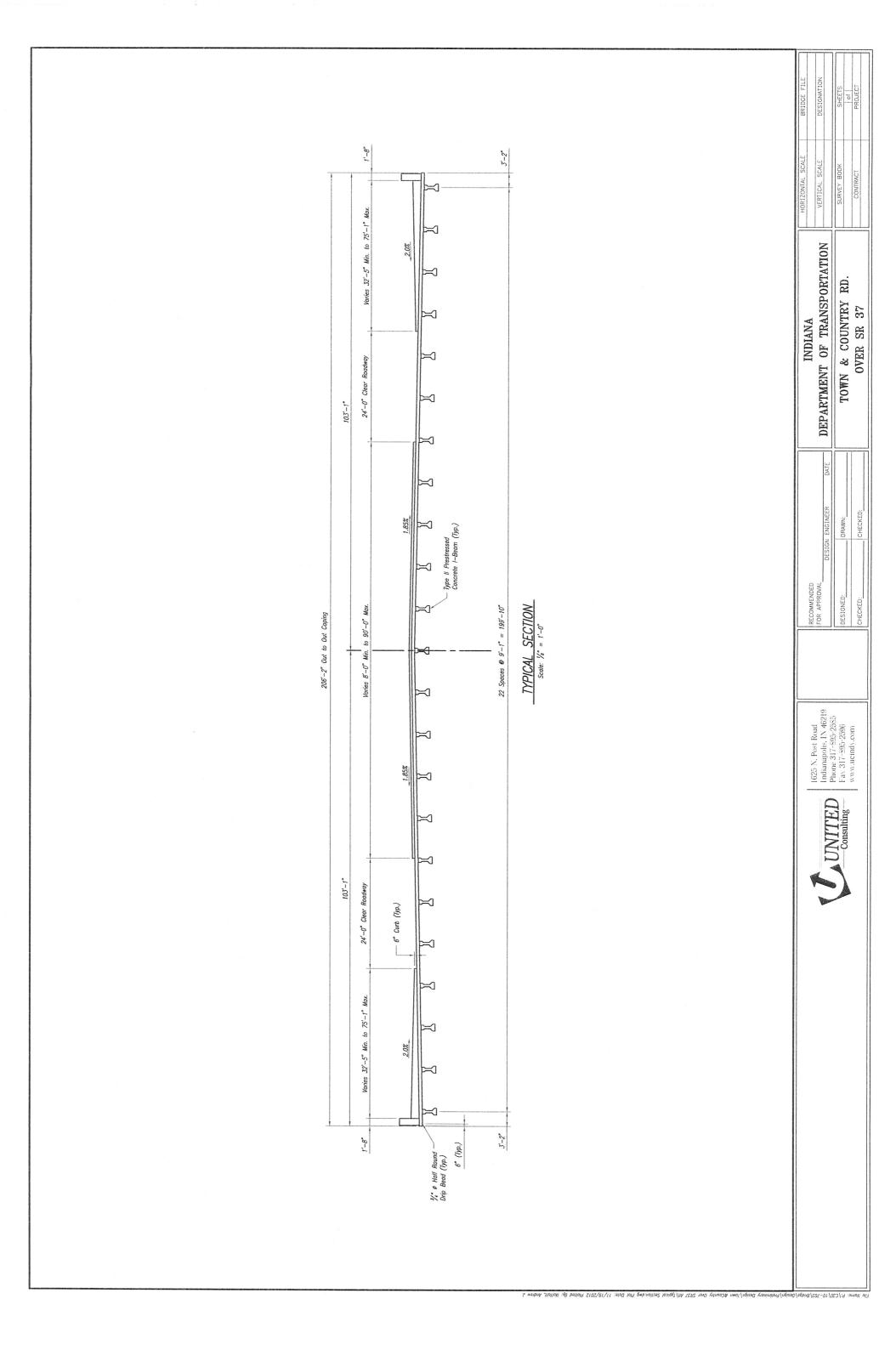
Begin Station	End Station	Begin Offset	End Offset	Length	Spacing	Each
SE Ramp		(2-way vellow/red n	narkes at solid yello	w inside lane lin	es at ramps)	
10+00.00	16+10.98	0.00	0.00	610.98	40	16
10+00.00	10+10.90	0.00	0.00	010.90	40	10
NE Ramp						
10+00.00	16+09.51	0.00	0.00	609.51	40	16
NW Ramp						
10+00.00	16+09.01	0.00	0.00	609.01	40	16
SW Ramp						
10+00.00	16+07.65	0.00	0.00	607.65	40	16
					1 1	
					┨───┤	
					<u>↓</u>	
					<u> </u>	

SUBTOTAL (THIS PAGE) = 64.0

# **BRIDGE QUANTITIES**

## BRIDGE GEOMETRY TOWN & COUNTRY RD. OVER SR 37





## Town&Country Rd. Over SR37



Rev by

### Summary of Bridge Quantities

### **Structure Number**

INDOT Item Description	unit	Quantity	
105-06845 CONSTRUCTION ENGINEERING	LS	3%	
110-01001 MOBILIZATION AND DEMOBILIZATION	LS	5%	
203-02020 EXCAVATION, FOUNDATION, UNCLASSIFIED	CYS	557	
211-02050 B BORROW	CYS	557	
302-07455 DENSE GRADED SUBBASE	CYS	156	
609-06259 REINFORCED CONCRETE BRIDGE APPROACH, 12 IN.	SYS	939	
701-06011 DYNAMIC PILE LOAD TEST	EACH	3	
701-09559 TEST PILE, DYNAMIC, RESTRIKE	EACH	3	
701-09690 TEST PILE, DYNAMIC, 14 IN NON-PRODUCTION	LFT	210	
701-08122 PILE, STEEL PIPE, 0.375", 14	LFT	5,580	
702-51005 CONCRETE,A,SUBSTRUCTURE	CYS	300	
702-51015 CONCRETE, B, FOOTINGS	CYS	206	
703-06028 REINFORCING BARS	LBS	61,660	
703-06029 REINFORCING BARS, EPOXY COATED	LBS	443,858	
704-51002 CONCRETE, C, SUPERSTRUCTURE	CYS	1,696	
706-09959 RAILING, CONCRETE, FT	LFT	236	
707-05983 STRUCTURAL MEMBERS, CONCRETE I-BEAM, II, 36 IN. X 12 IN.	LFT	2,680	
709-51821 SURFACE SEAL	SFT	29,198	estimated

## Town&Country Rd. over SR 37

Propose	ed Structure # is		-		
	Town & Country Rd.	over	SR 37		
Design Standards =	Road Over 4R		Under 4R		
Functional Classification =	Urban Collector		Urban Arterial		
ADT =	XXXX	(yr. 2030)	XXXX		
Design Speed =	35	mph	55		
Vertical Clearance Req'd =	16.5	feet			
Skew =	0	degrees			
Calculated C-C End Brg. Length =	116.5	feet			
USE	116.5	feet			
Span Configuration Anticipated =	1 1	@ @	58.25 58.25	feet feet	

### Town&Country Rd. over SR 37

Des by JTB 11/12/2012 Chk by JTP 11/12/2012 Rev by

Proposed Structure # is		0	
Town & Country Rd.	over	SR 37	

Number of Spans = \_\_\_\_\_ spans

O-O Coping Width = 206.17 feet

C-C End Brg Length = 116.5 feet

Skew = 0.0000 degrees

O-O Bridge Length = <u>118.0</u> feet

Clear Roadway Width = 202.83 feet

Slab Thickness = 8 inches

Number of Piers units = 1

Number of Substructure units = 3

Twin Structure = NO

Type of Slope Wall = MSE Wall

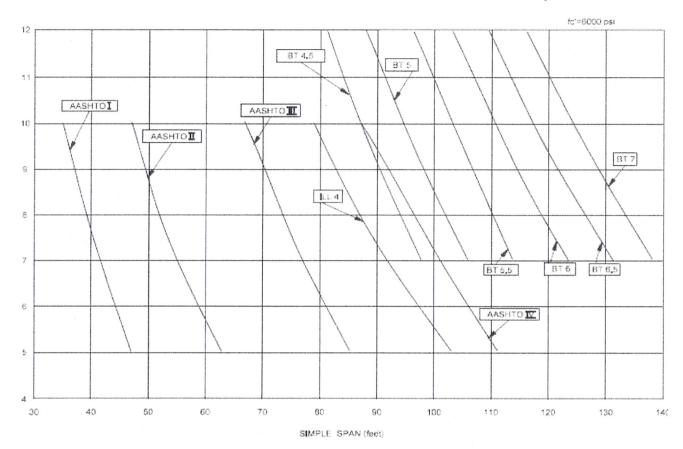


Des by JTB 11/12/2012

Chk by 11/14/12

Rev by

#### Structure Number 0 Town & Country Rd. over SR 37



#### PRESTRESSED CONCRETE HBEAM SELECTION CHART

Figure 59-3K

Beam Type = STRUCTURAL MEMBERS, CONCRETE I-BEAM, II, 36 IN. X 12 IN.

Overhang to be = 3.1705 ft Spacing to be = 9.083 ft out to out width = 206.17 ft Beam Length = 116.50 ft Beams Needed = 23 ft Twin Structure = NO Length Needed = **2,680** ft

**Beam Quantities** 

Rev b

### Town&Country Rd. over SR 37

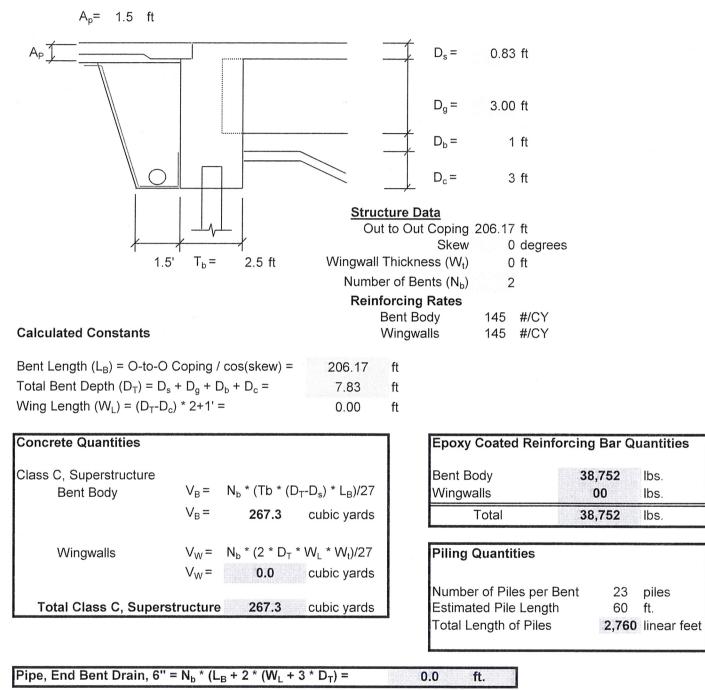
Des by \_\_\_\_\_\_JTB 11/12/2012

Chk by ) 02 11/14/5

Rev by

**Bent Quantities** 





0.0

sys

Geotextiles = N<sub>b</sub> \* ((D<sub>T</sub> - A<sub>P</sub>) \* 1.031 + 4.5') \* L<sub>B</sub>/9 =

Aggregate for End Bent Backfill

$$V_{bf} = ((D_T - A_P)/4 + 1.5) + 1.5)/2 * (D_T - A_P) * L_B * N_b$$

V<sub>bf</sub> = **0** cubic yards

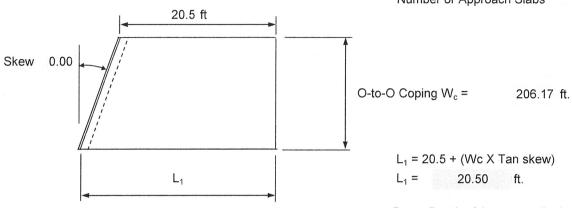
Des by \_\_\_\_\_JTB 11/12/2012

Chk by \_\_\_\_\_\_ 4 17

Rev by

Structure Number 0 Town & Country Rd. over SR 37

Number or Approach Slabs 2



 $D_{sub}$  = Depth of Aggregate (inches) = 6

Reinforced Concrete Bridge App	roach (A) = (L1	+20.5)	/2 * Wc /9	
	A = .	470	sys per approach	
Dense Graded Subbase (T <sub>base</sub> ) =	= A * D <sub>sub</sub>			

78.0

cys per approach

**Approach Slab Quantities** 

T<sub>base</sub> =
Epoxy Coated Reinforcing Bars
Reinforcement Rates 35 #/sy

Total Weight **16,436** Lbs. per approach

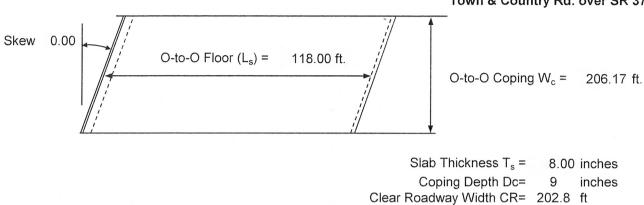
Grand	Totals	
A =	939	sys
T <sub>base</sub> =	156	cys
Reinforcing	32,872	Lbs.

Des by JTB 11/12/2012

Chk by 11/4/12

Rev by

#### Structure Number 0 Town & Country Rd. over SR 37



#### **Concrete Quantities**

Class C, Superstructure

Deck Slab  $V_D$  = (L<sub>s</sub> \* W<sub>c</sub> \* T<sub>s</sub>)/27

V<sub>D</sub> = 600.7 cubic yards

Sidewalk Vs = (Ls \* (Wc - 60') \* 1')/27 Vs = 638.8 cubic yards

**Deck Quantities** 

Concrete in fillets over beams and in thickened copings Increase deck concrete by 15%

 $V_T$  = 1428.7 cys cubic yards

Twin Structure = NO

# of Bridge Rail Trans = 4

Pier Diaphragm - Class, C, Superstr. (add to Concrete, C, Superstructure)

Vol = 3.83'\*3.5'\*199.66'\*1/27 = 99.1 cys

Bridge RailingArea of Rail  $A_r = 3.64$  Sq. Ft.Perimeter P = 8.65 Ft.LFT = 236 $V_R = (L_s * A_r) / 27$  $V_R = 31.9$  cubic Yards

Surface Seal		
Deck = $L_s * W_c =$	24328	square feet
Coping = $L_s * D_c * 2 =$	787	square feet
Rail = L <sub>s</sub> * P * 2 =	4083	square feet
Total	29,198	square feet

Epoxy Coate			-	
Reinforcemen	t Rates		250	#/cy
Deck	250	#/cy		
Rail	330	#/cy		
		-		
Deck	357	175	Lbs.	
Rail	10	527	Lbs.	
Trans.	4532		Lbs.	
Total Weight	372	372,234		

Grates, Basins, and Fittin	gs, Cast Iron
N <sub>G</sub> = 0	each
Weight per Drain =	1000 Lbs.
Total Weight	0 Lbs.

Roadway Drain (SQ or OS)

 $N_G = 0$  each

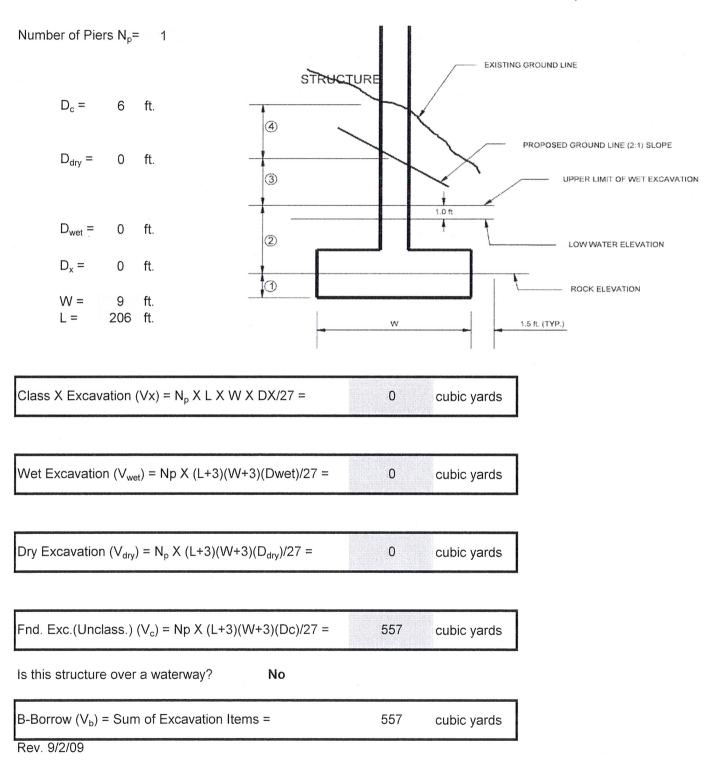
**Excavation Quantities** 

Des by JTB 11/12/2012

Chk by

Rev by

### Structure Number 0 Town & Country Rd. over SR 37



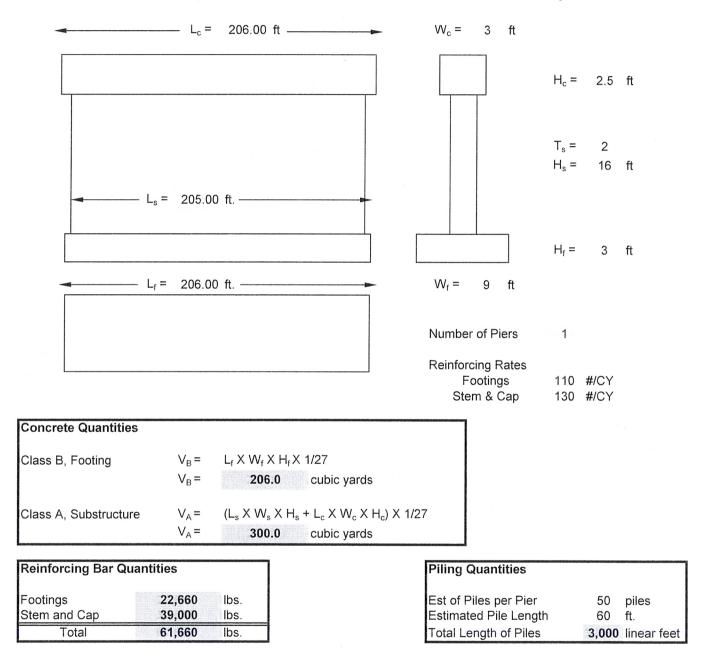
**Pier Quantities** 

Des by \_\_\_\_\_\_JTB 11/12/2012

10/12 Chk by

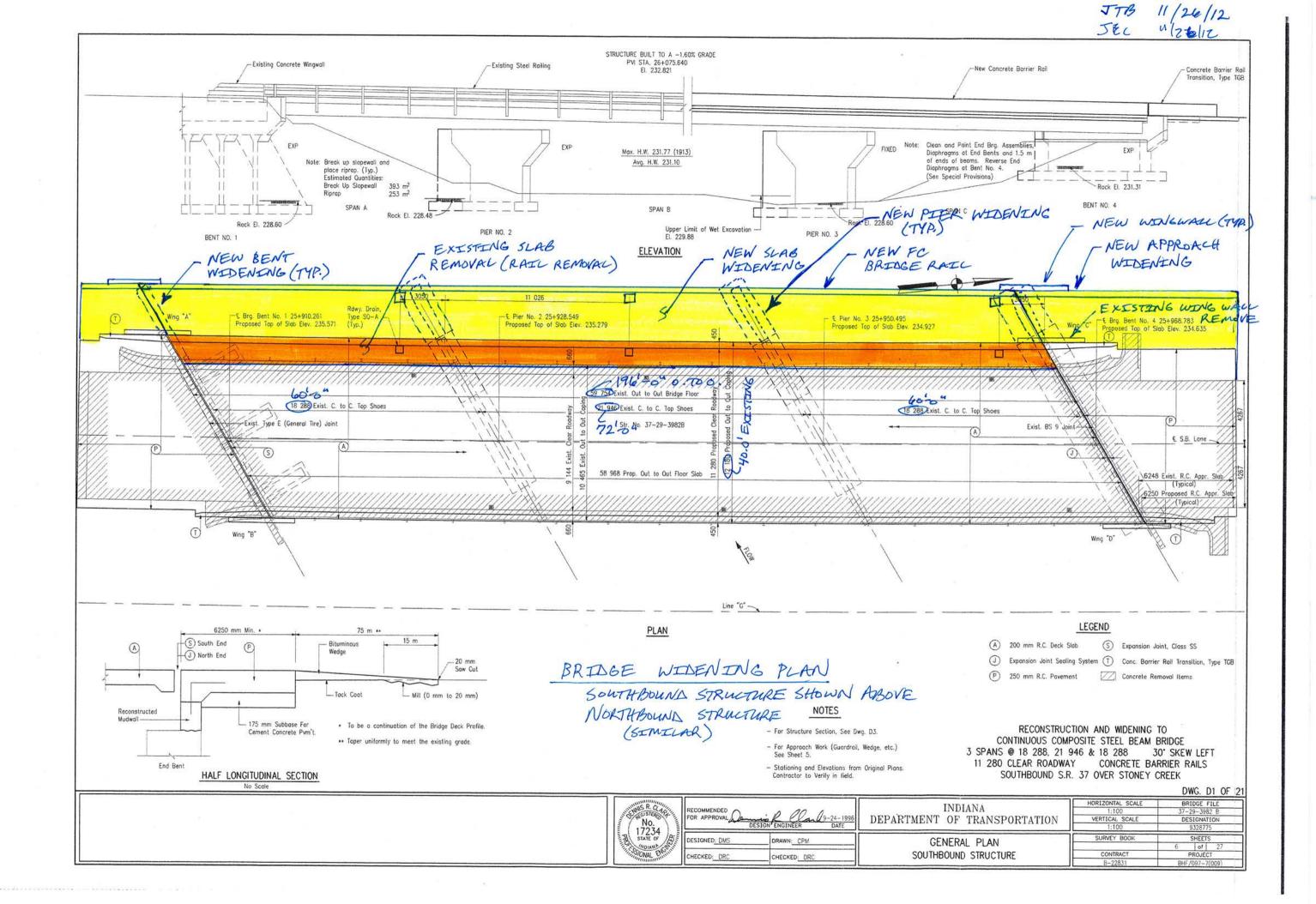
Rev by

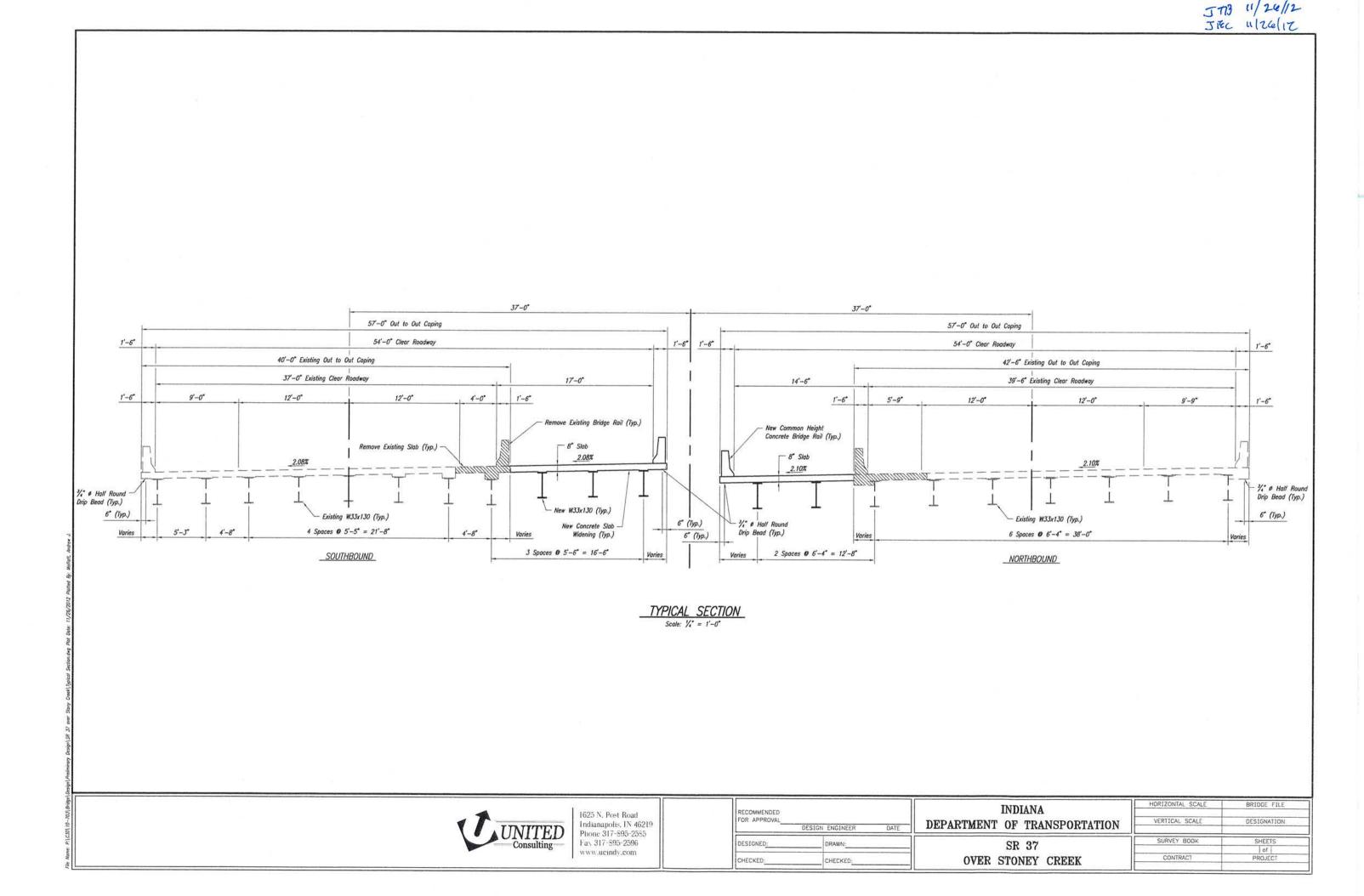
Structure Number 0 Town & Country Rd. over SR 37



Rev. 9/2/09

# BRIDGE GEOMETRY SR 37 OVER STONEY CREEK







BY JTB DATE 11/26/12 SUBJECT SR37 MOBILITY CHKD BY SEC DATE 126/12

1625 N. Post Road

Indianapolis, IN

46219-1995

SHEET NO. \_ OF \_ 10-703 JOB NO.

202-51328	PRESENT S	TRUCTURE, I	REMOVE	PORTIONS	LS
SLAB (	194.0') ( 6.5' + 9	6.58')(# 8.00,	ISFT) =	\$ 23, 640	e
RAILING (	194.0')(4) (#12	1.00/LFT)	E	\$ 9,408	
WINGWALLS	(4.0' × 14.76')(	\$ 8.00 /SFT)	x 4 =	\$ 3,779	
DRAINS	LEAX # 30	DO/EA	×	\$1,800	
		TOTAL	ann. Aan	#38,633	
		USE	Ħ	40,000	
			e e	1	_
				1 LS	



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OF

118-7 045

CYS

46219-1995 BY JTB DATE 11/26/12 SUBJECT SR 37 MOBILITY SHEET NO. CHKD BY Sec DATE "126/12 JOB NO. \_\_\_\_ 10-703 206-51220 EXCAVATEDN, WET [4.2"+1-6.0' ,1.6' AT 2 PLACES PIERS #2  $\frac{4}{3} = (4.2' \times 9.0' \times 22.63')/27 \times 2 = 63.4 \text{ CYS}$ AT 2 PLACES = (4.2' × 9.0' × 19.75')/27 × 2 = 55.3 CYS PIERS # 2 & # 3 NORTHBOUND TOTAL VOLUME 118.7 CYS



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BY JTB DATE 11/26/12 SUBJECT SR37 MOBILITY

\_\_\_\_ OF SHEET NO. 10-703 JOB NO.

302 - 07455 DENSE GRADED SUBBASE CYS TOTAL AREA = 306.0 SYS (FROM APPROACH QNTY) OF APPROACHES DEPTH OF = 6" ~ 0.167 yards TOTAL = 306.0545 x 0.167yd = 51.10 C45 51.10 CYS



SHEET NO.

JOB NO.

OF

10-703

BY JTB DATE 11/26/12 SUBJECT SR37 MOBILITY CHKD BY JEC DATE 11/26/12

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$\frac{\text{WIDTH OF EXTENSION}}{\text{LENGTH OF DUTSIDE}} = \frac{17.0'}{20.5} = \frac{43.6'}{20.5} \otimes \text{South}$ $\frac{\text{EXIST.}}{\text{EXIST.}} = \frac{30°}{30°}$ $\frac{\text{LENGTH OF DAP. SIDE}}{\text{LENGTH OF DAP. SIDE}} = \frac{43.6' + (17.0' \times +an 30°) = -53.4' \otimes \text{Non}}{20.5' \otimes \text{South}}$ $\frac{\text{APPROACH AREA}}{\text{AT SOUTHBOUND}} = [(.43.6' + 53.4')/2 \times 17.0']/9 + [20.5' \times 17.0']/9 = 130.4545$ $\frac{\text{WIDTH OF EXTENSION}}{\text{WIDTH OF EXTENSION}} = 14.5'$
$\frac{SKEW}{LENGTH OF DAP. SIDE} = \frac{30^{\circ}}{43.6' + (17.0' \times +an 30^{\circ})} = \frac{53.4' \otimes Not}{20.5' \otimes 500}$ $\frac{APPROACH}{AREA} = \left[ (.43.6' + 53.4') / 2 \times 17.0' \right] / 9 + \left[ 20.5' \times 17.0' \right] / 9 + \left[ 20.5' \times 17.0' \right] / 9 = 130.4545$
$\frac{APPROACH AREA}{AT SOUTHBOUND} = (.43.4' + 53.4')/2 \times 17.0']/9 + [20.5' \times 17.0']/9 = 130.4545$
$\frac{APPROACH AREA}{AT SOUTHBOUND} = \frac{[(.43, 6' + 53, 4')/2 \times 17.0']/9}{[20.5' \times 17.0']/9} = \frac{130.4545}{130.4545}$
AT SOUTHBOUND $[20.5' \times 17.0']/9 = 130.4545$
WIDTH OF EXTENSION = $14.5'$
$\frac{\text{LENGTH } \partial F \text{ outside}}{\text{Exist.}} = \frac{20.5' \text{@ south}}{\text{@ South}}, \frac{45.0' \text{@ NORTH}}{45.0' \text{@ NORTH}}$
LENGTH OF OPP. SIDE = 45.0' + (14.5' x tan 30°) = -53.4@NOR
$\frac{APPROACH}{AREA} = \left[ (53.4' + 45.0') / 2 \times 14.5' \right] / 9 + \frac{120.5' e south}{1} = \left[ (53.4' + 45.0') / 2 \times 14.5' \right] / 9 + \frac{1}{1} = \left[ (53.4' + 45.0') / 2 \times 14.5' \right] / 9 + \frac{1}{1} = \left[ (53.4' + 45.0') / 2 \times 14.5' \right] / 9 + \frac{1}{1} = \left[ (53.4' + 45.0') / 2 \times 14.5' \right] / 9 + \frac{1}{1} = \left[ (53.4' + 45.0') / 2 \times 14.5' \right] / 9 + \frac{1}{1} = \left[ (53.4' + 45.0') / 2 \times 14.5' \right] / 9 + \frac{1}{1} = \left[ (53.4' + 45.0') / 2 \times 14.5' \right] / 9 + \frac{1}{1} = \left[ (53.4' + 45.0') / 2 \times 14.5' \right] / 9 + \frac{1}{1} = \left[ (53.4' + 45.0') / 2 \times 14.5' \right] / 9 + \frac{1}{1} = \left[ (53.4' + 45.0') / 2 \times 14.5' \right] / 9 + \frac{1}{1} = \left[ (53.4' + 45.0') / 2 \times 14.5' \right] / 9 + \frac{1}{1} = \left[ (53.4' + 45.0') / 2 \times 14.5' \right] / 9 + \frac{1}{1} = \left[ (53.4' + 45.0') / 2 \times 14.5' \right] / 9 + \frac{1}{1} = \left[ (53.4' + 45.0') / 2 \times 14.5' \right] / 9 + \frac{1}{1} = \left[ (53.4' + 45.0') / 2 \times 14.5' \right] / 9 + \frac{1}{1} = \left[ (53.4' + 45.0') / 2 \times 14.5' \right] / 9 + \frac{1}{1} = \left[ (53.4' + 45.0') / 2 \times 14.5' \right] / 9 + \frac{1}{1} = \left[ (53.4' + 45.0') / 2 \times 14.5' \right] / 9 + \frac{1}{1} = \left[ (53.4' + 45.0') / 2 \times 14.5' \right] / 9 + \frac{1}{1} = \left[ (53.4' + 45.0') / 2 \times 14.5' \right] / 9 + \frac{1}{1} = \left[ (53.4' + 45.0') / 2 \times 14.5' \right] / 9 + \frac{1}{1} = \left[ (53.4' + 45.0') / 2 \times 14.5' \right] / 9 + \frac{1}{1} = \left[ (53.4' + 45.0') / 2 \times 14.5' \right] / 9 + \frac{1}{1} = \left[ (53.4' + 45.0') / 2 \times 14.5' \right] / 9 + \frac{1}{1} = \left[ (53.4' + 45.0') / 2 \times 14.5' \right] / 9 + \frac{1}{1} = \left[ (53.4' + 45.0') / 2 \times 14.5' \right] / 9 + \frac{1}{1} = \left[ (53.4' + 45.0') / 2 \times 14.5' \right] / 9 + \frac{1}{1} = \left[ (53.4' + 45.0') / 2 \times 14.5' \right] / 9 + \frac{1}{1} = \left[ (53.4' + 45.0') / 2 \times 14.5' \right] / 9 + \frac{1}{1} = \left[ (53.4' + 45.0') / 2 \times 14.5' \right] / 9 + \frac{1}{1} = \left[ (53.4' + 45.0') / 2 \times 14.5' \right] / 9 + \frac{1}{1} = \left[ (53.4' + 45.0') / 2 \times 14.5' \right] / 9 + \frac{1}{1} = \left[ (53.4' + 45.0') / 2 \times 14.5' \right] / 9 + \frac{1}{1} = \left[ (53.4' + 45.0') / 2 \times 14.5' \right] / 9 + \frac{1}{1} = \left[ (53.4' + 45.0') / 2 \times 14.5' \right] / 9 + \frac{1}{1} = \left[ (53.4' + 45.0') / 2 \times 14.5' \right] / 9 + \frac{1}{1} = \left[ (53.4' + 45.0') / 2 \times 14.5' \right] / 9 + \frac{1}{1} = \left[ (53.4' + 45.0') / 2 \times 14.5' \right] / 9 + \frac{1}{1} = \left[ (53.4' + 45.0') / 2 \times 14.5' \right] / 9 + \frac{1}{1} = \left[ (53.4' +$
$[20.5 \times 17.0]/9 = 118.0545$ TOTAL APPROACH 12.11
$\frac{AREA}{= 30.4 + 118.0} = 306545$
306 545



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BY JTB DATE 11/26/12 SUBJECT SR 37 MOBILITY CHKD BY SEC DATE 11/26/12 SHEET NO. OF JOB NO. 10 - 703 701 - 91792 PILE TIP, STEEL H EACH TOTAL # OF = 12 PILES 2 12 TIPS 12 EA.



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BY JTB DATE 11/24/12 SUBJECT SR37 MOBILITY CHKD BY JEC DATE 11/26/12

SHEET NO. \_\_\_\_\_ OF \_\_\_\_\_ Јов NO. \_\_\_\_\_/0 - 703

701 - 95782 PILE, STEELH, HP 12×84 LFT # OF PILES AT = 3 piles X 4 bents = 12 PILES PILE LENGTH = 15 FT TOTAL LENGTH = 12 Piles × 15' = 180 LFT 180 LFT



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BY JATE 11/26/12 SUBJECT SR 37 MOBILITY CHKD BY JEC DATE 11/26/12 SHEET NO. OF 10-703 JOB NO. 702 - 51005 CONCRETE A, SUBSTRUCTURE CYS PIER WALL  $= \left[ \frac{(19.63' \times 16.25' \times 2.0')}{_{NEDTH}} \right] \times 1$ EXTENSION @ I PLACE Pier#2-5.B. = 23.6 CYS PIER WALL EXTENSION @ 1 PLACE = [(16.75' x 16.25' x 2.0')/27] × 1 Pier # 2 - N.B. = 20.2045 PIER WALL = [(19.63' × 17.25' × 2.0')/27] × 1 EXTENSION @ 1 PLACE PIER #3 @ S.B. = 25.1 CYS PIER WALL EXTENSION @ 1 PLACE = [(16.75' × 17.25' × 2.0')/27] × 1 PIER#3@ N.B. = 21.4 CYS TOTAL = 23.6+ 20.2+25.1+21.4 90.3 CYS VOLUME = 90.3 CYS



BY JTB DATE 11/24/12 SUBJECT SR 37 MOBILITY CHKD BY JEC DATE 11 26 12

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SHEET NO. OF JOB NO. 10-703

702-51015 CONCRETE B FOOTINGS C45  $\frac{\text{CONCRETE FOUTENG}}{\text{AT Z PLACES}} = (2.0' \times 6.0' \times 19.43')/27 \times 2 = 17.5 \text{ CHS}$ PIER#2&#3-5,B. CONCRETE FOOTING AT 2 PLACES = (2.0'x 6.0'x 16.75')/27x2 = 14.9 C45 PIER #2 \$#3-N.B. TOTAL = 17.5 + 14.9 = 32.4 CHS 32.4 645



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\_\_\_\_\_\_ DATE \_\_\_\_\_\_ JZG/12 SUBJECT \_\_\_\_\_\_ SR37 MOBILITY BY JTB CHKD BY SUC

SHEET NO. OF 10-703 JOB NO.

702 - 51110 GRATES, BASINS, AND FITTINGS CAST IRON	LBS
DRAINS (TYPE SQ)	
6 BRAINS @ 215 16 = 1290 LBS	
TOTAL = 1290 LBS	
PIPES	
NO. OF PRAINS = 6	
LENGTH PER PIPE = 4,083 ft	
TOTAL LENGTH OF = 24.5 ft PIPE	
WEIGHT OF PIPE = 18.1 LBS/F4	
TOTAL = 444 LBS	
TOTAL WEIGHT = 1290+444= 1734LBS	
1,734 6	-BS



ВУ\_\_\_\_\_\_ DATE\_\_\_\_\_\_\_ SR 37 СНКО ВУ\_\_\_\_\_\_ DATE\_\_\_\_\_\_\_ [126]12

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37 MOBILITY

SHEET NO. \_\_\_\_\_ OF \_\_\_\_\_ JOB NO. \_\_\_/0 - 703

56.9 045

702 - 92857 CONCRETE, C, SUBSTRUCTURE CYS BENTS BELOW BEAM SEAT = (3.2'×3.0'×19.43')/27 × 2 = 21.3 cys @ 2 PLACES + (1.25' × 4.0' × 19.63') (BENTS #2,#3 S.B.) RENTS BELOW BEAM SEAT = (3.2' × 3.0' × 16.75')/27 × 2 = 18.1045 (BENTS #2,#3 N.B.) + (1.25'× 4.0' × 16.75') WINGWALLS AT 4 CORNERS = (8.0' × 14.76' × 1.0')/27 × 4 = 17.5 CYS MATCH EXIST. TOTAL = 21.3 + 18.1 + 17.5 = 56.9 CYS



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BY\_JTB DATE 11/26/12 SUBJECT\_SR37 MOBILITY SHEET NO. OF CHKD BY JELL DATE 11/26/12 JOB NO. 10 - 703 703 - 06028 REINFORCING BARS LOS PIER WALL = 90.3 CYS × 130#/CYS = 11,739 # CONC. A PIER FOOTENG = 32.4 C45 × 110#/C45 = 3,564# TOTAL = 15,303 #LBS = 15,303 #15,303 LBS



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BY773	_ DATE DATE J2/2/12 SUBJECT	SR 37	MOBILITY	SHEET NO.	OF
CHKD BY JEL	DATE II (rle 12			JOB NO	10-703

703-06029	REINFO	ORCING BARS	EPOXY COATES	LB5
SUPERSTRUM	URE =	250.4 0.45	× 250#/C45 =	62,600#
SUBSTRUCTURE BENTS	e -	56.9 645	x 250#/CYS =	14,225#
RAILING	-	392.0 FT	X 26,3#/LFT =	10,310 #
APPROACH SL	AB =	306.0545	x 35#/sys =	10, 710 #

TOTAL WEIGHT 97,845# aner

97, 845LBS



BY JTB DATE 11/26/12 SUBJECT SR37 MOBILITY

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OF

SHEET NO.

CHKD BY Ste DATE 11/26/17 10-703 JOB NO. 704-51602 CONCRETE C CYS SUPERSTRUCTURE WIDTH OF DECK = 23.5 + 23.08' = 46.58 FT LENGTH 0 TOO = 196.0 FT THICKNESS = 0.67 FT VOLUME MATN DECK WIDEN = (46.58' × 196.0' × 0.67')/27 = 226.6 CYS BEAM FILLETS = (0.167' × 0.9583' × 7 × 172')/27 = 8.0 CYS 2" × 111/2" DN 7 BEAMS BENTS ABOVE BEAM SEAT = (3.33' × 1.75' × 19.63')/27 × 2 = 8.5495 @ 2 PLACES BENTS #1, #4 @S.B. BENTS ABOVE BEAM SEAT @ 2 PLACES = (3.33' × 1.75' × 16.75')/27 × 2 = 7.3 C4S BENTS #1, #4 C.N.B. TOTAL = 226.6 + 8.0 + 8.5 + 7.3 = 250.4 250.4 CYS VOLUME



OF

BY JTB DATE 11/26/12 SUBJECT SR 37 MOBILITY CHKD BY SEL DATE 11/26/12

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BY SEL DATE MIZLENCE, CONCRETE, FC LFT

SHEET NO.

BRIDGE LENGTH = 196-04 x 2 TOTAL RAIL = 392.0 FT

392.0 LFT



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DATE 11/26/12 SUBJECT SR37 JTB BY CHKD BY JEC

SR37 MOBILITY

SHEET NO. OF 10-703 JOB NO.

709 - 51821	SURFACE SEAL LS
AELK WIDENING WIDTH	= 23.5'+23.08' = 46.58 FT
LENGTH	= 196.0 FT
AREA ON DECK	= 46.58' × 196.0' = $9,129.7$ FT <sup>2</sup>
AREA BOTTOM OF OVERHANG 2.25' NORTH, 1.87' SONT	= 4.12' × 196.0' = 807.5 FT2 H
AREA SIDE OF DECK 8" DECK	= 0.67' × 196.0' × 2 = 2.62.6 FT2
AREA ON RAIL PERIMETER Perimeter = 6.39 FT	$= 4.39' \times 2 \times 1960' = 2504.9 Fr^2$
TBTAL = AREA	12,704.7 FT2
#1 PER	SFT OF SURFACE SEAL
1	$LS = \frac{4}{12,705}$ <u>1 LS</u>



BY JTB DATE 11/24/12 SUBJECT SR37 MOBILITY CHKD BY SKL DATE WITCHIT

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SHEET NO. OF JOB NO. 10-703

711-51038 STRUCTURAL STEEL	LS
* 5 NEW BEAM LINES, 2 BMS N.B, 3 BMS. MATCH EXISTING BEAM SIZE ~ W33×130	s, B.
TOTAL BEAM = 193.0 FT (MATCH EXIST. B) LENGTHS = 193.0 FT (MATCH EXIST. B) X 5 965.0 FT	n. LENGTHS)
BEAM WEIGHT = 130 LBS/FT	
TOTAL BEAM = 945.0' × 130#/FT = 125,0	450 LBS
* ADD 1500 FOR MISC. STEEL = 144,	268 LBS
* ESTIMATE STEEL COST @ \$1.55/LB	
$\frac{e}{\cos t} = \frac{144}{268} \times \frac{4}{1.55} = \frac{4}{223}, \frac{1}{12}$	LS



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SHEET NO. \_\_\_\_\_ OF JOB NO. 10-703

724-51925 STRUCTURAL EXPANSION JOINT, SS LFT LENGTH OF JOINT AT EA. END OF = 65.8 FT BRIDGE X 4 ENDS = 263,2 LFT TOTAL LENGTH 263.2 LFT

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у7 <u>В</u> нко ву <u>Је</u>	_ date1/2.4 date1(2.6	/12_ SUBJECT_	2	5R37	MOBILI	TY		et no of no/0 - 78 3	
72-Ce -	- 11448	BEAR	ING A	SSE N	BLY, EX	PANSIO	N,T	YPE 1	EA
	AND	A. BEANT # BENT # PIER #	12#4	ertin. Salatur	5 BMS	x 3	5	15 EA.	
								15 EA.	



BY JTB DATE U/26/12 SUBJECT SR37 MOBILITY CHKD BY SEC DATE U(26/12

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SHEET NO. OF 10-702 JOB NO.

726-11451 BEARING ASSEMBLY, FIXED, TYPE 1 EA. AT EA. BEAM = 5 BMS X 1 = 5 EA. AND PIER # 3 5 EA.

**UNITED** 1625 N. Post Road Phone: (317) 895-2585 Consulting Indianapolis, IN Fax: (317) 895-2596 46219-1995 E-mail: info@ucindy.com www.ucindy.com BY JTB DATE 11/26/12 SUBJECT SR37 MOBILITY SHEET NO. OF JOB NO. \_\_\_ /0-703 801 - DIE203 TEMPERARY PAVEMENT MARKING, 4IN. LFT BARRIER = 466.5 FT EA. SIDE (SEE TEMP. TRAFFIC BARRIER) ABDITENAL = 100.0' LENGTH = 100.0' FLARE LENGTH = 200.0' 20' DEFET AT 10:1 TOTAL LENGTH = 766.5' × 2 sides = 1533 LFT 1533 LFT



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SHEET NO. \_\_\_\_ OF

JOB NO. 10-703

DATE 11/26/12 SUBJECT SR 37 MOBILITY BY J73 CHKD BY SILL

801-067,	10 FLASHING ARROW	FLASHING ARROW SIGN					
	6 Mo. X 30 DAYS =						
		¥ 2 LANES					
		480 DAYS					
		480 D	AYS				



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ВУ <u>578</u> DATE <u>11/26/12</u> SUBJECT <u>SR37</u> MOBILITY CHKD BY <u>SEC</u> DATE <u>11/26/12</u> SHEET NO. \_\_\_\_\_ OF \_\_\_\_ JOB NO. \_\_\_\_/0 - 7 2 3 801- 06775 MAINTAINING TRAFFIC 25 SAY \$ 20,000 1LS



OF

JOB NO. 10-703

SHEET NO.

BY JTB DATE 11/24/12 SUBJECT SR37 MOBILITY CHKD BY JEL DATE 11/26/17

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801-08508 TEMPORARY TRAFFIC BARRIER, TYPE 2, ANCHORED LFT BRIDGE LENGTH = 196.0 FT APPROACH LENGTH = 20.5 FT ADDITIONAL LENGTH = 50.0FT FLARE LENGTH = 200.0 FT 20' OFFSET AT 10:1  $\frac{T_{\text{TAL LENGTH}}}{T_{\text{TAL LENGTH}}} = (196' + 20.5' + 50.0' + 200.0') \times 2$ = 933.0 LET 933 LFT