PEDESTRIAN BRIDGE FEASIBILITY STUDY
Pedestrian Bridge over US 19 @ Marine Parkway

Pasco County, Florida

Prepared for
City of New Port Richey

Prepared by
KIMLEY-HORN AND ASSOCIATES, INC.
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West Palm Beach, Florida, 33411
Certificate of Authorization No. 696

July, 2016
(Updated May 2017)

Engineer of Record:

Jerry Marcus Piccolo, P.E.
Florida PE No. 80484
Pedestrian Bridge Feasibility Study

The project study area, as shown below, is located in the City of New Port Richey in Pasco County. This study investigates the feasibility of constructing a shared use (pedestrian/bicycle) bridge and ramp system over US 19 to accumulate continuity of the proposed shared use pathway alongside of Marine Parkway by the City.

The bridge and switchback ramps have been designated shared use paths and will maintain a minimum clear width of 12 feet and conform to Americans with Disabilities Act (ADA) criteria. The proposed ramp longitudinal grades follow the ADA maximum of 8.33% for 30 feet (2.5’ maximum rise) along with a 5 foot level platform before the next ramp portion begins.

The FDOT PPM Vol. 1 Ch. 8.7.2.3.1 requires for span lengths greater than 150 feet that an enclosed box truss bridge cross-section to be utilized (i.e. through truss). The through truss was selected since it has the minimal structure depth from the walkway surface to the bottom of the truss chords. The portion of the bridge spanning over US 19 utilizes a simple span prefabricated steel through truss. The prefabricated steel through truss bridge has a span length of 142'-9" and a clear pathway width of 12 feet.

The through truss also reduces the length and height of the approaching switchback ramps. A prestressed concrete beam option was also initially studied but the added structure depth required longer ramp lengths which do not fit within
the right of way on the easterly side of US 19 between Marine Parkway and the driveway to the shopping plaza.

The proposed east and west switchback ramps will utilize a Cast-In-Place (CIP) Reinforced Concrete (RC) construction. To minimize noise and vibration drilled shaft foundations are recommended. The first 32 feet at the entrance of both the east and west ramps are composed of a CIP concrete sidewalk poured on fill contained within CIP concrete retaining walls. The portions of these ramps supported on retaining wall are more efficient than having CIP concrete. The switchback ramps require a plan surface area of 13'-6" x 277'-9".

The substructure elements for the prefabricated steel truss would also consist of CIP RC piers and footings that are supported on drilled shaft foundations.

There are numerous existing utilities within the vicinity of the proposed pedestrian/bicycle switchback ramps. The photo below of the east side of US 19 depicts the existing utilities that conflict with the east ramp.
The photo below of the west side of US 19 depicts the existing utilities that conflict with the west ramp.

The bridge and switchback ramps will have lighting in the truss structure and parapets respectively to provide lighting in accordance with the FDOT PPM Vol. 1 Ch. 7 provisions for shared use paths.

In conclusion a prefabricated steel truss bridge and CIP RC ramps supported on drilled shaft foundations is recommended. The preliminary opinion of probable construction cost for the pedestrian bridge and ramps is $3,000,000. This preliminary opinion of probable construction cost is for the pedestrian bridge structure, Right of Way Acquisition, Utility Relocation, and 10’ Sidewalk Construction. The opinion of probable construction cost for Right of Way Acquisition, Utility Relocation, and 10’ Sidewalk Construction were provided by the City of New Port Richey (See attached Letter). This opinion of probable construction cost does not include maintenance of traffic.
# Preliminary Opinion of Probable Construction Costs for US 19 Pedestrian Bridge & Ramps

<table>
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<tr>
<th>Item Description</th>
<th>Unit</th>
<th>Unit Cost</th>
<th>Unit</th>
<th>Quantity</th>
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**Note:**
1. Opinion of Probable Construction Costs provided by the City of New Port Richey. See attached letter for more information.
VIEW A-A
East and West Ramp Elevation
SECTION E-E
Pedestrian Bridge Elevation @ E Pedestrian Bridge

SECTION F-F
Typical Section - Prefabricated Steel Truss Pedestrian Bridge
SECTION B-B
Typical Section - East and West Ramps within Span

SECTION C-C
Typical Section - East and West Ramps at Supports
SECTION F-F

Typical Section - Prefabricated Steel Truss Pedestrian Bridge

- Pedestrian Bridge
- Prefabricated Steel Truss
- Full Fencing Enclosure
- Exoconcrete Deck System
- 8'-0" Min. Vert. Cir. 12'-0"
- Clear Width
- 8'-0"
TO:          Debbie L Manns, City Manager
FROM:        Robert M Rivera, Public Works Director
DATE:        October 21, 2016
RE:          Pedestrian Bridge Concept Review

I have completed my review of the proposed concept drawing and location for the pedestrian bridge project. The following are my comments:

1. The proposed location of the bridge will take away all of the US Hwy 19 frontage view for the existing business located at 5028 US Hwy 19 (eastside). Should the proposed location of the bridge be approved, then it is recommended the purchase of the business be obtained by the City. The purchase of the property by the City will serve two (2) potential issues. Legal action by the current owner due to the economic impacts the bridge construction has created by eliminating access and view off of US Hwy 19. State Statutes address view zones for signs on State Highways; a review by the engineer of record would need to be performed to confirm the build ability of the overpass at the proposed located when compared to the potential conflict of the structure verse the view zone. Finally, the proposed location eliminates the connectivity of the existing sidewalk. Additional right of way would have to be acquired to construct the bridge and relocated the existing sidewalk as to continue the south to north pathway in its existing state. The Pasco County Property Appraiser has a value of $170,112; it does not take into account the business value. Total value may be obtained by performing a Brokers Price Opinion (BPO). Preliminary budget amount for the acquisition $500,000.

2. Several Utilities would have to be relocated for the proposed bridge construction location to occur. Duke Energy primary lines going west and east are in conflict. The relocation cost estimate is $60,000. City Water lines are in conflict on the west and east side. The relocation cost estimate is $80,000. The relocation of Pasco Traffic Signal facilities are in conflict on the N.E. corner of Marine Pkwy and US Hwy 19. The relocation cost estimate is $40,000. Communication fiber optic, and Clearwater Gas are in conflict on the east side. The relocation cost estimate is $15,000. FDOT stormwater lines located on the west and east sides of US Hwy 19 are in conflict. The preliminary cost estimate is $50,000. Preliminary estimate for all utility relocations is $195,000.

3. The removal of existing sidewalk and the installation of a 10’ trail extending from the bridge structure to the existing trail on the west side of US Hwy 19 is recommended. The preliminary cost estimate is $110,000.

4. Total preliminary estimate:
   a. Bridge Construction Cost $1,344,000
   b. Right of Way Acquisition $500,000
   c. Utility Relocations  $245,000
   d. 10’ Sidewalk Construction $110,000
   e. Contingency $200,000
   f. Total Cost Estimate $2,399,000