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Staff:	J. Baskin-A
Staff Report:	2/28/14
Hearing Date:	3/13/14

STAFF REPORT: REGULAR CALENDAR

Application No.:	**1-10-002**
Applicants:	**Del Norte Veterans Monument Committee & City of Crescent City**
Location:	Within Beach Front Park Near the Intersection of Southbound U.S. 101 and Front Street, Crescent City, Del Norte County (APN 118-020-031).
Project Description:	Erection of a public monument to honor area military veterans.
Staff Recommendation:	Approval with conditions.

SUMMARY OF STAFF RECOMMENDATION

Commission staff recommends **approval** of coastal development application 1-10-002 subject to the attached recommended special conditions.

The applicants propose to construct an approximately 80-foot-diameter landscaped plaza adorned with flagpoles and landscaped trees around its perimeter and an inner array of sitting benches encircling a pentagonal centerpiece sculpture (**Exhibit 4**). The purpose of the monument is to honor local military veterans. The project would also include a landscaped walkway connecting the monument plaza to an adjoining sidewalk. The monument would be illuminated by a series of up-lights and other lighting fixtures positioned at the base of the flagpoles, benches, and centerpiece.

The major issues raised by this application include whether the monument would: (1) be sited and designed to prevent impacts and avoid degradation of the environmentally sensitive habitat

areas adjacent to the project site consistent with the provisions of Coastal Act Section 30240(b); (2) minimize risks to life and property in areas of high flood hazard, and assure stability and structural integrity, nor contribute significantly to destruction of the site or surrounding area; and (3) protect views to and along the ocean and scenic coastal areas consistent with the visual resources protection policies of Coastal Act Section 30251.

Staff recommends special conditions requiring the applicant to verify through monitoring that no greater illumination of the adjacent riparian corridor and stream course of Elk Creek will result from the monument's nighttime lighting. If exceedance of ambient light levels is found to occur, nighttime lighting of the monument will be suspended until an amendment to the permit is submitted proposing specific measures to be undertaken for reducing incidental lighting trespass from the monument site. The Staff also recommends the incorporation of measures to ensure the structure will be strong enough to withstand the hydro-static forces of inundation from coastal storm surge floodwaters. Staff further believes that the development as conditioned will be consistent with the visual policies of the Coastal Act because the degree of view obstruction resulting from erection of the monument is relatively minor and, given the presence of a variety of other public art, commemorative installations, and landscaping similar to that proposed, the development would be compatible with the character of the surrounding area.

The motion to adopt the staff recommendation of approval with special conditions is found on page 4.

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I. MOTION AND RESOLUTION

The staff recommends that the Commission adopt the following resolution:

Motion:

I move that the Commission approve coastal development permit 1-10-002 pursuant to the staff recommendation.

Staff recommends a **YES** vote on the foregoing motion. Passage of this motion will result in approval of the permit as conditioned and adoption of the following resolution and findings. The motion passes only by affirmative vote of a majority of the Commissioners present.

Resolution:

The Commission hereby approves a coastal development permit for the proposed development and adopts the findings set forth below on grounds that the development as conditioned will be in conformity with the policies of Chapter 3 of the Coastal Act. Approval of the permit complies with the California Environmental Quality Act because either 1) feasible mitigation measures and/or alternatives have been incorporated to substantially lessen any significant adverse effects of the development on the environment, or 2) there are no further feasible mitigation measures or alternatives that would substantially lessen any significant adverse impacts of the development on the environment.

II. STANDARD CONDITIONS

This permit is granted subject to the following standard conditions:

1. **Notice of Receipt and Acknowledgment**: The permit is not valid and development shall not commence until a copy of the permit, signed by the permittee or authorized agent, acknowledging receipt of the permit and acceptance of the terms and conditions, is returned to the Commission office.

2. **Expiration**: If development has not commenced, the permit will expire two years from the date on which the Commission voted on the application. Development shall be pursued in a diligent manner and completed in a reasonable amount of time. Application for extension of the permit must be made prior to the expiration date.

3. **Interpretation**: Any questions of intent of interpretation of any condition will be resolved by the Executive Director or the Commission.

4. **Assignment**: The permit may be assigned to any qualified person, provided assignee files with the Commission an affidavit accepting all terms and conditions of the permit.

5. **Terms and Conditions Run with the Land**: These terms and conditions shall be perpetual, and it is the intention of the Commission and the permittee to bind all future owners and possessors of the subject property to the terms and conditions.

III. SPECIAL CONDITIONS

This permit is granted subject to the following special conditions:

1. Development in Accordance with Approved Monument Plan. The permittee shall ensure that all construction is performed in substantial conformance with the proposed "Point of Honor" monument project, attached hereto as Exhibit 4, as modified by the special conditions. The Executive Director may approve minor changes to the approved monument plan that are *de minimis* in nature and scope and are not inconsistent with the special conditions of this permit. Such minor changes may require an immaterial amendment approved by the Executive Director, unless the Executive Director determines no amendment is legally required. No other changes to the approved monument plan shall occur without a Commission approved material amendment to this coastal development permit.

2. Revised Final Project Plans. A. PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the Permittee shall submit two full size sets of drawn-to-scale Final Project Plans to the Executive Director for review and approval. The Revised Final Project Plans shall be substantially in conformance with the preliminary project plans (**Exhibit 4**) except that they shall be revised and supplemented to comply with the following requirements:

a. Construction Areas. All areas within which construction activities and/or staging are to take place shall be minimized to the maximum extent feasible and shall avoid all wetlands, habitat, and existing public walkways. The revised final project plans shall identify the specific location of all construction areas, all staging areas, and all construction access corridors in site plan view.

b. Construction Methods and Timing. The plans shall specify the construction methods and timing to be applied to limit coastal resource impacts to the maximum extent feasible. Construction shall be limited to daylight hours within the dry-weather seasonal scheduling identified in Special Condition 4. Construction site lighting levels beyond that required for safety purposes is prohibited.

c. Structural and Foundation Element. The revised final project plans shall be engineered to ensure the structural integrity of the development from exposure to the hydro-dynamic and hydro-static forces associated with inundation from coastal storm surge flooding events. For purposes of compliance with this condition, the 100-year coastal flooding event as depicted on FEMA Flood Insurance Rate Map Community Panel No. 06015C0214E (i.e. "VE (EL 17)") shall be used as a design standard. The plans shall be prepared by a California-registered civil engineer and provide adequately detailed descriptions and depictions of the design features to be incorporated into the framing, concrete and polystyrene panels, and foundation of the monument centerpiece (e.g., internal bracing and fasteners, vapor-barriers and coatings, keyed and/or anchored footings, pilings, etc.)

d. Electrical Service Element. The revised final project plans shall specify that all electrical service for the development is to be constructed underground, with the exception of the above-ground portion of the existing pedestal on the southeastern side of the intersection of southbound U.S. 101 and Front Street, and the monument's electrical service meter and control panel.

e. Water Quality Protection Element. The plans shall clearly identify the location of all water quality protective best management practices (BMPs) identified in Special Condition 4, as applicable, and notate that these measures are to be implemented during construction.

f. Monument Lighting Element. The revised final project plans shall show the location, design, wattage, and directional cast of all monument lighting features and shall substantially conform to the revised lighting plans submitted with the application, appearing on Sheets "A2," titled, "Foundation Plan / Electrical Plan" and "Electrical Legend," dated last revised on 2/14/14, as prepared by Charles Slert Associates Architects. The final lighting plans may delete lighting elements proposed in the application lighting plans and may substitute lower wattage lighting features that those proposed in the application lighting plans.

g. Landscaping and Vegetative Screening. All plant materials shall be non-invasive species selected to be complementary with the mix of native habitats in the project vicinity, prevent the spread of exotic invasive plant species, and avoid contamination of the local native plant community gene pool through cross-hybridization. The tree screening recommended and discussed on page 3 and appearing in Figures 4 and 5 of the revised photometric evaluation, titled "Point of Honor Monument - Revised Lighting Impact Study," dated February 6, 2014, as prepared by PACE Engineering, shall be installed with a minimum of six 15-inch diameter-at-breast-height trees of evergreen species. Screening shall include at least as many additional trees or shrubs to form a subtending understory beneath the trees, such that the value of the vegetative screening is maximized for screening the watercourse of Elk Creek from light from the monument over time as the tree canopy grows and thins its lower branches. All landscaped areas on the project site shall be maintained in a litter-free, weed-free, and healthy growing condition to ensure maximum value for screening light from the watercourse of Elk Creek. If any of the plantings die, become decadent, rotten, or weakened by decay or disease, or are removed for any reason, they shall be replaced within 60 days in-kind or with another native evergreen species common to the Del Norte County coastal area that will provide equivalent screening. No plant species listed as problematic or invasive by the California Native Plant Society, the California Invasive Plant Council, or as may be so identified from time to time by the State of California, and no plant species listed as a 'noxious weed' by the State of California or the U.S. Federal Government, shall be planted or allowed to naturalize or persist on the site. No rodenticides containing any anticoagulant compounds, including, but not limited to, bromadiolone or diphacinone shall be used. Revised final project plans shall include landscape and irrigation parameters that shall identify all plant materials (size, species, and quantity), all irrigation systems, and all proposed maintenance measures for the site.

B. The permittee shall undertake development in accordance with the approved final plans. Any proposed changes to the approved final plans shall be reported to the Executive

Director. No changes to the approved final plans shall occur without a Commission amendment to this coastal development permit, unless the Executive Director determines that no amendment is legally required.

3. Lighting Monitoring Plan. A. WITHIN SIXTY (60) DAYS OF THE INSTALLATION OF MONUMENT LIGHTING, the permittee shall submit for the review and approval of the Executive Director, a monitoring plan for the nighttime illumination of the monument. The lighting plan shall include monitoring provisions for a one-time verification that the lighting levels within the Elk Creek watercourse are not increased above pre-project ambient levels therein. The monitoring program shall be prepared by a licensed civil engineer with demonstrated training and experience in lighting engineering principles and practices. The monitoring plan shall identify a minimum of four fixed monitoring locations to be established in the Elk Creek channel, between the North Harbor Trail bridge crossing and the unnamed drainage outlet at the southern protraction of K Street, from which pre-project ambient lighting levels and incidental light for the illuminated monument shall be measured for a minimum of one clear and one foggy night at appropriate intervals between sunset and sunrise. The monitoring shall be conducted pursuant to the protocols and criteria set forth in recommended practices and technical memoranda, as developed by the Illuminating Engineering Society of North America (IESNA), for low level exterior lighting measurement and calculation, and shall include documentation of the monument lighting fixtures being measured. Any exceedance of ambient light levels shall be logged in the monitoring records. The plan shall provide for the submittal of a final report within sixty (60) days of the completion of the monitoring.

B. Should the monitoring report indicate that the monument lighting plan has increased lighting levels within the Elk Creek watercourse above pre-project ambient levels, nighttime illumination of the monument shall be discontinued immediately and may not resume until: (1) a supplementary lighting plan has been prepared, containing recommended lighting changes to ensure that lighting levels within the Elk Creek watercourse are restored to no greater than pre-project ambient levels; and (2) such recommendations for lighting changes have been incorporated into the project pursuant to an approved amendment to Coastal Development Permit 1-10-002, unless the Executive Director determines no amendment is legally required.

4. Best Management Practices and Construction Responsibilities. The permittee shall comply with the following construction-related requirements:

a. Erosion and sediment control products, such as fiber rolls, and/or an erosion control blanket with weed-free straw, shall be installed as proposed prior to and maintained throughout the construction period to minimize erosion and trap entrained sediment and other pollutants to prevent discharge of sediment and pollutants to coastal waters and wetlands;

b. To minimize wildlife entanglement and plastic debris pollution, temporary rolled erosion and sediment control products (such as fiber rolls, erosion control blankets, and mulch control netting) that incorporate plastic netting (such as polypropylene, nylon, polyethylene, polyester, or other synthetic fibers) shall not be used. Acceptable alternatives include erosion and sediment control products without netting, products made with loose-weave natural fiber netting, and unreinforced silt fences;

c. Erosion and sediment control measures shall be in place at the end of each work day, including fiber roll placement down-slope of the construction site as needed for effective sediment control;
d. Any excess excavated material and other construction debris resulting from construction activities shall be removed immediately upon completion of component construction, and shall be disposed of at a disposal site outside the coastal zone or within the coastal zone pursuant to a valid coastal development permit;
e. On-site native vegetation shall be maintained to the maximum extent possible during construction activities;
f. All ground disturbing activity shall be limited to the dry season between April 15th and October 31st;
g. Water Quality Best Management Practices (BMPs) shall be implemented to minimize the discharge of other pollutants resulting from staging, storage, use, and disposal of construction chemicals and materials (such as paints, solvents, vehicle fluids, asphalt and cement compounds, trash, and debris) into runoff or coastal waters. Maintenance and refueling of construction equipment and vehicles at the project site is prohibited;
h. Adequate supplies of hazardous materials spill prevention and clean-up supplies shall be kept on site at all times during construction;
i. All on-site stockpiles of soil and construction debris shall be contained at all times and shall be covered during storm events if necessary to minimize discharge of sediment and other pollutants; and
j. Concrete paving and grinding operations, and storm drain inlet protection best management practices shall be employed to prevent concrete grindings, cutting slurry, and paving rinsate from entering drop inlets or sheet-flowing into coastal waters. Concrete delivery vehicle wash-out maintenance at the project site is prohibited.

5. Assumption of Risk, Waiver of Liability and Indemnity. By acceptance of this permit, the applicant acknowledges and agrees: (i) that the site may be subject to hazards from flooding, sea level rise, erosion and wave uprush; (ii) to assume the risks to the applicant and the property that is the subject of this permit of injury and damage from such hazards in connection with this permitted development; (iii) to unconditionally waive any claim of damage or liability against the Commission, its officers, agents, and employees for injury or damage from such hazards; and (iv) to indemnify and hold harmless the Commission, its officers, agents, and employees with respect to the Commission's approval of the project against any and all liability, claims, demands, damages, costs (including costs and fees incurred in defense of such claims), expenses, and amounts paid in settlement arising from any injury or damage due to such hazards.

6. Final Encroachment Permits. PRIOR TO COMMENCEMENT OF CONSTRUCTION, the permittee shall submit copies of encroachment permits issued by the City of Crescent City and the California Department of Transportation (Caltrans) or evidence that no encroachment permits are required. The applicants shall inform the Executive Director of any changes to the project required by the City or Caltrans. Such changes shall not be incorporated into the project until the permittee obtains a Commission amendment to this coastal development permit, unless the Executive Director determines that no amendment is legally required.

7. **Protection of Archaeological Resources.** If an area of cultural deposits or human remains is discovered during the course of the project, all construction shall cease and shall not re-commence until a qualified cultural resource specialist analyzes the significance of the find and prepares a supplementary archaeological plan for the review and approval of the Executive Director, and either: (a) the Executive Director approves the Supplementary Archaeological Plan and determines that the Supplementary Archaeological Plan's recommended changes to the proposed development or mitigation measures are *de minimis* in nature and scope, or (b) the Executive Director reviews the Supplementary Archaeological Plan, determines that the changes proposed therein are not *de minimis*, and the permittee has thereafter obtained an amendment to Coastal Development Permit 1-10-002 approved by the Commission.

8. **Agreement to Record Deed Restriction if Property Conveyed.** A. PRIOR TO ANY CONVEYANCE OF THE PROPERTY THAT IS THE SUBJECT OF THE COASTAL DEVELOPMENT PERMIT, the applicant shall execute and record a deed restriction, in a form and content acceptable to the Executive Director: (1) indicating that, pursuant to this permit, the California Coastal Commission has authorized development on the subject property, subject to terms and conditions that restrict the use and enjoyment of that property (hereinafter referred to as the "Standard and Special Conditions"); and (2) imposing all Standard and Special Conditions of this permit as covenants, conditions and restrictions on the use and enjoyment of the Property. The restriction shall include a legal description of the applicant's entire parcel or parcels. It shall also indicate that, in the event of an extinguishment or termination of the deed restriction for any reason, the Standard and Special Conditions of this permit shall continue to restrict the use and enjoyment of the subject property so long as either this permit or the development it authorizes – or any part, modification, or amendment thereof – remains in existence on or with respect to the subject property.

B. PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicant shall submit a written agreement, in a form and content acceptable to the Executive Director, incorporating all of the above terms of this condition.

IV. FINDINGS AND DECLARATIONS

The Commission hereby finds and declares as follows:

A. PROJECT DESCRIPTION

The applicants propose to construct an approximately 500-square-foot veterans' monument within an open area of the City of Crescent City's Beach Front Park. The monument would comprise a roughly 60-foot-diameter paved and landscaped circular plaza with a six- to twelve-foot-high canted, pentagonal, granite-clad centerpiece capped with a bronze eagle-on-sphere finial, rising to an overall height of 17 feet, 9 inches above a finished grade of 12 feet, 6 inches above mean sea level (**Exhibit 4**). The interior void of the monument centerpiece would be filled with a series of polystyrene foam sheets to provide rigidity to the overall structure. Four sitting benches would be installed around the centerpiece, as would five 30-foot-high fiberglass flagpoles around the perimeter of the paved plaza. In addition, a 26-foot-wide paved and landscaped walkway would be installed to connect the monument plaza to the sidewalks along Front Street and Highway 101.

The proposed landscaping for the monument plaza would entail the planting of "flowering cherry" and "maple" trees around the periphery of the monument plaza, "seasonal plantings" and "ground cover" within the landscaping beds flanking the plaza benches and walkway, and six 15-inch-diameter "Specimen evergreen trees" as vegetative screening between the monument and Elk Creek (**Exhibits 4 and 5**). No other information as to particular plant species or the need for maintenance irrigation facilities is provided.

The monument plaza would be night-illuminated by a series of 26 recessed, stanchion, and sconce mounted up-lights positioned at the bases of the perimeter flagpoles and trees, around the centerpiece, and beneath the sitting benches, totaling 1,696 watts (**Exhibit 4, page 4**). Electrical service for the monument would be provided by a new underground line extension crossing beneath southbound U.S. 101 from an existing above-ground service pedestal located at the southeast corner of the intersection of Front Street and U.S. Highway 101 (**Exhibit 4, page 3**).

B. ENVIRONMENTAL SETTING

The roughly tenth-of-an-acre project site is located within the City of Crescent City's Beach Front Park, at the intersection of U.S. 101 and Front Street, on the periphery of Crescent City's central business district grid. The subject site occupies an approximately 500-square-foot area of the park's northeasterly panhandle situated alongside the south side of Front Street and southwest of U.S. 101 between the street frontages and the mouth of Elk Creek as it enters Crescent City Harbor (**Exhibits 1-3**). Prior to the catastrophic damage suffered in the tsunami following the Great Alaska Earthquake in 1964, the area comprised a transitional zone between the intertidal flat along the creek and harbor and filled developed portions of the City's waterfront. Following destruction of much of the harbor and the downtown of Crescent City, the area was subsequently cleared, graded, and developed into a public park. The North Harbor Trail (see CDP 1-07-005) is situated immediately adjacent to the proposed project site, along the southern side of the park's panhandle area.

With the exception of the slope down from the North Harbor Trail through the riparian vegetation into Elk Creek, the majority of the site is generally flat in topography at an elevation of 11 to 12 feet about mean sea level. The project site is currently an open grass surfaced area, with scattered tree cover to the east and southwest. Across the North Harbor Trail to the south of the project area, a riparian corridor covered by a mixture of willows and coyotebrush occupies a bench above the open waters of Elk Creek. As proposed, the monument would be sited approximately 30 feet from the outer edge of the riparian corridor and roughly 185 feet from the wetted stream channel of Elk Creek.

The project site is located within an Open Space zoning district as depicted on the City's certified zoning map. Adjoining land uses comprise a mixture of other public recreational and visitor-serving uses, including "Dolo Plaza," whose centerpiece is a steel-reinforced concrete tetrapod identical to those armoring the outer jetties of Crescent City Harbor, a visitors' center, and a public swimming pool. The area across Front Street and southbound U.S. 101 to the north and east from the project site is developed with a variety of highway-oriented commercial development, including motels and restaurants, the administrative headquarters of Redwood National Park, and a wide grass covered and tree lined median between the southbound and northbound couplet of Highway 101.0

Based upon a biological site assessment conducted for the North Harbor Trail project, the adjoining areas to the south of the project site comprise riverine and riparian emergent wetlands associated with the Elk Creek watercourse (**Exhibit 6**). The creek supports small runs of threatened salmonid species.

Several coastal access and recreational amenities exist in the project vicinity, namely the aforementioned North Harbor Trail and Beach Front Park, including its picnicking areas and harbor strand access points along Howe Drive. In addition, the City-owned Shoreline Recreational Vehicle Park lays across the Class I bikepath crossing of Elk Creek from the project site. The North Harbor Trail, its Elk Creek bridged crossing and the South Harbor Trail, currently in development, are recognized as components of the California Coastal Trail through Crescent City.

The project site is prominent from U.S. 101 as it passes through Crescent City as one-way couplets, and from along abutting Front Street. The project area is not located within a designated highly scenic area.

C. STANDARD OF REVIEW

The project site is situated within the Coastal Commission's retained permit jurisdiction comprising filled former tidelands corresponding to the reclaimed former margins of Elk Creek / Crescent City Harbor that are subject to the public trust. According, the policies of Chapter 3 of the Coastal Act provide the legal standard of review for the subject coastal development permit application.

D. OTHER AGENCY APPROVALS

City of Crescent City Use Permit

The project is situated within one of the City's municipal parks and is planned and zoned for "open space" uses. Pursuant to the City's municipal code, a conditional use permit is required for "public buildings and facilities." The representative for applicant Del Norte Veterans Monument Commission secured Use Permit No. 09-06 for the monument improvements from the City Planning Commission on September 10, 2009.

City Streets and State Highway Rights-of-Way Encroachment Permits

The proposed walkway connecting the monument to the street/highway roadsides passes through the City of Crescent City's Front Street right-of-way. In addition, portions of the walkway, electrical service connection, and the monument's perimeter landscaping will require entry into the state highway right-of-way along the park's eastern boundary. Therefore, to ensure that the applicants have the necessary authority to undertake all aspects of the project on these public lands, the Commission attaches **Special Condition 6**, which requires that the applicants provide copies of the encroachment permits issued by the City and/or the California Department of Transportation for such development, or evidence that no encroachment permits are required, prior to the commencement of construction of the walkway and monument improvements.

E. PROTECTION OF ADJACENT ESHA AND WATER QUALITY

Section 30231 of the Coastal Act states that:

> *The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.*

Section 30232 of the Coastal Act states:

> *Protection against the spillage of crude oil, gas, petroleum products, or hazardous substances shall be provided in relation to any development or transportation of such materials. Effective containment and cleanup facilities and procedures shall be provided for accidental spills that do occur.*

Section 30240(b) of the Coastal Act states:

> *Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.*

Coastal Act section 30240(b) requires that new development adjacent to environmentally sensitive habitat areas be sited and designed in a manner so as to prevent impacts which would significantly degrade adjoining habitat, and to be compatible with the continuance of those habitat areas. A Biological Constraints Analysis and Wetland Delineation performed by Mad River Biologists in 2003 for the immediately adjoining North Harbor Trail project found that the development was to be situated adjacent to riverine and riparian coastal wetland environmentally sensitive habitat areas associated with Elk Creek. A canopy layer of shore pine (*Pinus contorta* ssp. *contorta*) and a few gum trees (*Eucalyptus* sp.) dot the park grounds to the west and southeast, while a scattered shrub layer and understory dominated by arroyo willows (*Salix lasiolepis*) occupies the area immediately adjoining the trail side, transitioning from upland exotic species including yellow bush lupine (*Lupinus arboreus*), wild radish (*Raphanus raphanistrum*), and Hottentot fig (*Carpobrotus edulis*), into more endemic hydrophytic species, namely California aster (*Aster californica*), orchard grass (*Dactylis glomerata*), native dunegrass (*Leymus mollis*), and common scouring rush (*Equisetum hyemale*), and silverleaf (*Potentilla anserina*) with closer proximity to the creek waters. Further to the southwest, the creek enters the Crescent City Harbor where more salt-tolerant species, such as salt rush (*Juncus breweri*) and sea rocket (*Cakile* sp.), intergrade. In addition, the report noted the presence of two special status plants in the project area: Wolf's evening primrose (*Oenothera wolfii*) and Beach pea (*Lathyus japonicus*), species that appear on the California Native Plants Society's List 1B and

List 2,[1] respectively. However, these rare plant outcroppings are not within the immediate area of the trail and support facilities project site or that of the proposed monument development. Also noted in the report were three California or Federal listed species of birds: brown pelican (*Pelecanus occidentalis*), bald eagle (*Haliaeetus leucocephalus*), and peregrine falcon (*Falco peregrinus*), and fifteen other avian species on the California Species of Special Concern list, occurring in the vicinity of the project site. In addition, the Northern Red-legged Frog (*Rana aurora aurora*), a California Species of Special Concern, is likely to occur in the vicinity of the project area.

With respect to aquatic habitat, Elk Creek, a Class I, Third Order coastal stream lies approximately 185 feet from the proposed monument site. Elk Creek supports small runs of anadromous and resident salmonids, including coho salmon (*Oncorhynchus kisutch*), Chinook salmon (*Oncorhynchus tshawytscha*), steelhead (*Oncorhynchus mykiss*), and cutthroat trout (*Oncorhynchus clarki*). Based upon in-stream surveys conducted by the California Department of Fish and Wildlife (CDFW) in spring 2013, numerous young of the year, smolt coho salmon, and eight coastal cutthroat trout were caught and released in the portion of Elk Creek adjoining the project site, documenting the watercourse's current viability as anadromous fish habitat. As this sampling was not conducted in a year-round timeframe, the full extent of habitat utilization has not been established. However, CDFW staff believes that, based upon the presence of multiple age classes, anadromous fish likely utilize the mouth of Elk Creek as long as freshwater outflows through this reach.[2]

Various reptiles and amphibians inhabit the lower creek watershed, including salamanders (*Dicamptodon* sp.), the western toad (*Bufo* sp.), the Pacific tree frog (*Pseudacris regilla*), the common western fence lizard (*Sceloporus occidentalis*), garter snake (*Thamnophis* sp.), and Pacific gopher snake (*Pituophis catenifer*). The waterway is also frequented by numerous terrestrial common mammal species including raccoon, stripped and spotted skunks, and opossum. The portion of Elk Creek in proximity to the development site connects the marine waters of Crescent City Harbor to the Elk Creek Wetlands Wildlife Area, comprising a 160-acre natural preserve of riverine, riparian and freshwater marsh habitats, located inland across U.S. 101 from the project site.

The 2003 biological report concluded that damage to sensitive species will be avoided or mitigated by siting development away from sensitive habitat areas to the greatest extent feasible, providing clear demarcation between use and natural areas, and preserving native riparian vegetation to protect native wildlife. Typically, non-development buffers are established around

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[1] Pursuant to the Native Plant Protection Act (NPPA) and the California Endangered Species Act (CESA), plants appearing on the California Native Plant Society's "List 1B" and "List 2" meet the definition as species eligible for state listing as a rare, threatened, or endangered plant. List 1B plants are defined as "rare plant species vulnerable under present circumstances or to have a high potential for becoming so because of its limited or vulnerable habitat, its low numbers of individuals per population (even though they may be wide ranging), or its limited number of populations." List 2 plants are defined as "plants rare, threatened, or endangered in California, but more common elsewhere." The NPPA mandates that plants so listed be considered in the preparation of all environmental analyses conducted pursuant to the California Environmental Quality Act (CEQA).

[2] Justin Garwood, Associate Biologist, California Department of Fish and Wildlife, pers. comm.

the periphery of such environmentally sensitive areas to provide a spatial setback between the ESHA resources and development sites. However, with the substantial existing development adjoining or located within the ESHA, including a coastal access trail and bridge crossing, state highway roadway, stream bank armoring, and utility pipeline crossings, establishment of a traditional buffer perimeter around the creek and riparian corridor is precluded.

The project involves the construction of a public monument in the vicinity of shoreline areas of Crescent City Harbor and Elk Creek. The 2003 biological report documents that the project site is adjacent to the emergent estuarine and palustrine wetlands along lower Elk Creek. While the project improvements would be situated approximately 35 feet from the outer edge of the riparian vegetation and 185 feet from the live waters of Elk Creek and thus do not encroach into the ESHA, the development must nonetheless be sited and designed to prevent impacts that would significantly degrade the adjacent ESHA. In this regard, the five greatest potential sources of impacts from the proposed development to the adjacent riparian corridor and estuarine ESHA are: (1) effects of light trespass from nighttime illumination of the monument; (2) sedimentation from soil materials entrained in stormwater originating at the project site; (3) accidental releases of hazardous materials; (4) introduction of exotic species; and (5) the use of bio-accumulative rodenticides in establishing the monument landscaping.

Lighting Impacts

Night sky light pollution is an emerging regional, national and even international concern. Commission staff research has determined that artificial night lighting can have a variety of significant direct and cumulative effects on flora and fauna, including disruption of light-dark photosynthesis cycles and circadian rhythms, disruption of foraging behaviors and increased risks of predation, and inference with vision and migratory orientation. These impacts can result in reductions in biological productivity, reduce the population of otherwise threatened, endangered, or rare species, elevate incidences of collisions between birds and structures, or cause large numbers of arthropods to fixate on the lighting source attraction to the point of fatal exhaustion, negatively affecting their populations and reproductive success, as well as the food web they support. The Commission staff ecologists note that the effects of night lighting on sensitive habitat and species is both complex and not well understood, nonetheless new research supports the basis for concern and the need to limit light pollution to the extent feasible.

In their book *Ecological Consequences of Artificial Night Lighting*, Rich and Longcore[3] collate and summarize the results of the numerous studies conducted on various fishes and invertebrates, including several of the environmentally sensitive species inhabiting Elk Creek, as to responses to the intensification of nocturnal lighting:

Table Three: Lower Light Thresholds for a Variety of Behaviors Performed by Freshwater Invertebrates and Fish

Organism	Behavior	Threshold (foot-candles)*	References
INVERTEBRATES			
Daphnia	Positive phototaxis	0.00092–0.278	Flik et al. 1997
Mysid shrimp	Negative phototaxis	≥0.000005–0.000037	Gal et al. 1999

[3] Rich, Catherine, Longcore, Travis; Ecological Consequences of Artificial Night Lighting, ©Island Press, 2006, adapted from Table 15.1, p. 373.

Organism	Behavior	Threshold (foot-candles)*	References
Phantom midge	Negative phototaxis	>0.000000037	Forward 1988
Stream insects	Initiation of drift	0.22–2.92	Haney et al. 1983
Stream invertebrates	Maximum stream drift	0.00009–0.0929	Holt and Waters 1967, Bishop 1969
FISH			
Atlantic herring, European plaice	Schooling	0.00929	Blaxter 1975
Kokanee salmon**	Foraging (*Daphnia*)***	0.00929	Koski and Johnson 2002
Pike, coho, salmon, carp, (zooplankton) and minnow	Foraging	0.000009–0.000929	Blaxter 1975
European perch	Foraging (*Daphnia* and phantom midge)	0.00185	Bergman 1988
Rainbow trout	Foraging (drifting stream insects)	0.0027–0.0929	Tanaka 1970, Jenkins et al. 1970
Bream	Foraging (*Daphnia*)	0.00046	Townsend and Risebrow 1982
Brown trout	Foraging (brine shrimp)	0.000929	Robinson and Tash 1979
Rainbow smelt	Negative phototaxis	>0.0185	Appenzeller and Leggett 1995
Bonneville cisco	Negative phototaxis	≥0.00929	Luecke and Wurtsbaugh 1993
Rainbow trout	Emergence from substrate in winter	<0.0929	Contor and Griffith 1995

* Light units, originally presented by authors in lux, converted (1 lux = 0.0929030 foot-candles).
** Young-of-the-year (fingerlings).
*** Names of organisms in parentheses refer to prey of foraging fish.

Further, the authors enumerated additional qualitative behavioral changes associated with changes in nighttime lighting regimes:

- Increased nighttime light intensity measured at lighted building and bridge sites caused *Oncorynchus* sp. fry to delay migration and move to the low velocity and lighted shoreline habitats, with downstream migration being initiated only after light intensity less than 0.1 foot-candle of incidental light was achieved

- While little information is available regarding the effects of artificial light on marine mammals, accounts of increased foraging on salmon by seals under artificial lights has been documented.

- After visual disturbance, salmonid smolts took cover for a longer period than fry and tended to scatter wildly when light was flashed on them at night.

- Although fish are rarely exposed to fluorescent or incandescent lighting under natural habitat conditions, juvenile salmon were found to be attracted to incandescent light when encountering a decrease in ambient light intensity.

- Increased artificial illumination may eliminate or reduce the ability of juvenile salmonids to vertically migrate so as to maintain a constant light environment and avoid detection by predators.

- Increased illumination may also allow normally diurnal predators to continue to forage at night, and aids predatory fish or mammals attacking from below by allowing them to distinguish the dark form of their prey against an illuminated background.

As discussed in the project description findings above, the roughly 500-square-foot monument plaza would be illuminated by several arrays of recessed and fixture-mounted up lights totaling 1,696 watts. The lighting is proposed to be operated from dusk to dawn year-round. The monument project proposes illumination of each of its five flags by a 70-watt recessed landscaping uplight positioned at the base of each flagpole. Individually, this lighting intensity is similar to that used for exterior lighting of residential entries, typically in the 60- to 100-watt range. In addition, 17 additional 70-watt uplights and 4 shielded 39-watt underlights, totaling 1,696 watts, would be placed around and within the monument to illuminate the landscaping trees, the monument centerpiece, and the benches, respectively. The proposed lighting fixtures are detailed below:

Table One: *Point of Honor* Veterans Monument Lighting Schedule

Subject	Luminaire Description	Lamp	Number	Mounting Height
Monument	Metallic Recessed Uplight	70W Metal Halide	5	In-grade
Trees	Stanchion-mounted Architectural Flood Uplight	70W Metal Halide	12	12 inches
Benches / Aisle	Bollard-mounted Shielded Underlight	39W Metal Halide	4	24 inches
Flag Poles	Landscape Recessed Uplight	70W Metal Halide	5	In-grade

The Commission's ecologist, John Dixon PhD, reviewed the proposed project lighting. Dr. Dixon observed that much of the lighting planned for the proposed veteran's monument is directed upward, noting that such uplighting generally does not minimize adverse effects of lighting on habitat areas. Uplighting poses significant hazards to birds in flight. As a result, the Commission has routinely required night lighting to be shielded and directed downwards. However, the applicants contend the uplighting of the flag is essential given the purpose of, and design aesthetics for, the project and assert that illumination of the flag from below is necessary to maintain lighting on the flags in all of their various positions as they are blown about in different directions by the wind.

Dr. Dixon recommends that, to prevent significant adverse impacts to the fish and wildlife habitats within and along Elk Creek, appropriate actions be taken to limit any monument lighting in a manner that would not increase the ambient light levels within and along the watercourse. Such actions could include lighting curfew periods, limitations on the luminescence of the lighting features, and the use of shielding, downcast lighting, and polarized lamp fixtures and lenses to reduce offsite and aerial light transmission. For example, in place of uplighting of the monument trees and flagpoles, sconce and louvered lighting fixtures could be integrated onto the monument facets and within the flagpoles. Similarly, light sensors could be utilized around the

benches to trigger their lighting only when visitors to the monument enter the plaza. Other possible mitigative adaptations include the use of photometric switching to extinguish the lights once a certain darkness threshold is reached, or substituting the proposed floodlight lamps with short-distance, narrow beam light emitting diode (LED) based spotlights with full cutoff "can" shielding.

Project Revisions

Following discussions with Commission staff regarding the results of a preliminary lighting impact study prepared for the project, the applicants revised the initial lighting design to incorporate additional features intended for meeting the no exceedance of ambient light criterion recommended by Dr. Dixon. Adjustments were made to the lighting plan, including the incorporation of shielding on the monument facet lights and setting the landscaping up lights to a mid-throw projection to restrict the cast of these luminaries. In addition, six 15-inch diameter "specimen" conifer trees would be planted along the outboard side of the Harbor Trail to serve as a light shield between the monument and the creek.

A lighting impact study was prepared for the revised project that modeled levels of illumination from the proposed monument's nighttime lighting fixtures, estimating the amount of light for the development that would enter the environmentally sensitive areas adjoining the project site. Based upon the model outputs, the applicant's lighting engineer anticipates the following amounts of additional incidental light generated by the development that would be detectable in proximity of the monument and within the adjoining riparian and estuarine ESHA, in foot-candle (fc) units, varying with clear and foggy conditions:

Table Two: Summary of Results of *Point of Honor* Veterans Monument Revised Photometric Study

Calculation Points	Clear Nighttime Conditions			Foggy Nighttime Conditions		
	Max	Min	Average	Max	Min	Average
At Boundary of Elk Creek	0.0 fc	0.0 fc	0.0 fc	0.0 fc	0.0 fc	0.0 fc
Incident to Elk Creek	0.0 fc	0.0 fc	0.0 fc	0.0 fc	0.0 fc	0.0 fc
Above Site (at 30 feet)	3.2 fc	0.0 fc	0.5 fc	1.5 fc	0.0 fc	0.54 fc
Along Front Street	0.6 fc	0.0 fc	0.3 fc	0.6 fc	0.0 fc	0.19 fc
Along U.S. 101 South	0.4 fc	0.0 fc	0.19 fc	0.2 fc	0.0 fc	0.07 fc

As regards light entry into the adjacent ESHA associated with Elk Creek, the revised lighting impact study observes:

> With the addition of the evergreen trees along the Harbor Trail, the illuminance incident to Elk Creek is 0.0 footcandle for both clear and foggy conditions. These results meet the desired goal set by the Coastal Commission.

The study concludes that:

> [T]he perceived lighting from the Monument would be inconsequential to the surrounding areas… From a professional engineering viewpoint, the proposed lighting levels are appropriate for a project of this size and are not excessive for the illumination of a public monument.

In reviewing the lighting impact study for the revised project, Dr. Dixon reiterated that the ambient light levels within the Elk Creek watercourse need to serve as the threshold metric against which the monument lighting is evaluated. Another environmentally sensitive area outside of the Elk Creek watercourse is located closer to the monument, namely the riparian corridor vegetation comprised of scatter arroyo willow shrubbery adjoining the Harbor Trail. This riparian ESHA is currently subject to significant levels of light trespass from the headlights of vehicles travelling along southbound U.S. 101 and Front Street, and from highway commercial signage and outdoor lighting at levels far in excess of the additional 0.6 foot-candle maximum increased illumination that the impact study indicates the monument lighting would generate in proximity to the willows. In contrast, the Elk Creek watercourse is topographically recessed below the level of the adjacent parklands where its streambanks and riparian corridor serve to shield it from light intrusion.

The results of the lighting impact study for the revised project conclude that no increase in incidental light from the monument would enter Elk Creek with the adjustments to the lighting fixtures and the provision of additional vegetative screening. As the ambient light levels would not increase within and along the Elk Creek watercourse, no significant adverse impact to the fish and wildlife habitats within and along Elk Creek are expected. However, a degree of uncertainty exists with regard to the results of the lighting impacts study. In particular, it was noted that 1.5 foot-candles of illumination on foggy nights would still be anticipated at a 30-foot height above the monument which would be subject to sky glow reflection. Dr. Dixon observes that the lighting impact study was limited to indirect calculations of the illumination that would be produced by the various proposed lighting fixtures, in terms of incidental levels of increased nighttime light into surrounding areas under varying atmospheric conditions with no specific data collected at the site with respect to existing baseline conditions. As a consequence, the study was based solely upon a computer software generated simulation model with the inherent limitations and assumptions associated with such an analytical tool.

When clarification was sought as to whether sky glow reflection on foggy nights would appreciably increase light levels within the Elk Creek watercourse despite the proposed landscape screen and other lighting adjustments, the applicant's lighting engineer deferred to the architecture of the lighting impact simulation software and explained how the effects of fog are determined using the model:

> The use of concentric spheres with a transmittance of 79% and a reflectance of 20% is used to approximate the effects of fog in a lighting environment because the light is scattered by the water droplets suspended in the air. To model each of these droplets is not feasible in a lighting model, so the software manufacturer has recommended the use of concentric spheres. In the model, a series of domes has been drawn around the site centered at the monument. Each dome lets 79% of the incident light through (transmittance) and reflects 20% of the incident light (reflectance). Because of the spherical shape, the light is diffused in many directions similar to the effect of fog. The values used mimic a dense fog…
>
> While some of the uplighting for the flagpole is indeed reflected in the direction of Elk Creek, the lighting in that direction is also reflected and diffused similarly,

> so that no measureable light reaches the boundary. It is important to emphasize the difference between measurable and perceptible light. ***Because a measurement reads 0.0 Fc does not mean that it is completely devoid of light, but that there is no way to accurately measure or model it***. [Emphases added]

The lighting impact study provides evidence that the proposed luminaire adjustments and landscape screening would confine monument site illumination in a manner so as to prevent additional light from entering the Elk Creek watercourse at levels which would impact, significantly degrade, or be incompatible with the continuance of the environmentally sensitive habitat area therein. However, a degree of uncertainty exists as to whether the project will increase ambient light levels in the waters and along the Elk Creek watercourse given the limitations of the impact simulation model utilized in the lighting impact study.

Therefore, the Commission attaches **Special Condition 3** requiring that a light monitoring program for the monument project be submitted for the review and approval of the Executive Director. The program must include monitoring measures to be performed after installation of the monument to verify that the project's nighttime illumination as installed does not exceed the ambient lighting levels in Elk Creek to prevent light emissions at levels harmful to aquatic biological organisms. The condition requires the submission of photometric data to substantiate compliance with the required lighting limitations. Additionally, if exceedance of ambient light levels is found to occur, nighttime lighting of the monument will be suspended until an amendment to the permit is submitted proposing specific measures to be undertaken for reducing incidental lighting trespass from the monument site. As conditioned, the development will be sited and designed to prevent lighting impacts that would significantly degrade the Elk Creek watercourse ESHA and the development will be compatible with continuance of the ESHA.

Sedimentation Impacts

The monument's construction would entail ground disturbing excavation and grading, involving the placement of approximately 50 cubic yards fill materials would be placed to bring the finished elevation to between one to one-and-a-half feet above the surrounding grade. Depending upon how the grading is conducted and final slopes stabilized, eroded soil materials could become entrained in stormwater leaving the site resulting in sedimentation of Elk Creek and other nearby coastal waters. To prevent such potential water quality impacts, the Commission attaches **Special Condition 4**. Special Condition 4 requires that a suite of BMPs be employed in the construction of the monument and walkway including: (a) installing fiber rolls and/or an erosion control blanket with weed-free straw prior to, and maintained throughout, the construction period to contain runoff from construction areas, trap entrained sediment and other pollutants, and prevent discharge of sediment and pollutants to coastal waters and wetlands; (b) removing and disposing of any excess excavated material and construction debris resulting from construction activities at a disposal site outside the coastal zone or within the coastal zone pursuant to a valid coastal development permit; (c) maintaining on-site vegetation to the maximum extent possible during construction activities; (d) limiting all ground disturbing activity to the dry season between April 15th and October 31st; (e) containing all on-site stockpiles of soil and construction debris at all times; (f) replanting any disturbed areas with native vegetation immediately following project completion; (g) implementing site housekeeping practices to prevent, minimize and contain erosion and siltation; and (h) utilizing concrete paving

and grind operational constraints and the use of inlet protection barriers around stormwater grates.

Accidental Release of Hazardous Substances

Construction of the monument will involve grading and paving operations entailing the use of motorized equipment such as back-hoes, excavators, hoists or small cranes, dump trucks, and concrete delivery trucks. Use of such mechanized equipment has associated risks of the accidental release of petroleum based fuels, lubricants, and hydraulic fluids during the course of their use or maintenance. In addition the installation of the plaza and walkway surface improvements may result in releases of highly alkaline concrete products. To minimize such potential impacts, **Special Condition 4** prohibits concrete delivery vehicle wash-out maintenance at the site and requires that measures be employed to prevent concrete grindings, cutting slurry, and paving rinsate from entering drop inlets or sheet-flowing into coastal waters.

Introduction of Exotic Species

To assure that the biological integrity of the project area is maintained, **Special Condition 2** requires that only species appropriate to the site be used for all landscaping, vegetative screening, and reseeding for erosion control. Plantings derived from local genetic stocks are to be used when available. For decorative landscaping around the perimeter of the monument plaza and flanking the walkway, use of invasive species are prohibited. **Special Condition 2** also specifically prohibits the planting of any plant species listed as problematic and/or invasive by the California Native Plant Society, the California Invasive Plant Council, or as may be identified from time to time by the State of California, shall be employed or allowed to naturalize or persist on the site. Furthermore, no plant species listed as a 'noxious weed' by the governments of the State of California or the United States are to be utilized in project landscaping areas.

Anticoagulant-based Pest Control Agents

To help in the establishment of vegetation, rodenticides are sometimes used to prevent rats, moles, voles, and other similar small animals from eating the newly planted saplings. Certain rodenticides, particularly those utilizing blood anticoagulant compounds such as brodifacoum, bromadiolone and diphacinone, have been found to pose significant primary and secondary risks to non-target wildlife present in urban and urban/wildland areas. As the target species are preyed upon by raptors or other environmentally sensitive predators and scavengers, these compounds can bioaccumulate in the animals that have consumed the rodents to concentrations toxic to the ingesting non-target species. To avoid this potential cumulative impact to environmentally sensitive wildlife species, **Special Condition 2** requires that a prohibition on the use of such anticoagulant-based rodenticides in included in the landscaping element of the revised final project plans.

Conclusion

As conditioned to require: (1) submittal of a lighting monitoring program for the review and approval of the Executive Director identifying monitoring measures be undertaken to verify and ensure that no greater illumination of the Elk Creek watercourse will result from the nighttime illumination of the monument (**Special Condition 3**); (2) specific mitigation measures to further protect the environmentally sensitive areas from the construction of the monument and walkway

improvements, including the required use of specified water quality best management practices (**Special Conditions 2e, 4**); (3) restrictions on certain construction related activities and the stockpiling of spill prevention and cleanup materials on site to prevent the accidental release of hazardous substances (**Special Condition 4h**); (4) the use of locally-obtained genetic stocks of landscaping plants and prohibitions on the use of exotic invasive species (**Special Condition 2g**); and (5) that the use of anticoagulant-based rodenticides be prohibited (**Special Condition 2g**), the Commission finds that the development is consistent with Coastal Act Sections 30231, 30232, and 30240, as the monument would be sited and designed to prevent impacts which would significantly degrade coastal water quality and adjacent ESHA, be compatible with the continuance of those adjacent habitat areas, and protect against the spillage or accidental releases of hazardous materials.

F. GEOLOGIC AND FLOOD HAZARDS

Section 30253 of the Coastal Act states, in applicable part:

> *New development shall do all of the following:*
> *(a) Minimize risks to life and property in areas of high geologic, flood, and fire hazard.*
> *(b) Assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area…*

The portion of Beach Front Park in which the monument and walkway would be developed is situated alongside the lower reaches of Elk Creek and the open waters of Crescent City Harbor, at an elevation of 11 to 12 feet above mean sea level (msl) referenced from the 1929 National Geodetic Vertical Datum (NGVD). The primary natural hazards issues affecting the project site include coastal flooding from storm surges and tsunami inundation, as may be exacerbated overtime by sea level rise, and liquefaction related ground failures.

Storm Surge

The Federal Emergency Management Agency's Flood Insurance Rate Map (FEMA-FIRM) Community Panel No. 06015C0214, dated September 26, 2008, designates the area around the U.S. 101 bridge crossing of Elk Creek as being within "Zone VE17," corresponding to a coastal flooding area with potential 100-year recurrence frequency inundation up to a 17-foot depth above sea level with an associated velocity enhanced ("VE") hazard. The plans for the monument and walkway improvements provide no details as to whether the improvements have been designed to meet appropriate coastal flooding standards for non-critical/non-residential structures taking into account the frequency and intensity of the predicted flood risks, showing only very generalized annotated descriptions and diagrammatic representations of the monument's inter-tied and capped tilt-up panel configuration and pier and grade-slab foundation elements. According to the applicant, the preparation of engineering plans is proposed to be deferred to a later time.

With a proposed finished elevation of 12 feet, 6 inches, the monument would be subject to up to approximately 4½-feet of storm surge inundation. As noted above, these flood waters have a velocity component that could exert significant lateral hydro-dynamic force on the monument

centerpiece. In addition, the buoyancy and water-absorption properties of the polystyrene sheets within the centerpiece's interior could exert cumulative force upward and outward on the monuments tilt-up walls and metallic cap once immersed in flood waters that could contribute to compromising the structure's structural integrity.

Tsunami Inundation

The second type of flood hazard associated with the project site is exposure to tsunamis. Crescent City is heavily affected by tsunamis from distant source seismic events and recent evidence suggests that earthquakes may generate large tsunamis every 300 to 700 years along the Cascadia subduction zone, an area off of the Pacific Northwest coast from Cape Mendocino to Puget Sound, where a crustal plate carrying part of the Pacific Ocean is diving under North America.

Crescent City has experienced at least six tsunamis in the last 54 years, the greatest occurring on March 28, 1964. On that date, a series of tsunamis generated from the Richter 9.2 earthquake near Anchorage, Alaska rolled into the Crescent City Harbor and inundated much of the waterfront and downtown area, killing eleven people. The fourth wave was the largest of the set, with a height of approximately 20 to 21 feet. It was preceded by a withdrawal of the water that left the inner harbor almost dry. This fast moving wave capsized 15 fishing boats. Three other boats disappeared, and eight more sunk in the mooring area. Several other boats were washed onto the beach. Extensive damage was inflicted to the piers. The wave covered the entire length of Front Street, and about thirty blocks of Crescent City were devastated. Lumber, automobiles, and other objects carried by the waves were responsible for a good portion of the damage to the buildings in the area. Fires started when the wave picked up a gasoline tank truck and slammed it against electrical wires. The fire spread quickly to the nearby fuel tank farm, which burned for three days. Overall damage was estimated at between $7.5 - 16 million (1964 dollars). Because of the ongoing risk of future tsunami events, much of the City's harbor waterfront remains vacant or has been reserved for open space, parks, and other low-occupancy public facilities uses.

Significant damage or full destruction of the monument improvements in a tsunami event would likely be viewed as a minor loss compared to the extensive devastation that would likely be experienced regionally. Nonetheless, construction of the monument will result in additional structures being placed in a location vulnerable to tsunami inundation and incrementally adding to the volume of material that could potentially break apart under the force of a tsunami wave and become projectiles entrained with other debris in the up-rush and backflow of tsunami runup waters that could further endanger people and property in the path of the tsunami.

Liquefaction

Liquefaction of soils adjacent to or underlying the monument's foundation could result in uneven settlement or lateral movement of the structure that could undermine its integrity and stability. The geotechnical report prepared for the immediately adjoining North Harbor Trail project made note of the shallow groundwater and poorly graded, cohesionless soils (i.e., sands and silts) underlying the project area, finding that these conditions to be conducive to liquefaction during a moderate to strong earthquake. The North Harbor Trail report noted that numerous accounts of this type of deformation have been observed in the Crescent City area as a result of seismically-induced liquefaction. For significant structures, mitigation of this hazard would require that their

design and construction include deep piers or piles to transfer loads to deeper/denser soils situated at depths of more than 20 feet below ground surface (bgs).

However, the North Harbor Trail geotechnical report concluded that the age and density of the sediments indicate a moderate to low potential for liquefaction to occur at this site, that such risks were structural in nature and generally not life-threatening. Other than the transient presence of visitors to the monument who could easily evacuate to a safer location, the development is not intended for long term occupation by persons. Accordingly, any collapse of the structure would not result in significant hazard to people as would the collapse of an occupied structure.

Measures to Minimize Geologic and Flooding Risks and Ensure Stability

The Commission's coastal engineer, Lesley Ewing PE, has reviewed the preliminary building plans for the monument and has identified several measures to minimize coastal flooding and other geologic risks, to assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area. These measures entail the following:

- Require the submittal of final foundation, framing, and structural plans prepared by a State of California-registered civil engineer, using the FEMA-FIRM Flood Zone VE 17 as a standard for the monument's design in terms of withstanding hydro-static and hydro-dynamic loads associated with storm surge coastal flooding.
- Address potential internal forces on the monument structure during coastal flooding associated with the buoyancy and water absorption properties of the monument's foamed polystyrene interior panels.
- As the monument centerpiece is not intended to be human-occupied, it is not necessary to require the structure to be tsunami resilient. Instead, efforts should be concentrated on warning and evacuation measures.

Therefore, to minimum risks of exposure to coastal flooding and assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area, the Commission includes within **Special Condition 2c** requirements that the applicant submit for the review and approval of the Executive Director a structural and foundation element in the revised final project plans. The special condition requires the applicant to demonstrate that the final design of the monument improvements has incorporated adequate design features, as determined by a state-licensed civil engineer, to ensure the structure's competency with respect to exposure to hydro-static and hydro-dynamic loads associated with coastal flooding risk exposure at the project site. Such plans are also required to address measures to ensure that the design of the monument's interior foamed polystyrene panels address potential internal buoyancy and water absorption related swell forces on the structure through appropriate anchoring of the panels, coating or shrouding the materials in waterproofing materials, and/or providing allowances for their swelling when inundated.

Finally, with regards to tsunami warning and evacuation efforts, the project site has adequate siren broadcast coverage from facilities located on the nearby Cultural Center building, and within the Crescent City Harbor complex across Elk River from the site. In addition, as part of the 50th anniversary commemoration of the 1964 Gulf of Alaska Tsunami, the City of Crescent

City plans to install throughout the city a series of temporary public informational kiosks with mobile device readable Quick Response (QR) matrix barcode strips containing addresses to Internet website pages where interpretative information on the tsunami event may be accessed. Locations for the interpretative kiosks include placing a station in proximity to the project site along the Harbor Trail near the U.S. 101 crossing of Elk Creek, where five of the 11 people perished. Accordingly, the Commission finds that adequate tsunami related public information and warning infrastructure exists in the project area to minimize risks to visitors of the hazards of tsunami inundation.

Conclusion

As discussed above, feasible mitigation measures necessary to minimize coastal flooding risks have been required to be incorporated into the development of the monument at the site. Therefore, the Commission finds that the proposed project will minimize risk to life and property from hazards, and assure stability and structural integrity, and neither creates nor contributes significantly to erosion, geologic instability, or destruction of the site or surrounding area, consistent with Section 30253 of the Coastal Act.

G. PROTECTION OF VISUAL RESOURCES

Section 30251 of the Coastal Act requires that the scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance, and requires in applicable part that permitted development be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, and to be visually compatible with the character of surrounding areas. Furthermore, Section 30240(b) of the Coastal Act states that development in areas adjacent to parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those recreation areas.

The project site is located the panhandle shaped easternmost portion of Beach Front Park southwest of the intersection of Front Street with southbound U.S. 101. The shoreline of Lower Elk Creek / inner Crescent City Harbor lies approximate 185 feet from the proposed monument site. The area setting is that of a mixture of public parklands, state highway lanes and medians, resource area open space, and visitor-serving commercial uses situated on a coastal plain of low topographic relief. The project site is visible from several public recreational areas and roads, including the Beach Front Park, along Front Street east of "Dolo Plaza," and from portions of southbound Highway 101. The project site is obscured from view from vantage points further to the south (i.e., Sunset Drive, RV Park Road and Huston Street) by intervening vegetation along Elk Creek. In addition, distant views of the site are afforded from the waters of the harbor. The City of Crescent City LCP does not designate the project area as "highly scenic."

The project has the potential to impact the visual resources in three ways: (1) interference with views to and along the coast and scenic areas from the installation of new structures; (2) significant alteration of the area's landform associated with excavation for construction of the monument improvements; and (3) the introduction of new development that would be incompatible with the character of the surroundings and/or the continuance of the visual aesthetics of adjacent public parklands.

Coastal Views
The first views of the harbor and ocean that southbound travelers on Highway 101 have as they pass through Crescent City are the views afforded through the project site. Only a relatively small west-southwest vista of the harbor waters is afforded through a break in the vegetation along Elk Creek and Beach Front Park for travelers heading along southbound on U.S. 101 (Exhibit 6). Much more extensive views of the harbor and ocean are afforded from vantage points further south within the City, especially as travelers approach Anchor Way on the south side of the harbor and continue southbound past South Beach.

The proposed finished elevation at the base of the monument will be approximately one to 1½ feet above the park and road surface of adjacent Highway 101. At 17 feet, 9 inches above the plaza, the highest point on the monument centerpiece will be approximately 30 feet above sea level. However, only the lower 12 feet of the centerpiece would comprise a solid mass of roughly 20 feet in width, with the balance of the structure comprising statuary with an approximately eight-foot horizontal span. The perimeter tree landscaping and flagpoles would rise to heights of ±16 and 30 feet above grade to a maximum project height of about 41 to 42 feet above sea level.

The construction of the monument will result in blockage of some coastal views from the adjoining street and highway frontages. Distant blue-water views of the harbor from an approximately 100-foot segment of Front Street immediately east of U.S. 101 and from along a roughly 60-foot length of southbound U.S. 101 from the middle of its intersection with Front Street southward would be obscured by the monument's above-grade improvements. However, all views to and along the harbor from these vantage points would not be blocked. Views of the harbor waters over 60- to100-foot lengths of these two public thoroughfares would remain on either side of the monument. Based upon photographic documentation of story poles installed by the applicant and a drive-by analysis of the portions of the adjoining roadways where obstruction of the distant harbor water view would be impeded, and the fleeting nature of the coastal view afforded through the break in the park's tree landscaping, the relative degree of view obstruction from the various publically accessible vantage points in the project's vicinity would be minor (**Exhibit 6**).

Moreover, the Commission observes that the project would be located in a municipal park where access to and around the monument would be fully available to the public. Access around to the back side of the monument and along the North Harbor Trail would continue to be available for coastal visitors wishing to partake of views of the harbor from this locale. Therefore, considering the relative amount of scenic and visual qualities affected, the Commission finds that the development will be sited and designed to protect views to and along the ocean and scenic coastal areas.

Landform Alteration
The proposed monument plaza would have a finished elevation of 12-feet, six-inches above sea level, corresponding to a rise of 1 to 1½ feet higher than the grade of the surrounding parklands. Construction of the monument would require the importing of approximately 50 cubic yards of fill materials to establish this finished elevation. Although much of Beach Front Park is relatively flat, the project area does contain some topographic variety, where fill slopes rising two to three feet have been created in the construction of the neighboring cultural/visitors center,

municipal pool, and children's playground. Accordingly, the Commission finds that the project minimizes landform alteration.

Compatibility with Character of Surroundings

The proposed monument would be erected in a portion of Beach Front Park that lies immediately adjacent to a state highway and related central business district and transient commercial development, including one- and two-story motels, restaurants, and public and quasi-public offices and recreational facilities. The adjoining roadsides represent full-improved two-way street cross sections, with curb, gutter, sidewalk, street lighting, and traffic control signalization. To the south across the North Harbor Trail lay the lower reaches of Elk Creek. Accordingly, with respect to visual character, the project site is within a transitional area between urban development, and natural areas.

Unlike the design of other kinds of development, a chief objective of the design of the monument is to draw visual attention to the monument rather than to simply be aesthetically attractive and congruent with its setting. Toward this goal, the proposed monument includes a variety of decorative elements, including statuary, flagpoles, lighting, and landscaping. These components differ markedly to those employed on surrounding sites. However, from a strictly comparative structural basis, these components are well within the range of building and landscaping heights and bulks of the surrounding area. More specifically, other statuary, monuments, and flagpoles are present in nearby areas of Beach Front Park, including a carved wooden Teddy bear at Front and Play Streets, a tetrapod within Dolo Plaza and a piece of ship's bulkhead at the S.S. Emidio memorial, and other monuments at the entrances to the cultural/visitors center and municipal pool buildings, respectively. With respect to the electrical services connection, the utility lines will be undergrounded to further make the development compatible with the character of the surrounding area, which does not include overhead wires between the intersection of Front and Southbound Highway 101 and Elk Creek. **Special Condition 2d** requires the monument's electrical service line to be placed underground as proposed. Therefore, the Commission finds that these project elements to be compatible with the character of the surrounding area in terms of physical scale and appearance.

With regard to landscaping, the site plan depicts numerous trees and groundcovers to be planted on the periphery of the monument plaza and along the walkway. The proposed landscaping is typical of that currently planted throughout the surrounding municipal park and street sides and as such, would be compatible with the character of the surrounding area. However, other than generically specifying the use of certain "evergreen," cultivated and seasonal plantings, no details were provided as to the particular species to be planted, or whether any irrigation systems for watering the trees and shrubs, or any other landscaping fixtures might also be installed, or the specific types and locations of site illumination to be installed. Therefore, to ensure biological compatibility and the successful establishment and ongoing viability of the proposed landscaping within the project's recreational park setting, the Commission includes within **Special Condition 2g** requirements for the approval of a final landscaping plan addressing provisions for their maintenance, irrigation, replacement, and upkeep.

Conclusion

The Commission thus finds that, as conditioned, the proposed project is consistent with Section 30251 of the Coastal Act as the development will be sited and designed to: (a) to protect views to and along the ocean and scenic coastal areas; (b) minimize the alteration of natural landforms; and (c) be visually compatible with the character of the surrounding area.

H. PUBLIC ACCESS

Section 30210 of the Coastal Act requires that maximum public access shall be provided consistent with public safety needs and the need to protect natural resource areas from overuse. Section 30212 of the Coastal Act requires that access from the nearest public roadway to the shoreline be provided in new development projects except where it is inconsistent with public safety, military security, or protection of fragile coastal resources, or where adequate access exists nearby. Section 30211 requires that development not interfere with the public's right to access gained by use or legislative authorization. Section 30214 of the Coastal Act provides that the public access policies of the Coastal Act shall be implemented in a manner that takes into account the capacity of the site and the fragility of natural resources in the area. In applying Sections 30210, 30211, 30212, and 30214, the Commission is also limited by the need to show that any denial of a permit application based on these sections, or any decision to grant a permit subject to special conditions requiring public access, is necessary to avoid or offset a project's adverse impact on existing or potential access.

The proposed monument project site is located between the first public road and the sea. Therefore, the Commission must consider whether requiring public access is appropriate in this case. The proposed site for the monument development is situated within publicly accessible Beachfront Park, comprising nearly 180 acres of open sports fields, playgrounds, picnicking areas, and other development public recreational and assembly facilities. Immediately adjacent the to the project site, the North Harbor Trail runs along the edge of lower Elk Creek, connecting the monument site with a bridge crossing of the creek and the inner Crescent City Harbor strand to the southwest and southeast. Therefore adequate public access exists.

The project will cause some temporary interference with public access along the North Harbor Trail at the eastern side of Beach Front Park, and along southbound U.S. 101 and Front Street. The construction of the monument improvements would create hazard conditions for those who venture too near the building, staging, and excavation sites, as the work entails the operation of large mechanized equipment and the generation of traffic associated with delivery and material disposal vehicles. To prevent unsafe entry into areas in proximity to the construction and staging sites, City building code standards require that portable chain-link construction fencing or similar barriers be temporarily installed around the perimeter of these areas during the construction phase of the project.

However, this impact on public access use would not be significant as the interruption of access would only occur over a relatively short duration of the project and the affected areas are relatively small. The majority of Beach Front Park, the inner harbor beach areas beyond the monument site, the "B" Street Fishing Pier, and the Battery Point Lighthouse would remain open to public access and recreational use throughout construction of the monument improvements.

To ensure that construction activities do not block access along the North Harbor Trail, **Special Condition No. 2** requires the submittal of final project plans that identify the location of all construction and staging areas and show that all existing walkways will be avoided.

The Commission therefore finds that the project, as proposed to only temporarily exclude public access through the areas immediately adjoining the monument construction site and within the equipment and materials storage and staging areas within the adjoining portions of eastern Beach Front Park to protect the public from potential injuries, is consistent with the public access and coastal recreation policies of the Coastal Act.

I. ARCHAEOLOGICAL RESOURCES

Section 30244 of the Coastal Act states:

> *Where development would adversely impact archeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required.*

The project area includes lands formerly occupied by the Tolowa. The Tolowa territory included the area from the mouth of the Winchuck River (in southern Oregon) to the mouth of Wilson Creek (approximately 17 miles south of Crescent City).

Although no archaeological resources are known to exist in the area, and the area has been severely modified by grading associated with past tsunami restoration and development of Beachfront Park, the site is near the mouth of Elk Creek. The mouths of streams and rivers were often used by indigenous peoples as places for hunting, fishing, food gathering, and camps. To ensure protection of any cultural resources that may be discovered at the site during construction of the physical development authorized as part of the proposed project, the Commission attaches **Special Condition 8**. This condition requires that if an area of cultural deposits is discovered during the course of the project, all construction must cease, and a qualified cultural resource specialist must analyze the significance of the find. To recommence construction following discovery of cultural deposits, the permittee is required to submit a supplementary archaeological plan for the review and approval of the Executive Director, who determines whether the changes are de minimis in nature and scope, or whether an amendment to this permit is required.

Therefore, the Commission finds that the proposed project is consistent with Coastal Act Section 30244, as the proposed development includes reasonable mitigation measures to ensure that construction activities within the project area will not result in significant adverse impacts to archaeological resources.

J. CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

Concurrent with conditional approval of the design review of the monument, on September 10, 2009, the City of Crescent City adopted a Negative Declaration pursuant to CEQA requirements for the proposed project.

Section 13906 of the Commission's administrative regulations requires Coastal Commission approval of coastal development permit applications to be supported by a finding showing the application, as modified by any conditions of approval, is consistent with any applicable requirements of the California Environmental Quality Act (CEQA). Section 21080.5(d)(2)(A) of CEQA prohibits approval of a proposed development if there are any feasible alternatives or feasible mitigation measures available, which would substantially lessen any significant adverse effect the proposed development may have on the environment.

The Commission incorporates its findings on Coastal Act consistency at this point as if set forth in full. As discussed above, the proposed project has been conditioned to be consistent with the policies of the Coastal Act. As specifically discussed in these above findings, which are hereby incorporated by reference, mitigation measures that will minimize or avoid all significant adverse environmental impacts have been required. As conditioned, there are no other feasible alternatives or feasible mitigation measures available which would substantially lessen any significant adverse impacts which the activity may have on the environment. Therefore, the Commission finds that the proposed project, as conditioned to mitigate the identified impacts, is consistent with the requirements of the Coastal Act and to conform to CEQA.

APPENDIX A: SUBSTANTIVE FILE DOCUMENTS

Application file for Coastal Development Permit (CDP) Application No. 1-10-002

Biological Constraints Analysis and Wetland Delineation for City of Crescent City Harbor Trails Project (Mad River Biologists, July 31, 2003/Tamara Gedik February 17, 2006)

Final Preliminary Geotechnical Investigation Report of Findings – Harbor Trail Pedestrian Bridge, Crescent City, California (LACO Associates, May 8, 2006)

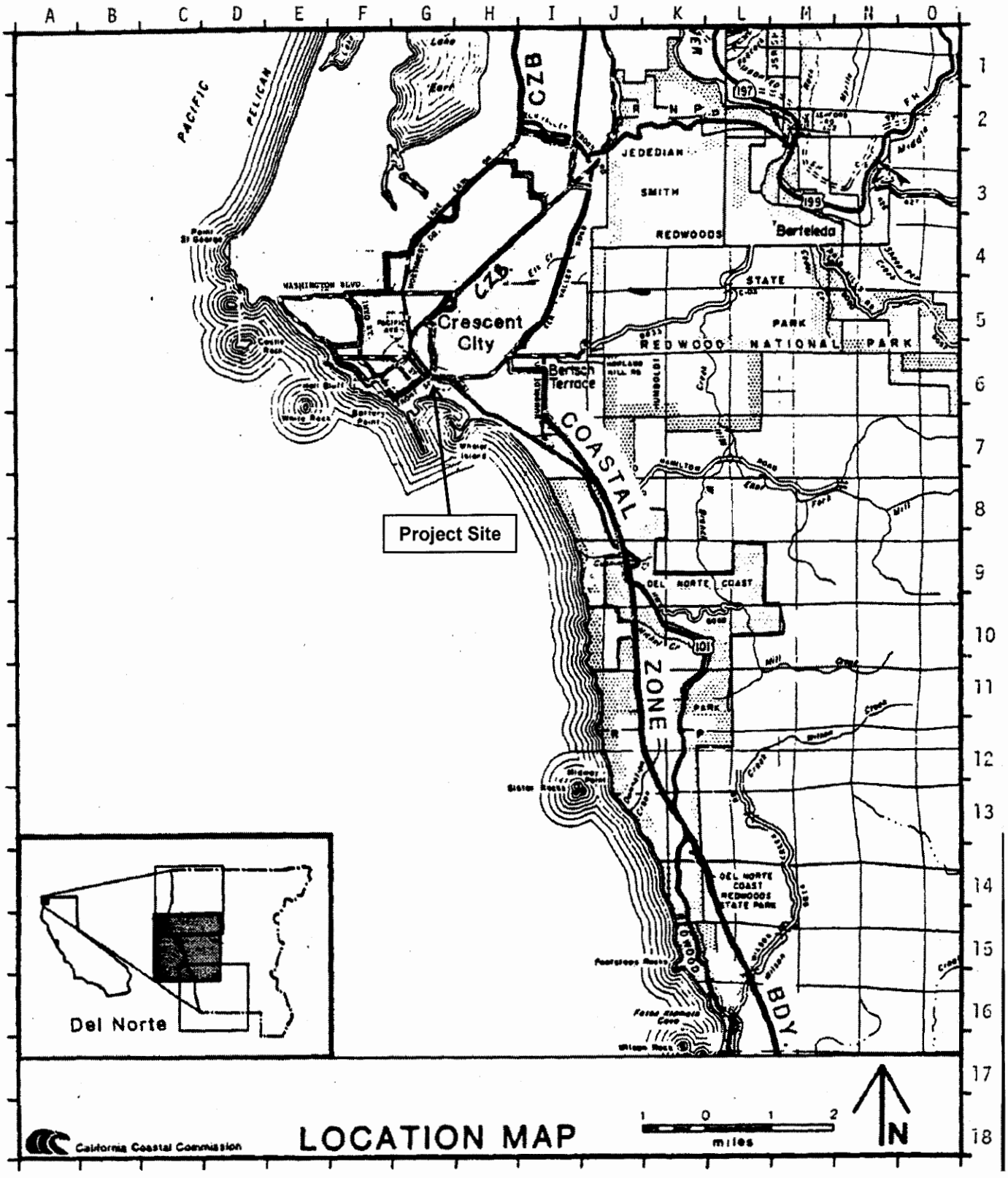
FEMA Flood Insurance Rate Map Community Panel No. 06015C0214E

Tsunami Inundation Map for Emergency Planning – Crescent City Quadrangle

City of Crescent City Local Coastal Program

Crescent City Local Coastal Plan – Draft and Final Program Environmental Impact Report

City of Crescent City – Beachfront Park Master Plan



County of Del Norte

EXHIBIT NO. 1

APPLICATION NO.

1-10-002 – Del Norte Veterans Monument Committee

REGIONAL LOCATION MAP

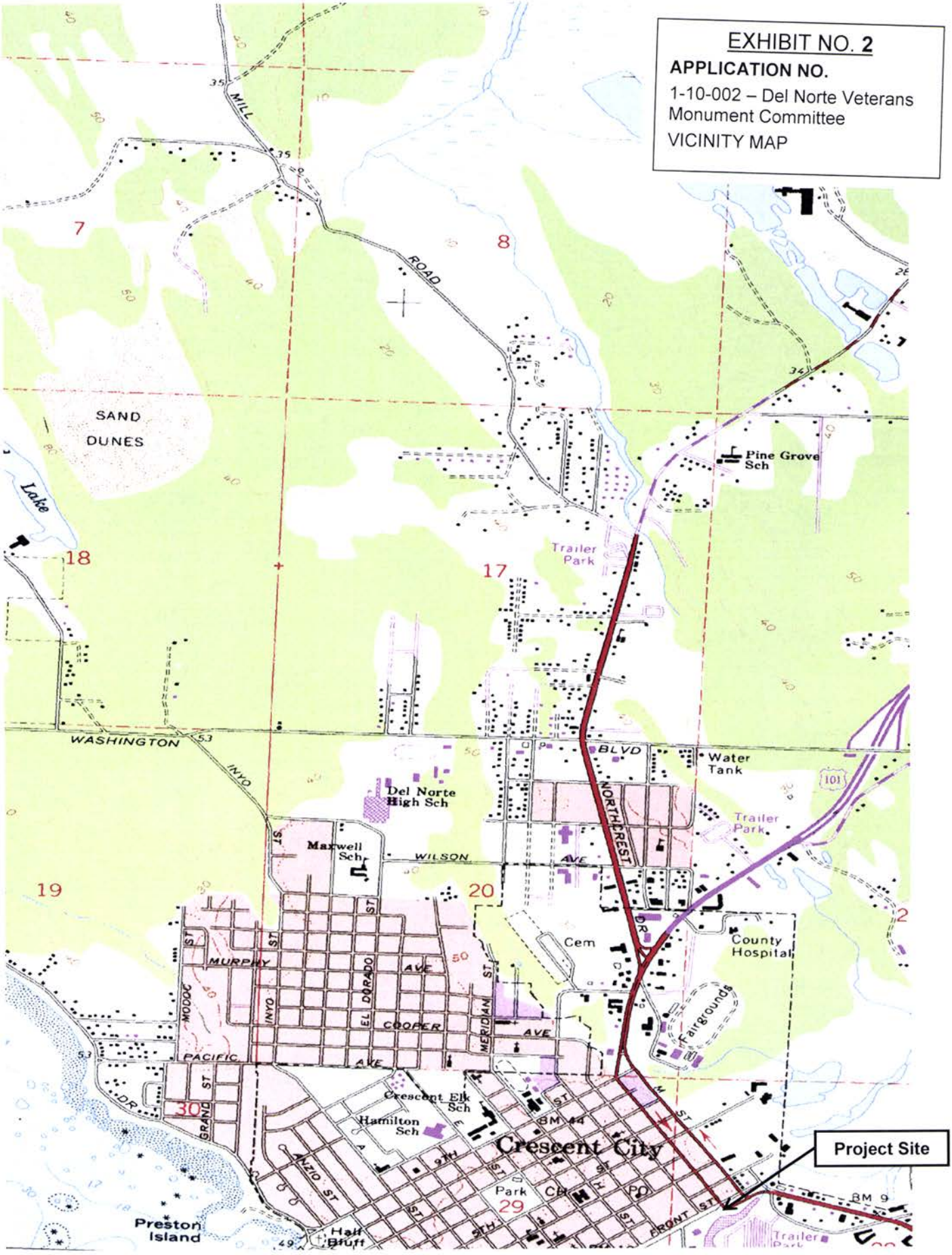


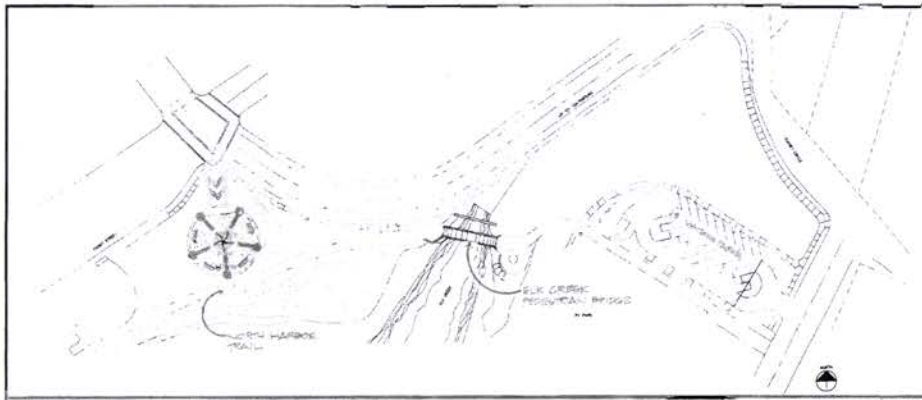
EXHIBIT NO. 2
APPLICATION NO.
1-10-002 – Del Norte Veterans Monument Committee
VICINITY MAP
MILL ROAD
SAND DUNES
Lake
Pine Grove Sch
Trailer Park
WASHINGTON
INYO
Del Norte High Sch
Maxwell Sch
WILSON AVE
BLVD
NORTHCREST DR
Water Tank
Trailer Park
Cem
County Hospital
Fairgrounds
MURPHY
EL DORADO
COOPER AVE
PACIFIC AVE
MODOC
MERIDIAN ST
Crescent Elk Sch
Hamilton Sch
BM 44
Crescent City
Park
CH
PO
FRONT ST
BM 9
Trailer Park
Preston Island
Hall Bluff
Project Site
7
8
17
18
19
20
29
30

EXHIBIT NO. 3

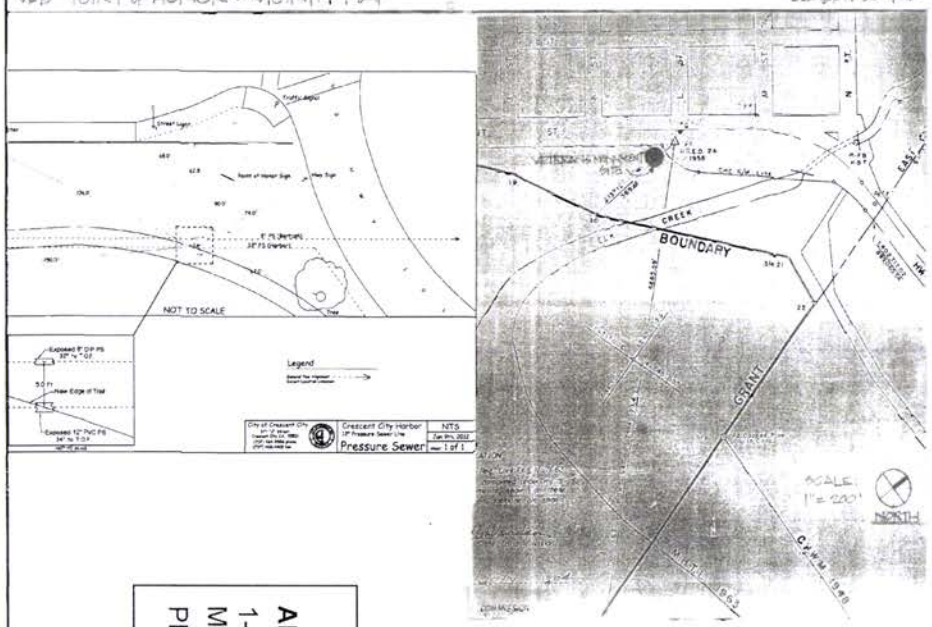
APPLICATION NO.

1-10-002 – Del Norte Veterans Monument Committee

PROJECT SITE AERIAL



VETS "POINT OF HONOR" - VICINITY MAP SCALE: 1/32" = 1'-0"



ASSESSOR'S MAP

SHEET INDEX

OWNER/APPLICANT
CITY OF CRESCENT CITY
377 J STREET
CRESCENT CITY, CA 95531
VETERANS OF DEL NORTE CO./CRESCENT CITY
810 H STREET
CRESCENT CITY, CA 95531
Representative: Harlan Ziegler, President
(707) 464-1469 PHONE
(707) 951-1635 CELL

ARCHITECT
CHARLES SLERT, FAIA
130 HWY 101 N.
CRESCENT CITY, CA 95531
(707) 496-9105
EMAIL: cslert@suddenlink.net

CIVIL ENGINEER
MIKE YOUNG
711 J STREET
CRESCENT CITY, CA 95531
(707) 954-5178 PHONE

LAND SURVEYOR
RICHARD B. DAVIS
100 MINERS CAMP RD,
GASQUET, CA 95531

CODES
2009 CBC / 2009 IBC • ACI CODE • ALL LOCAL, GOVERNING CODES, REGULATION AND INDUSTRY STANDARD 2009 CPC, 2009 CEC

PROJECT DATA

• TOTAL LOT DEVELOPMENT AREA	5,846 SF
• MONUMENT CENTERPIECE AREA	314 SF
• PAVED PLAZA AREA	3,024 SF
• LANDSCAPE AREA	2,272 SF
• EXCAVATION AREA	5,846 SF
• SOIL IMPORT AREA	157,842 CU. YD.

ZONING
- APN 118-020-31 DEL NORTE COUNTY
- OPEN-SPACE/COASTAL ZONE

LEGAL DESCRIPTION
- NOT APPLICABLE

SCOPE OF WORK
•CONSTRUCT NEW 12 FT. HIGH VETERANS PENTAGRAM SHAPE MONUMENT WITH • 8 FT. HIGH EAGLE SCULPTURE ATOP, ASSOCIATED SEATING BENCHES, FLAGPOLES, LIGHTING AND LANDSCAPING

TYPE OF CONSTRUCTION
• "TYPE I" NON-COMBUSTIBLE/FIRE RESISTIVE: GRANITE VENEER CLAD, CAST-IN-PLACE CONCRETE VETERANS MONUMENT "CENTER-PIECE", AND ASSOCIATED POURED CONCRETE PLAZA SLAB AND ACCESS WALKWAY

OCCUPANT
THIS PROJECT REPRESENTS A COMMUNITY "MONUMENT" (NOT A MEMORIAL) TO HONOR THOSE LOCAL MEN AND WHO SERVED OUR COUNTRY IN CURRENT AND PAST CONFLICTS.
NOTE: THERE WILL BE NO PUBLIC ASSEMBLY @ THIS "POINT OF HONOR" COMMUNITY MONUMENT, AS IT IS FOR PERSONAL EXPERIENCE AND REFLECTION.

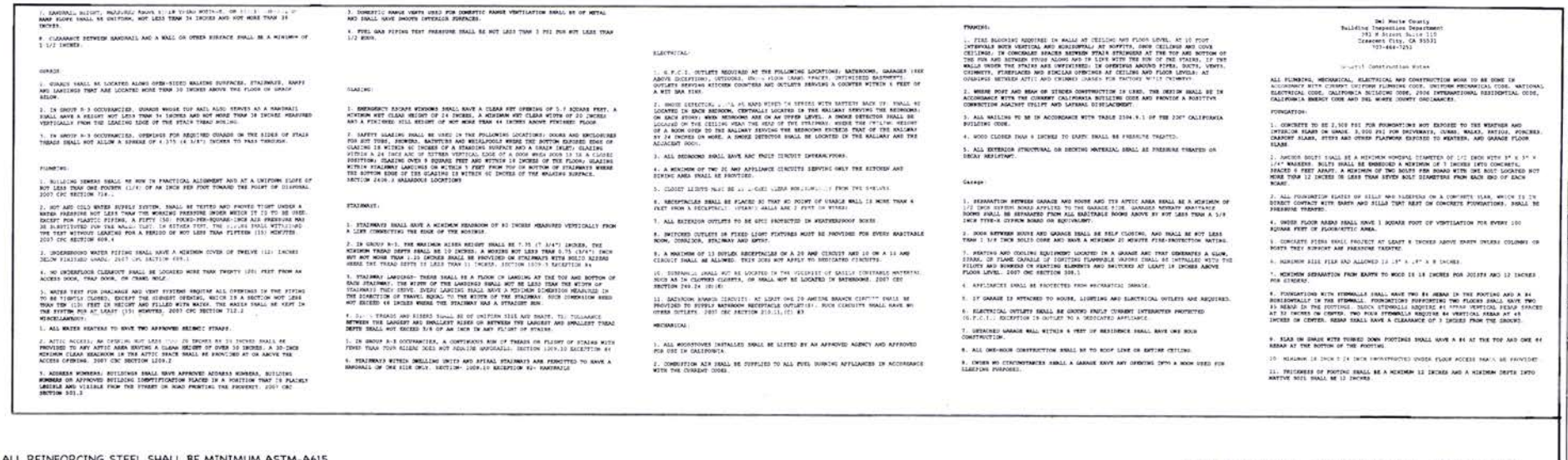
REVISIONS	BY

CHARLES SLERT ASSOCIATES ARCHITECTS
ARCHITECTURE
PLANNING
INTERIORS
FORENSICS

DEL NORTE COUNTY VETERANS "POINT OF HONOR"
@ FRONT ST. & US HWY 101 SOUTH
CRESCENT CITY, CA 95531

Date 4/17/12
Scale
Drawn CHARLES SLERT
Job 1212-10
Sheet T-1
Of Sheets

EXHIBIT NO. 4
APPLICATION NO.
1-10-002 – Del Norte Veterans Monument Committee
PROJECT PLANS (1 of 11)



21. ALL REINFORCING STEEL SHALL BE MINIMUM ASTM-A615 GRADE 60 UNLESS NOTED OTHERWISE. SEE STRUCTURAL DRAWINGS.

22. ALL REINFORCING BARS SHALL BE ACCURATELY AND SECURELY PLACED BEFORE POURING CONCRETE OR APPLYING MORTAR OR GROUT.

23. PROVIDE A MINIMUM OF ONE #4 REINFORCING BAR TOP AND BOTTOM AT ALL BEARING FOOTINGS UNLESS NOTED OTHERWISE ON PLAN OR DETAILS. SEE STRUCTURAL DRAWINGS.

24. ALL CONTINUOUS AND ISOLATED FOOTINGS SHALL BE PLACED A MINIMUM OF 12 INCHES INTO COMPETENT BEARING SOIL OR BEDROCK.

25. THE CONTRACTOR SHALL REFER TO THE DRAWINGS, SCHEDULES AND SPECIFICATIONS AS A WHOLE WHEN DETERMINING THE CONSTRUCTION REQUIREMENTS FOR THE PROJECT.

26. THE CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING ALL AREAS ON THE PROJECT WHICH REQUIRE TOLERANCES BETWEEN ROUGH OPENINGS AND/OR FINISH MATERIALS AND PROVIDE FOR THE PROPER TOLERANCES TO COMPLETE THE CONSTRUCTION IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS AND GOVERNING CODE REQUIREMENTS.

15. PROVIDE MINIMUM CONCRETE COVERAGE OF ALL REINFORCING STEEL OF 3 INCHES FOR CONCRETE CAST AGAINST EARTH OR MINIMUM 2 INCHES FOR ALL FORMED CONCRETE.

16. DRY PACK SHALL BE ONE PART CEMENT, ONE PART SAND AND SUFFICIENT WATER TO ALLOW A SMALL AMOUNT OF PASTE TO COME TO THE SURFACE.

17. SEE FOUNDATION PLAN AND DETAILS FOR SIZE AND PLACEMENT OF REINFORCING STEEL IN ALL FOUNDATIONS AND FOOTINGS.

18. ALL REINFORCING BARS SHALL BE FREE BENDS OR KINKS EXCEPT AS DETAILED ON DRAWINGS AND SHALL BE FREE FROM ANY MATERIAL WHICH MIGHT REDUCE THE BOND. EXCEPT FOR SLABS ON GRADE AND CONTINUOUS FOOTINGS, CONCRETE BLOCKS SHALL NOT BE USED TO SUPPORT OR SPACE REINFORCING BARS.

19. ALL SPLICES IN CONTINUOUS REINFORCING BARS IN FLOORS, WALLS AND FOOTINGS SHALL BE A MINIMUM OF 24 INCHES, UNLESS NOTED OTHERWISE IN DRAWINGS.

20. ALL REINFORCING STEEL, INCLUDING MESH, SHALL BE FIRMLY TIED IN POSITION PRIOR TO THE PLACEMENT OF THE CONCRETE.

8. ALL WORKMANSHIP SHALL BE PERFORMED NEATLY IN ACCORDANCE WITH ACCEPTED BEST PRACTICES OF THE TRADE; INDUSTRY STANDARD OF CARE AND STANDARD OF THE INDUSTRY INVOLVED AND SHALL BE STRAIGHT, PLUMB AND/OR TRUE TO LINE.

9. ALL GRADING AND EXCAVATION WORK SHALL CONFORM TO AND BE EXECUTED UNDER THE SUPERVISION AND DIRECTION OF THE SOILS ENGINEER, AND/OR HIS AGENT OR REPRESENTATIVE.

10. FOOTING TRENCHES SHALL BE FLOODED IMMEDIATELY PRIOR TO POURING CONCRETE.

11. FOUNDATION SHALL BE CARRIED BELOW NATURAL GRADE NOT LESS THAN SHOWN IN DETAILS.

12. TOP OF FOUNDATION SHALL BE MINIMUM OF 6" ABOVE FINISHED GRADE.

13. CONCRETE SHALL BE AS PER ASTM C-150 (AGGREGATES PER ASTN C-33), TYPICAL PORTLAND CEMENT TYPE I. USE GRADE 'C' MIX OF 1:2-1/2:3-1/2 (CEMENT TO SAND TO AGGREGATE) WITH MAXIMUM 7-1/2 GALLONS OF WATER PER SACK OF CEMENT. SEE STRUCTURAL DRAWINGS.

14. ALL CONCRETE SHALL REACH MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF 2000 PSI IN 28 DAYS UNLESS NOTED OTHERWISE. SEE STRUCTURAL DRAWINGS.

PROJECT GENERAL NOTES

1. ALL WORK PERFORMED SHALL CONFORM TO THE 2007 CALIFORNIA BUILDING CODE STANDARDS AND ALL LOCAL BUILDING, ELECTRICAL, PLUMBING AND HEALTH ORDINANCES; WHETHER OR NOT INDICATED ON THE DRAWINGS.

2. THE CONTRACTOR AND ALL SUBCONTRACTORS SHALL INSPECT THE SITE AND VERIFY ALL DIMENSIONS AND CONDITIONS AT THE SITE PRIOR TO COMMENCING WORK, AND SHALL NOTIFY THE ARCHITECT OF ANY DISCREPANCY.

3. NO SUBSTITUTIONS PERMITTED UNLESS APPROVED BY THE ARCHITECT/OWNER.

4. ALL DIMENSIONS ARE TO FACE OF FINISH WALL UNLESS NOTED OTHERWISE.

5. ANY ERRORS, OMISSIONS OR DISCREPANCIES IN PLANS, SPECIFICATIONS OR JOB CONDITIONS; AND ANY CONFLICTS IN THE ABOVE WITH THE GOVERNING BUILDING CODE SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT, PRIOR TO CONSTRUCTION.

6. SUBCONTRACTORS SHALL NEATLY PATCH OR REPAIR ALL AREAS OR ITEMS DAMAGED DURING CONSTRUCTION.

7. AT COMPLETION OF JOB, SITE WILL BE SWEPT CLEAN AND ALL SURFACES SHALL BE CLEANED.

REVISIONS	BY

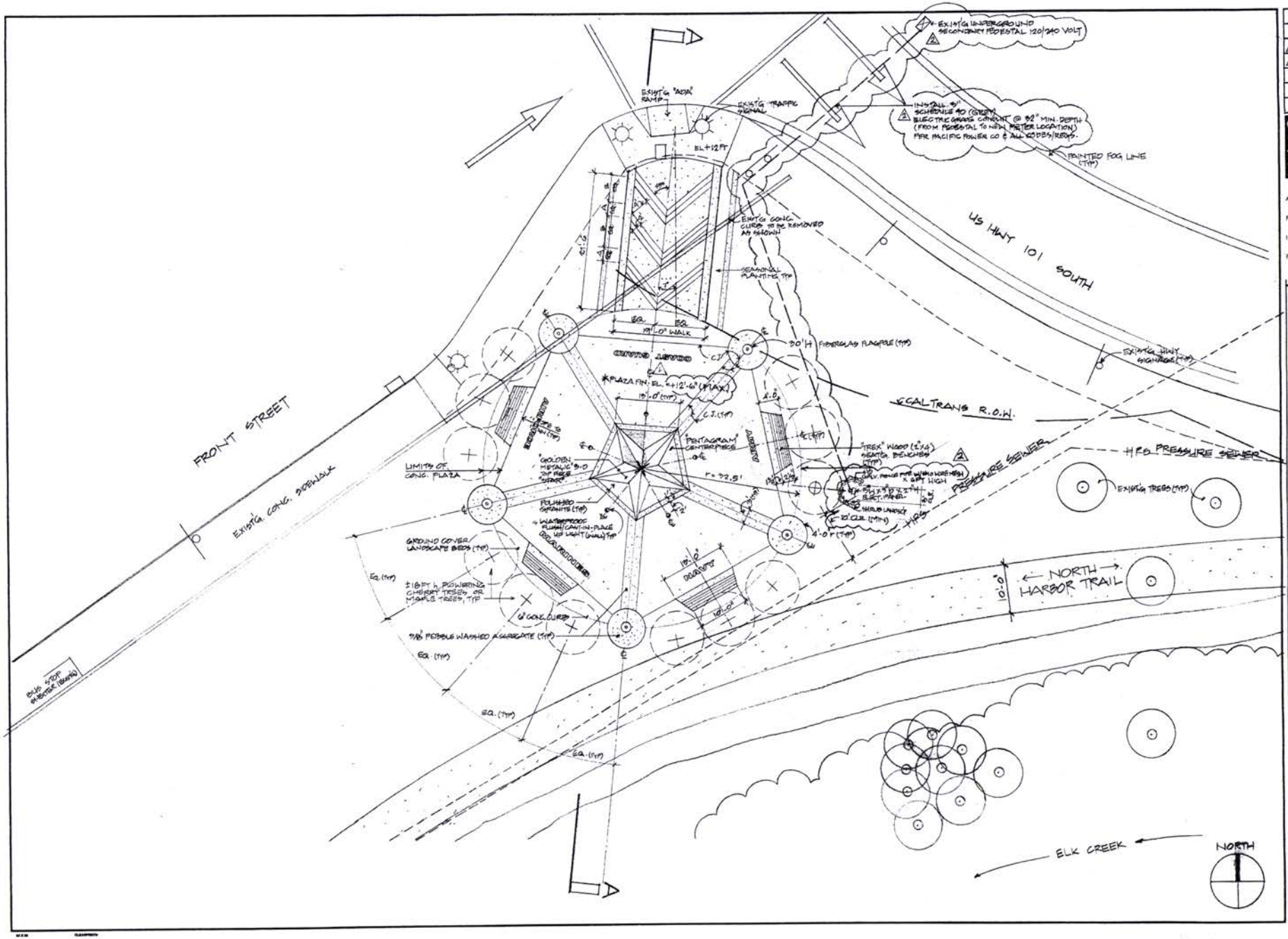
CHARLES SLERT ASSOCIATES ARCHITECTS

ARCHITECTURE
PLANNING
INTERIORS
FORENSICS

DEL NORTE COUNTY VETERANS "POINT OF HONOR"
@ FRONT ST & US HWY 101 SOUTH
CRESCENT CITY, CA 95531

Date 4/17/12
Scale
Drawn CHARLES/SA
Job 2012-10
Sheet T2
Of Sheets

2 of 11



REVISIONS	BY
1 1/10/14	KS
2 2/4/14	KS

CHARLES SLERT ASSOCIATES ARCHITECTS

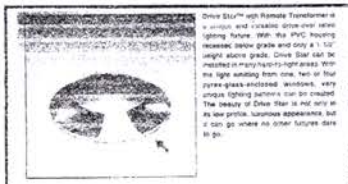
ARCHITECTURE
PLANNING
INTERIORS
FORENSICS

DEL NORTE COUNTY VETERANS "POINT OF HONOR"

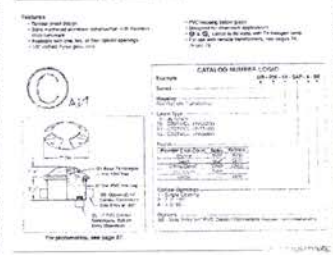
@ FRONT ST. & US HWY 101 SOUTH
CRESCENT CITY, CA 95531

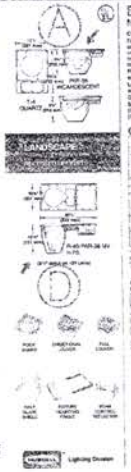
Date 12/17/12
Scale 1/8"=1'-0"
Drawn CHARLESWORTH
Job 2012-10
Sheet A1 Of Sheets

38811



Drive Star™ with Remote Transformer is a unique and durable drive-over series lighting fixture. With the PVC housing recessed below grade and only a 1 1/2" height above grade, Drive Star can be installed in many high-traffic areas. With this light existing from one, two or four pyrex-glass-enclosed windows, very unique lighting patterns can be created. The beauty of Drive Star is not only in its low profile, luxurious appearance, but it can go where no other fixtures dare to go.





BAF/BBF SERIES
METALLIC RECESSED UPLIGHTS

CONSTRUCTION DETAILS

ORDERING INFORMATION*

ACCESSORIES

ELECTRICAL LEGEND

NEW ELECTRIC SERVICE POLE/METER & SWITCHES

(A) METALLIC RECESSED WATERPROOF UP-LIGHT FIXTURE (by: Hubbell or equal) (ALUMINUM, METAL HALIDE WITH BALLAST/TRANSFORMER, GLASS LENS FLAT, TEMPERED, HEAT RESISTANT; W/T-4 **70 WATT (MAX)** QUARTZ LAMP)

(B) ARCHITECTURAL FLOOD LIGHT FIXTURES TO UP-LIGHT EACH TREE (by: White Cap or Kim Lighting or equal) (WHITE FINISH ALUMINUM; 120V E-17 METAL HALIDE 70W MAX)

(C) LHS-7340 AISLE LIGHT FIXTURE (CENTERED BELOW BENCHES, TYP), (by: TEKA Illumination w/PATINA FINISH **OR EQUAL**) or GROUND ILLUMINATOR, by: BEGA #8717 Four Port 39W **(MAX)** G12T6 METAL HALIDE or DRIVE STAR (w/remote transformer) (by: BK Lighting) ALUMINUM FINISH, w/4-optical openings

(D) BAF-0070H-IGX, 70W METAL HALIDE, METALLIC RECESSED UPLIGHT w/TRANSFORMER w/CONVEX LENS (by: Hubbell or equal): to up-light each of 5 (five) fiberglas flag poles (with a maximum throw of light, of 30 vertical feet, typ)

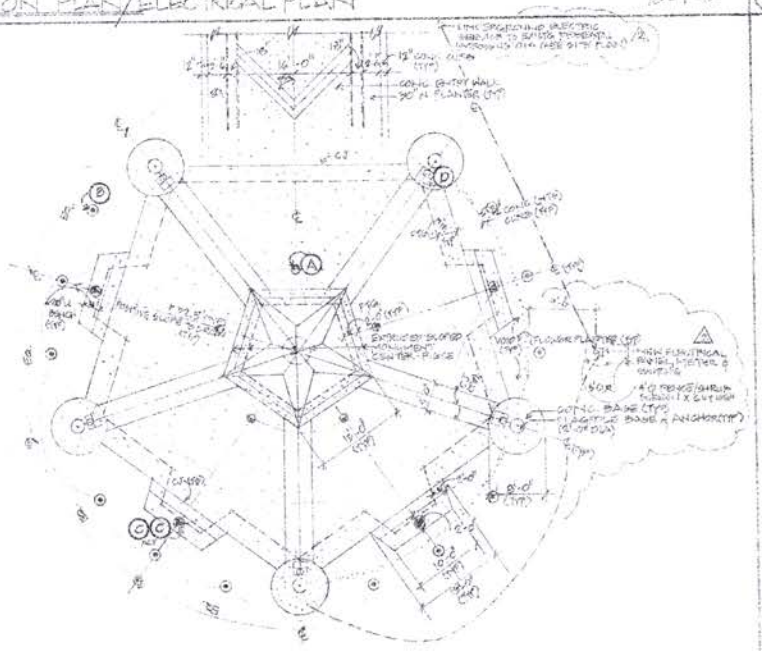
REVISIONS	BY
1 10/14	CG
2 2/14/12	

CHARLES SLERT ASSOCIATES ARCHITECTS
ARCHITECTURE
PLANNING
INTERIORS
FORENSICS

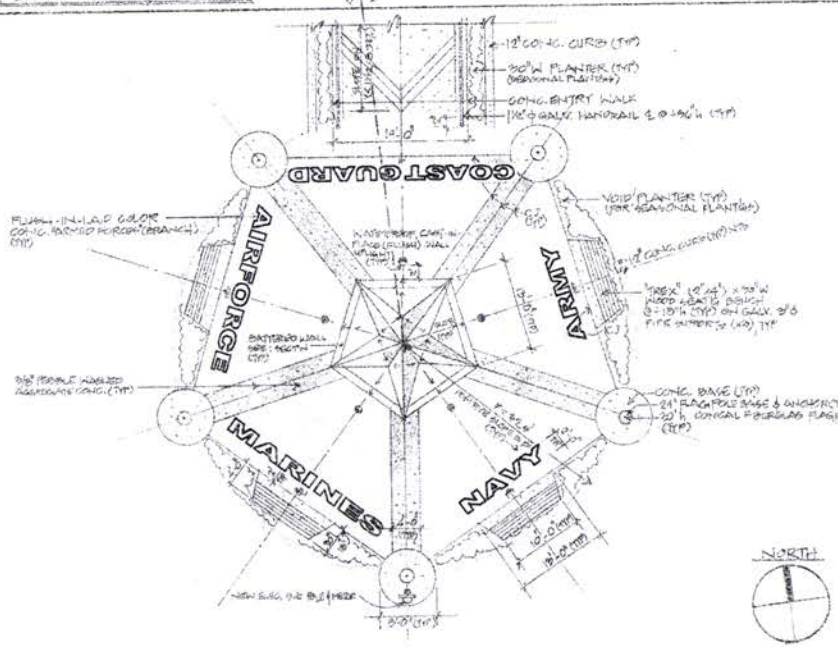
DEL NORTE COUNTY VETERANS "POINT of HONOR"
@ FRONT ST. & HWY 101 SOUTH
CRESCENT CITY, CA 95531

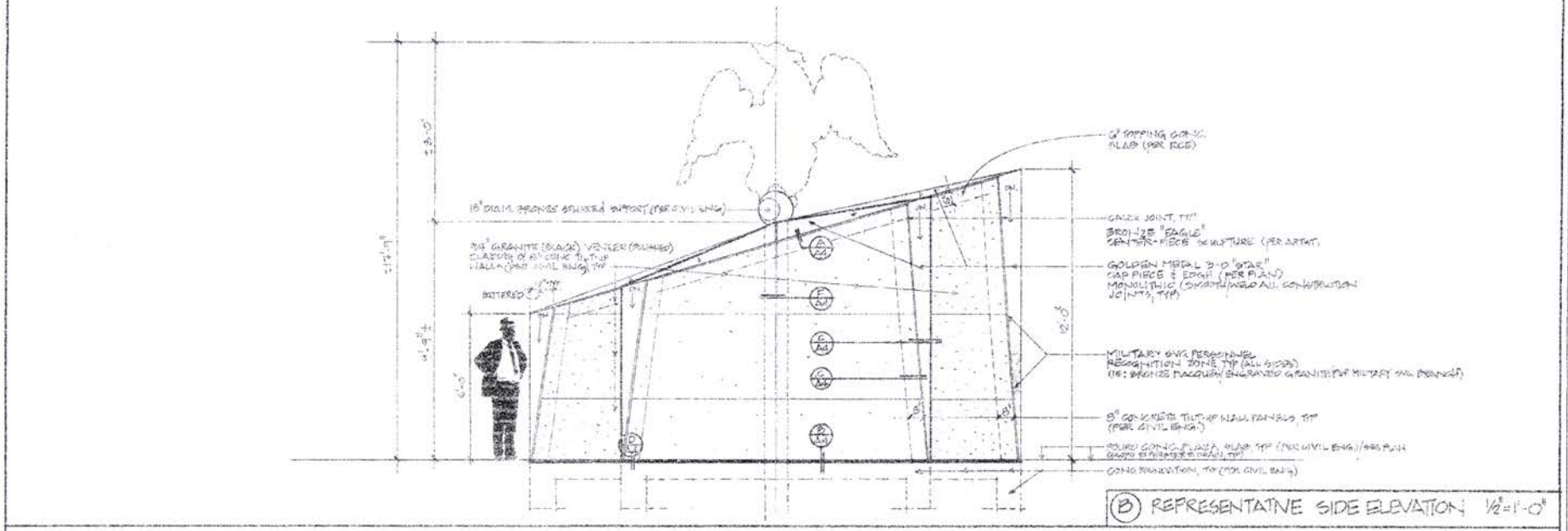
Date 9/14/12
Scale 1/8"
Drawn CG/PLUS SURVEY
Job 2012-10
Sheet A2
Of Sheets

A FOUNDATION PLAN/ELECTRICAL PLAN 1/8"=1'-0"

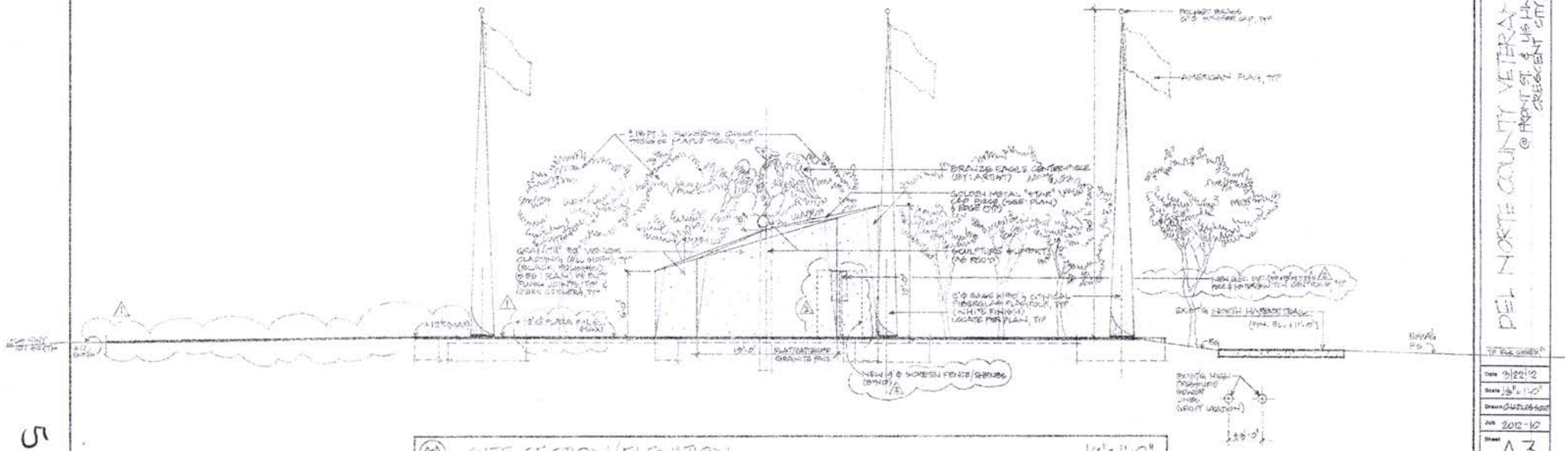


B PLAZA FLOOR PLAN 1/8"=1'-0"





(B) REPRESENTATIVE SIDE ELEVATION 1/2"=1'-0"



(A) SITE SECTION/ELEVATION 1/4"=1'-0"

REVISIONS	BY
1 11/10/14	CS
2 2/4/14	CS

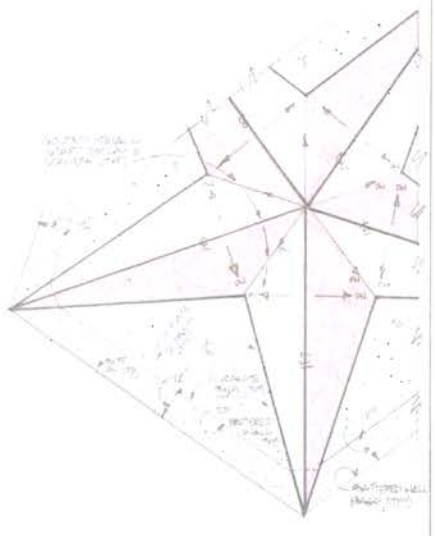
CHARLES SLERT ASSOCIATES ARCHITECTS

ARCHITECTURE
PLANNING
INTERIORS
FORENSICS

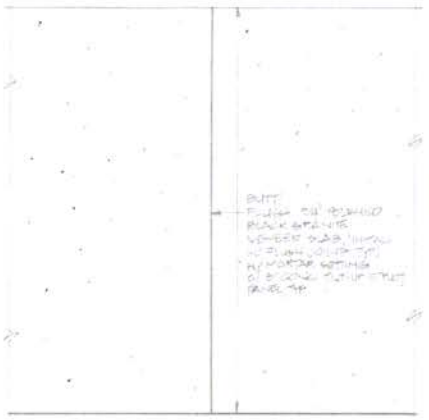
DEL NORTE COUNTY VETERANS "POINT OF HONOR"
@ FRONT ST. & US HWY 101 SOUTH
CRESCENT CITY, CA 95531

Date 3/22/12
Scale 1/8"=1'-0"
Drawn CHARLES SLERT
Job 2012-10
Sheet A3
Of Sheets

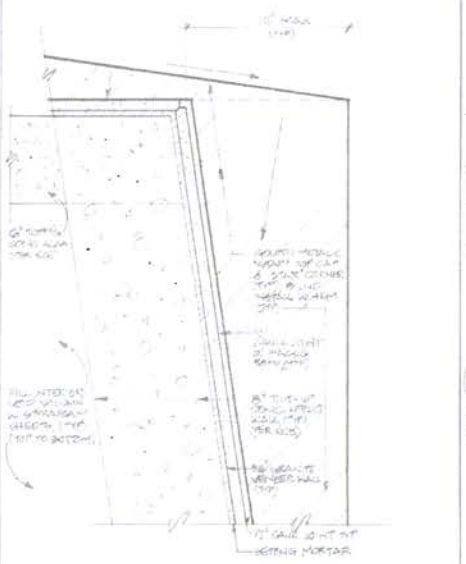
5 of 11



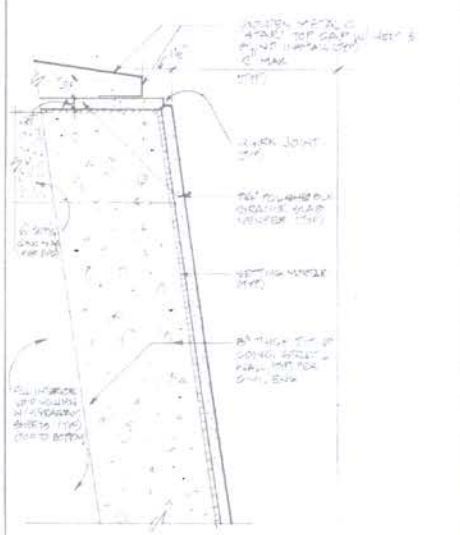
Ⓖ "STAR" TOP CAP & CORNERS (TYP) 1/2"=1'-0"



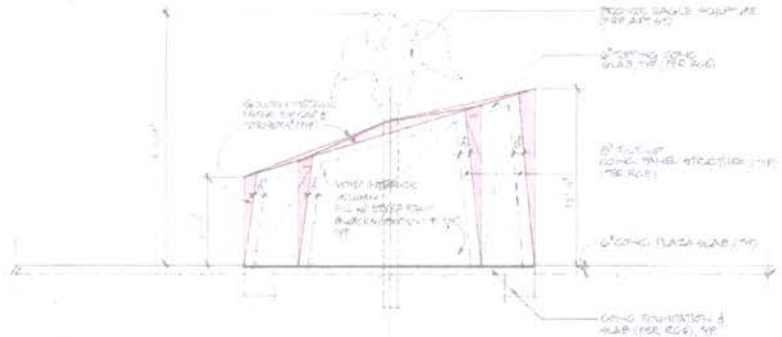
Ⓕ TYPICAL GRANITE VENEER BUTT JOINT



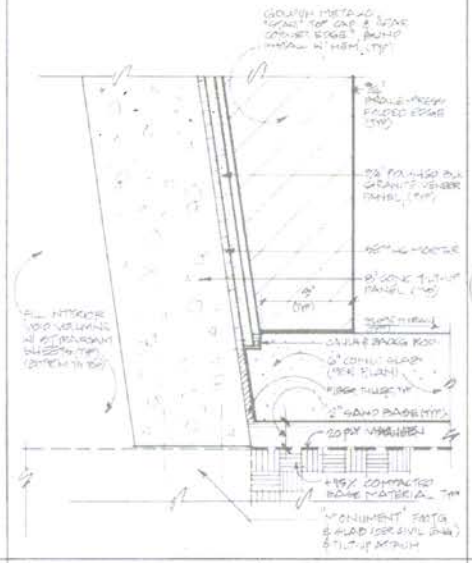
Ⓒ TOP @ "STAR" MONUMENT CORNERS @ WALL



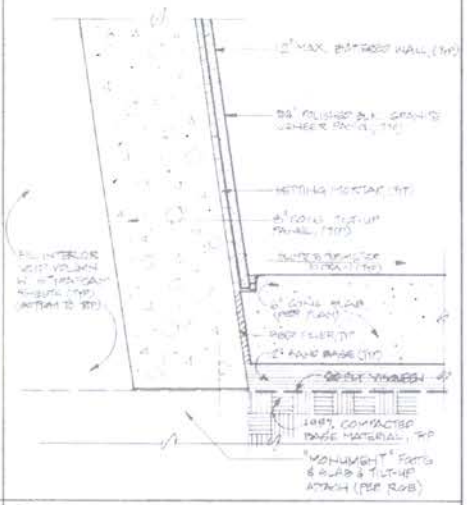
Ⓐ TOP BATTERED MONUMENT WALL, TYP



Ⓔ BATTERED WALL "MONUMENT" - BASIC CROSS SECTION DIAGRAM



Ⓓ BATTERED WALL @ "STAR" CORNER @ BASE



Ⓑ BATTERED WALL BASE @ MID WALL (TYP)

DEL NORTE COUNTY VETERANS "POINT OF HONOR"

@ FRONT ST. & HWY 101

CRESCENT CITY, CA 95531

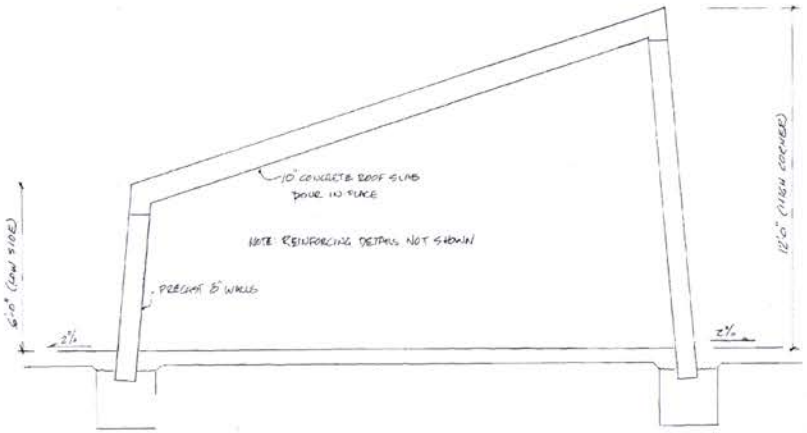
CHARLES SLERT ASSOCIATES ARCHITECTS

ARCHITECTURE
PLANNING
INTERIORS
FORENSICS

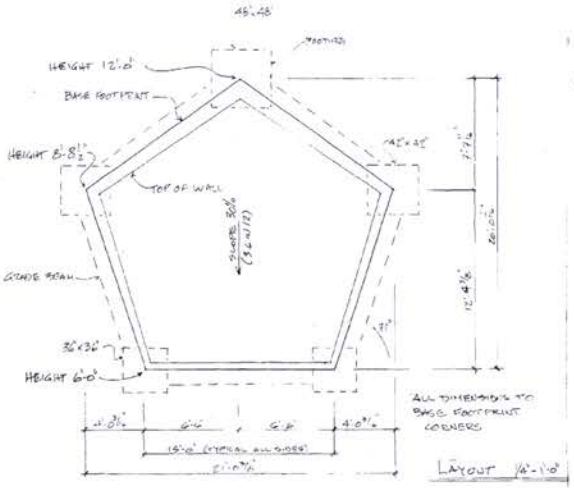
REVISIONS	BY

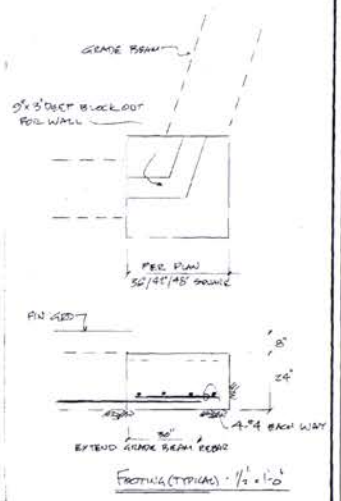
Date 4/24/12
Scale 3/4"=1'-0"
Drawing Path & Name
Job 2012-10
Sheet A4
Of Sheets

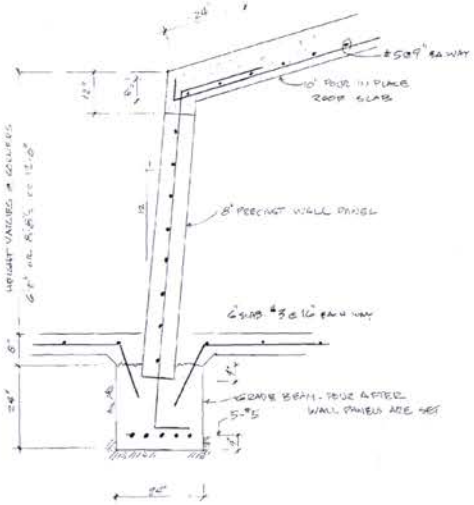
6 of 11



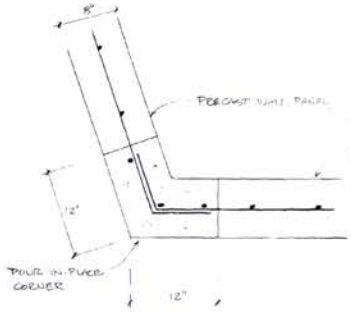
SECTION - 1/2" = 1'-0"



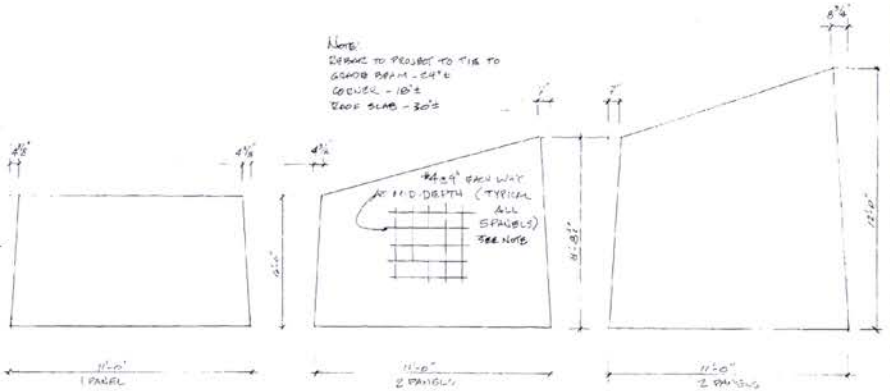




SECTION - 3/4" = 1'-0"



CORNER DETAIL - 1 1/2" = 1'-0"



WALL PANELS - 3/8" = 1'-0"

DEL NORTE COUNTY VETERANS "POINT OF HONOR"
@ FRONT ST & US HWY 101 SOUTH
CRESCENT CITY, CA 95531

REVISIONS	BY

Date 5/3/12
Scale AS NOTED
Drawn M. YOUNG
Job
Sheet S1
01 Sheets

STRUCTURAL NOTES

GENERAL

1. All materials and work shall conform to the International Building Code (IBC), 2006 Edition.
2. The Contractor is responsible for safety, bracing, shoring, ect for the structure during construction.
3. Contractor is responsible for determining the size and location of lifting inserts for tilt-up wall panels.
4. Shoring for roof slab may be left in place. However, if desired by the Contractor and notice given to the Engineer before commencing any work, the Engineer will design a wall or roof opening, no more than 48 inches square, for shoring removal.

SOILS + FOUNDATION

1. Footing design based on allowable soils strength of 1200 pounds per square foot, upon excavation for footings, Engineer to inspect to verify adequacy of foundation soils.
2. Footings shall be placed upon firm undisturbed soil or place on fill that has been compacted to 95% relative density.
3. Bottom of all footings must be level.

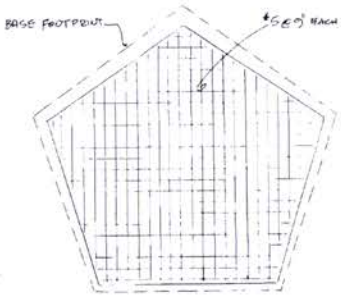
CONCRETE

1. Concrete shall attain a minimum compressive strength of 3000 psi @ 28 days, have a minimum cement content of 6 sacks/cubic yard, and a maximum water/cement ratio of 7.0 gallons per sack of cement.
2. Reinforcing steel shall conform to ASTM A615 Grade 60. Reinforcing steel shall be positioned as shown on the drawings. Splices only permitted where shown or noted on plans. Rebar clearance to be three (3) inches from unformed surfaces against soil, two (2) inches from formed surface against soil, one (1) inch elsewhere.
3. Construction joints shall be placed only where noted on the Drawings. Construction joints shall be cleaned and roughened to expose coarse aggregate.
4. All reinforcing steel, dowels, bolts, anchors, pick-up inserts, ect. to be embedded in concrete shall be securely positioned before placing concrete.

INSPECTIONS

The following inspections are required to verify compliance with the plans. The Contractor shall notify the Engineer at least 24 hours in advance of the inspection time.

1. Immediately upon completion of footing excavation, prior to placement of any reinforcing steel or construction of formwork.
2. Prior to the placement of any structural concrete (footings, walls, roof, ect.).
3. During placement of any structural concrete.
4. During the lifting and placement of pre-cast wall panels.



ROOF SLAB REBAR - 1/4"=1'-0"

REVISIONS	BY

DEL NORTE COUNTY VETERANS "POINT OF HONOR"
@ FRONT ST & US HWY 101 SOUTH
CRESCENT CITY, CA 95531

Date	5/9/12
Scale	1/4" = 1'-0"
Drawn	M. YOUNG
Job	
Sheet	S2
Of	Sheets

9 & 11


Caltrans R/W
60'-0"
Pressure Sewer
Pressure Sewer
Pothole & Verify Pressure Sewer Location -
2 lines
Harbor Trail
10'-0"

C1
1/8"=1'

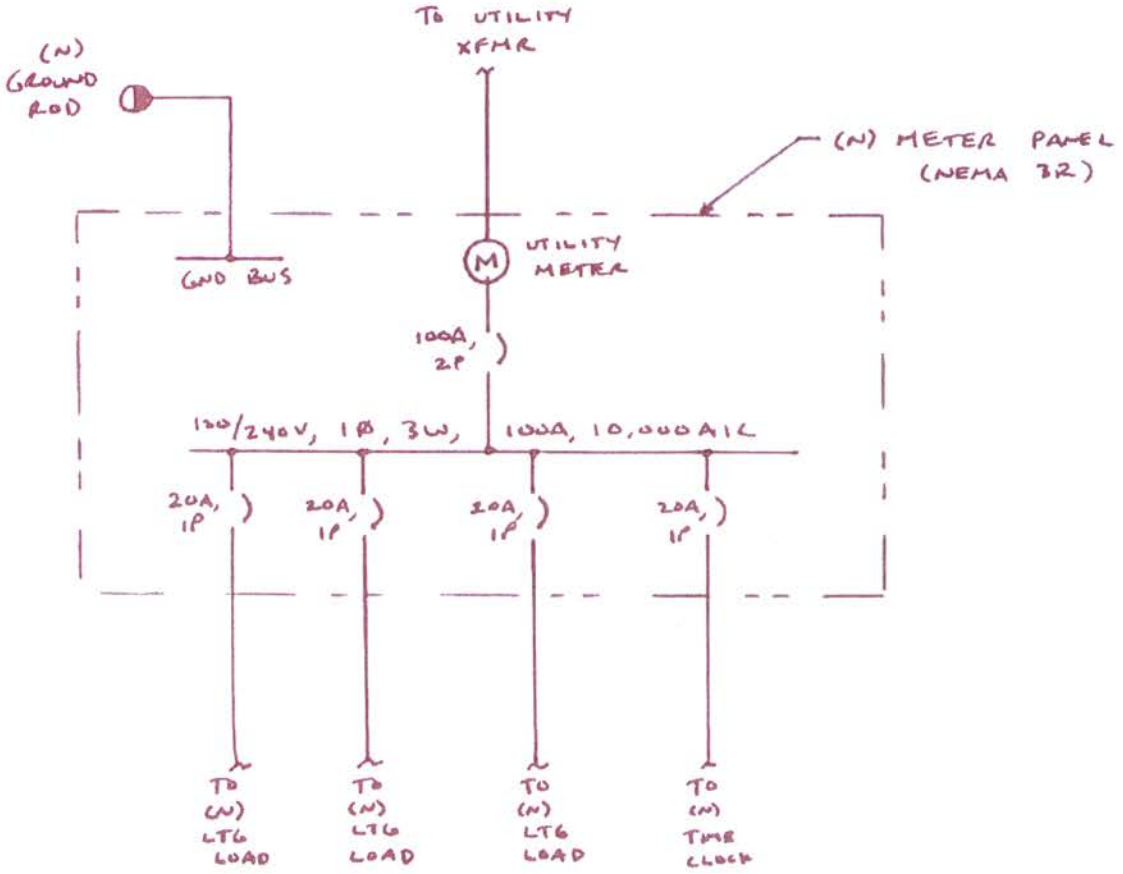
PACE ENGINEERING

Subject POINT OF HONOR

By TB Date 11/15/13

Sheet No. _____ of _____

Project No. 2389.01



ONE-LINE DIAGRAM

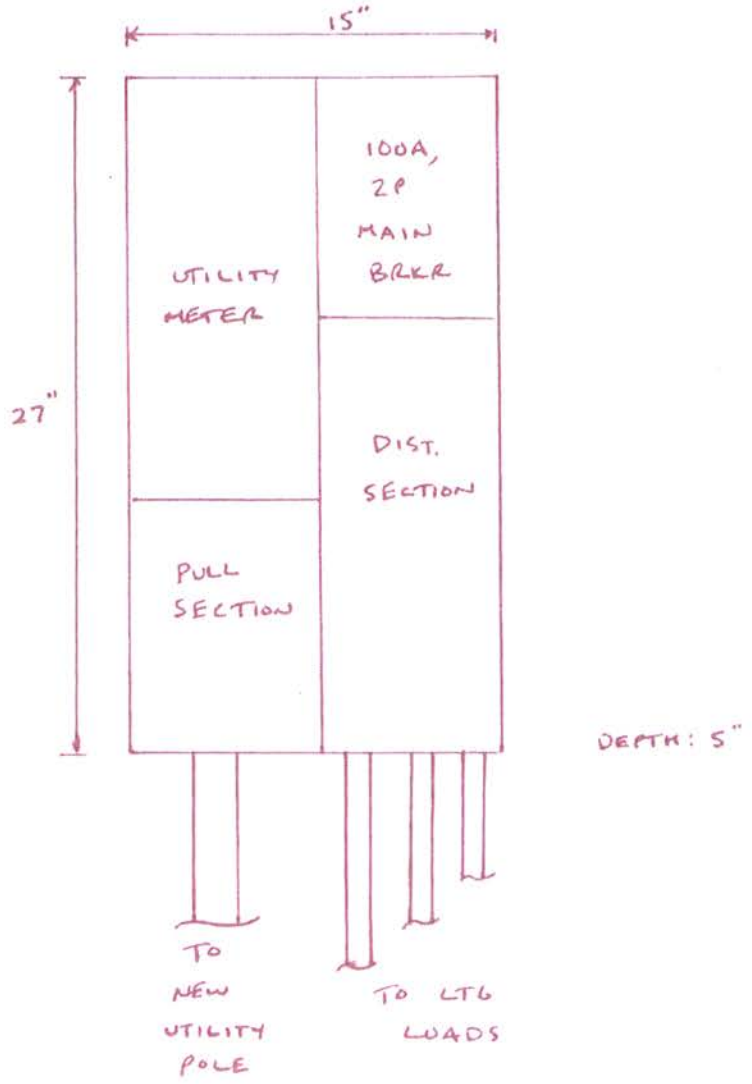
PACE ENGINEERING

Subject POINT OF HONOR

By TB Date 11/15/13

Sheet No of

Project No 2389.01



METER PANEL ELEVATION

N.T.S.

PACE ENGINEERING

February 6, 2014

2389.01

SENT BY EMAIL ONLY
cslert@suddenlink.net

Charles Slert
Charles Slert Associates Architects
469 8th Street
Fortuna, CA 95540

EXHIBIT NO. 5
APPLICATION NO.
1-10-002 – Del Norte Veterans Monument Committee
REVISED PHOTOMETRIC EVALUATION (1 of 13)

Dear Charles,

Subject: Point of Honor Monument – Revised Lighting Impact Study

The purpose of this report is to present the findings from our photometric modeling of the proposed Point of Honor Monument located in Crescent City, CA. Using the data contained herein, the Owner and Authority Having Jurisdiction (AHJ) will be more able to make informed decisions regarding the lighting impacts on the surrounding areas and natural habitats. The comprehensive photometric study was performed using Lighting Analysts Incorporated's AGI32 software. This is an industry standard lighting software tested in compliance with the International Commission on Illumination (CIE) benchmark, CIE 171:2006.

A model of the Monument and surrounding area was created to represent the proposed improvements as accurately as possible. See Figures 1, 2, and 3 at the end of this document for the model of the proposed Monument. The light fixture types and locations included in the study were taken from sheet A2 of the "Del Norte County Veterans 'Point of Honor'" Plans. If a specified light fixture did not have an Illuminating Engineering Society (IES) file (which is necessary to model the fixture) or was no longer in production, an equivalent fixture was used to model the system as accurately as possible. See Table 1 below for a summary of the luminaires used in the model:

Table 1

Type	Description	Lamp	Mounting Height
A	Recessed Uplight (Monument)	70W Metal Halide	In-grade
B	Uplight – Flood (Trees)	70W Metal Halide	12 inches
C	Aisle Fixture (Benches)	39W Metal Halide	24 inches
D	Recessed Uplight (Flag Poles)	70W Metal Halide	In-grade

Light fixture type A is a recess uplight with an integral shield on the backside of the fixture to more accurately deliver light to the monument wall. The light distribution is wide, enabling the single fixture to illuminate the width of the wall without exceeding the height of the wall. Light fixture type B distribution was changed to a medium angle to more effectively illuminate the tree without producing unnecessary light pollution. Light fixture types C and D remain unchanged from the original lighting impact study dated 11/19/13.

The model was generated using nighttime conditions with the assumptions that: 1) the lights would only operate after dark, and 2) any time the lights were on during daylight hours, the perceived lighting from the Monument would be inconsequential to the surrounding areas. The calculations were made along the boundary of the site to measure the illuminance in footcandles (fc) incident to the specified boundary. Refer to Figure 4 at the end of this document for the photometric results.

Of particular interest to the California Coastal Commission was the light both along and incident to Elk Creek, as well as the light above the Monument. See Table 2 below for a summary of the calculated results of the photometric study performed under clear, nighttime sky conditions:

Table 2

Calculation Points	Max	Min	Average
At Boundary of Elk Creek	0.0 fc	0.0 fc	0.0 fc
Incident to Elk Creek	0.0 fc	0.0 fc	0.0 fc
Above Site (at 30 feet)	3.2 fc	0.0 fc	0.5 fc
Along Front Street	0.6 fc	0.0 fc	0.3 fc
Along US-101 South	0.4 fc	0.0 fc	0.19 fc

The California Coastal Commission also requested that the study take into account glare, diffusion, and scattering which would result from foggy conditions. In order to model these conditions, a series of concentric spheres were generated, each with transmittance of 79% and reflectance of 20%. According to the representatives from AGI32, these values provide an accurate modeling condition for an overcast, foggy environment. Refer to Figure 5 at the end of this document for the photometric results. See Table 3 below for a summary of the calculated results of the photometric study performed under foggy, nighttime sky conditions:

Table 3

Calculation Points	Max	Min	Average
At Boundary of Elk Creek	0.0 fc	0.0 fc	0.0 fc
Incident to Elk Creek	0.0 fc	0.0 fc	0.0 fc
Above Site (at 30 feet)	1.5 fc	0.0 fc	0.54 fc
Along Front Street	0.6 fc	0.0 fc	0.19 fc
Along US-101 South	0.2 fc	0.0 fc	0.07 fc

As would be expected, the overall illuminance values generally decreased as a result of the foggy conditions. With the addition of the evergreen trees along the Harbor Trail, the illuminance incident to Elk Creek is 0.0 footcandle for both clear and foggy conditions. These results meet the desired goal set by the Coastal Commission.

Hopefully the contents of this report give all parties involved better insight as to the lighting impacts that can be expected from the proposed lighting improvements. From a professional engineering viewpoint, the proposed lighting levels are appropriate for a project of this size and are not excessive for the illumination of a public monument. If you have any questions about the findings of this study or would like further clarification, please do not hesitate to contact me.

Sincerely,

Tony Bowser
Associate Engineer

REGISTERED PROFESSIONAL ENGINEER
ANTHONY A. BOWSER
No. E017008
Exp. 12/31/14
ELECTRICAL
STATE OF CALIFORNIA

SIGNED: 2/6/14

TB/CB
M:\Jobs\2389.01\Report\REV2\Photometric Study Report REV2.docx

FIGURE 1

FIGURE 2

FIGURE 3

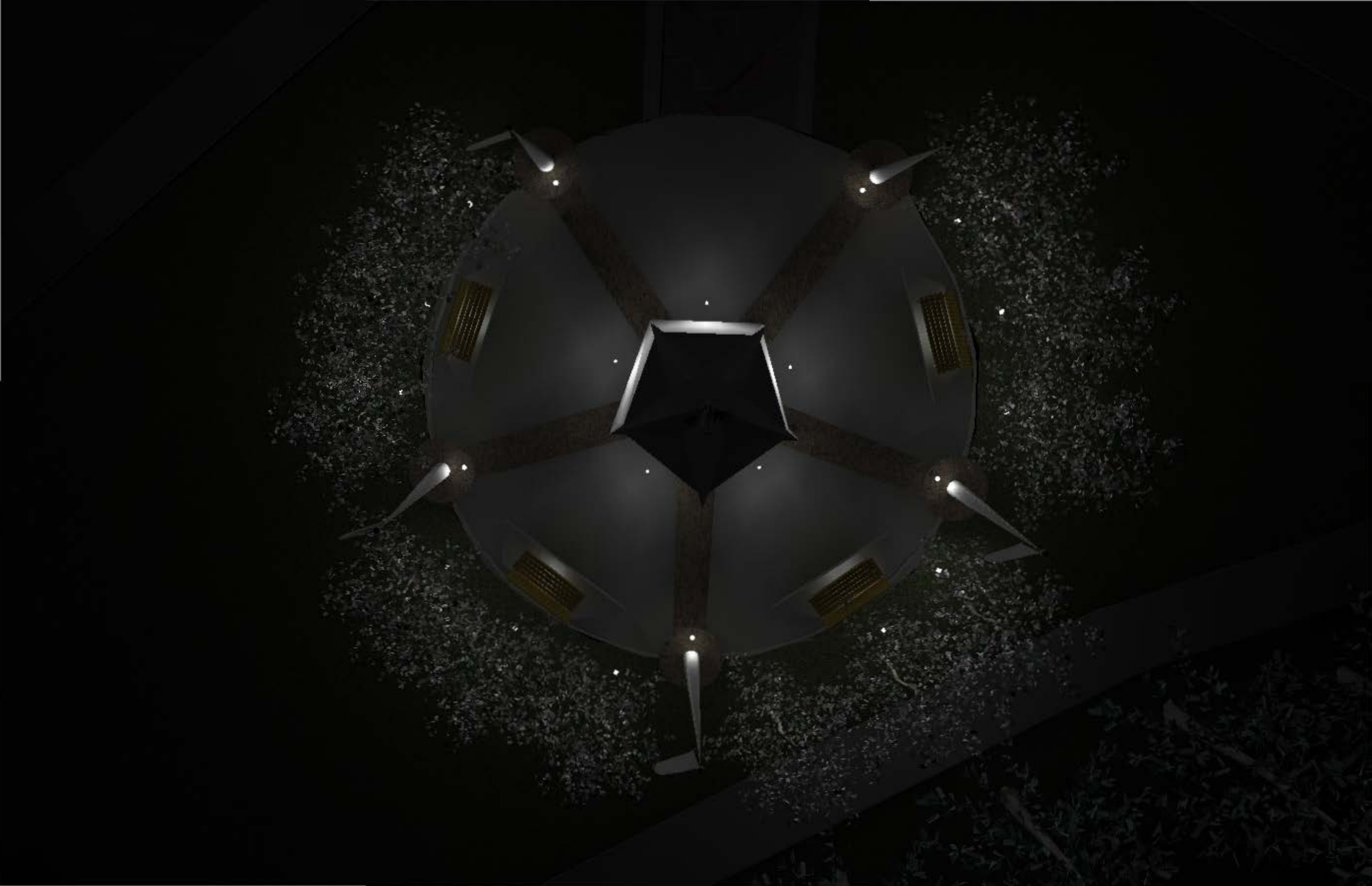
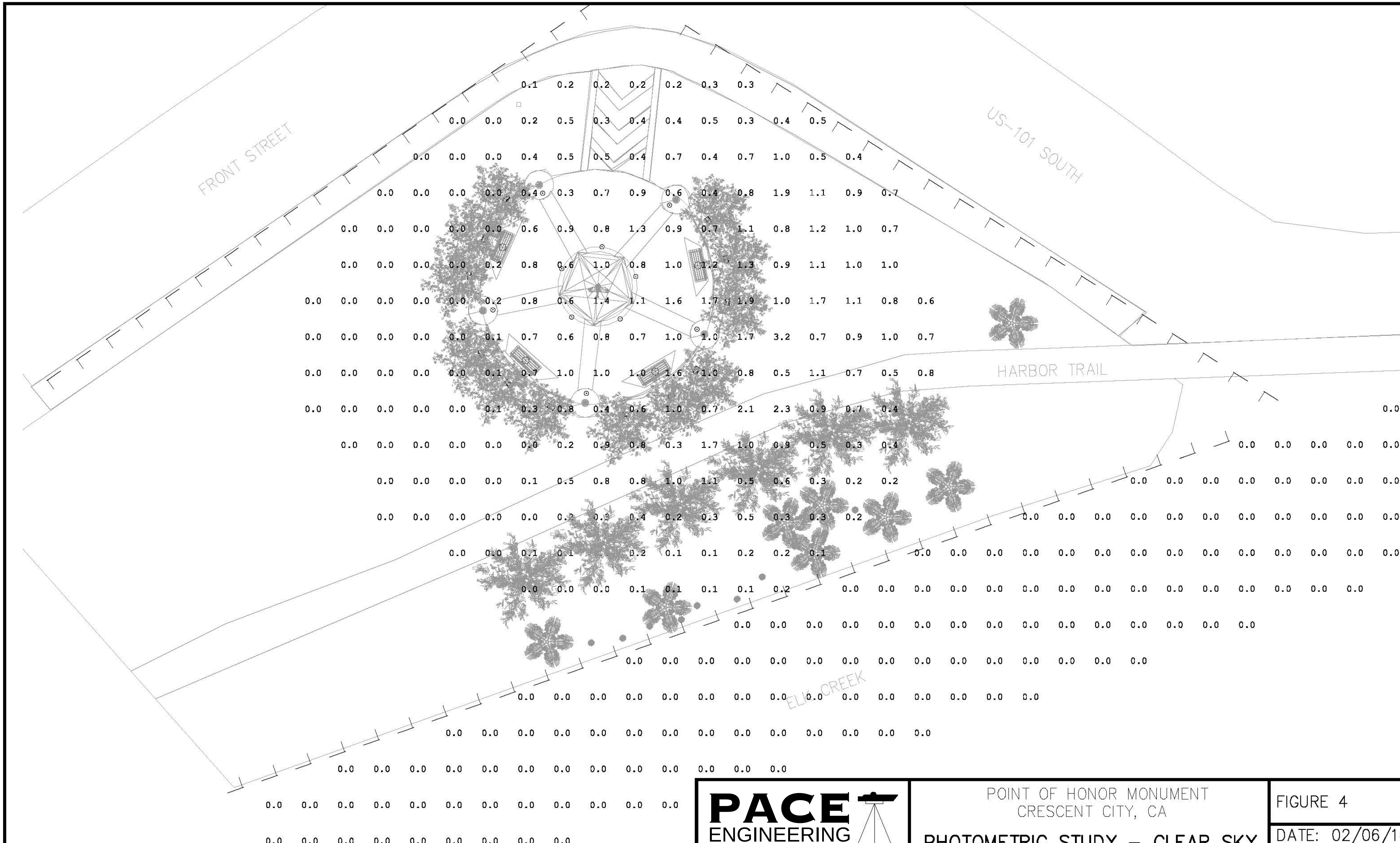


FIGURE 4



PACE ENGINEERING
REDDING, CALIFORNIA

POINT OF HONOR MONUMENT
CRESCENT CITY, CA

PHOTOMETRIC STUDY – CLEAR SKY

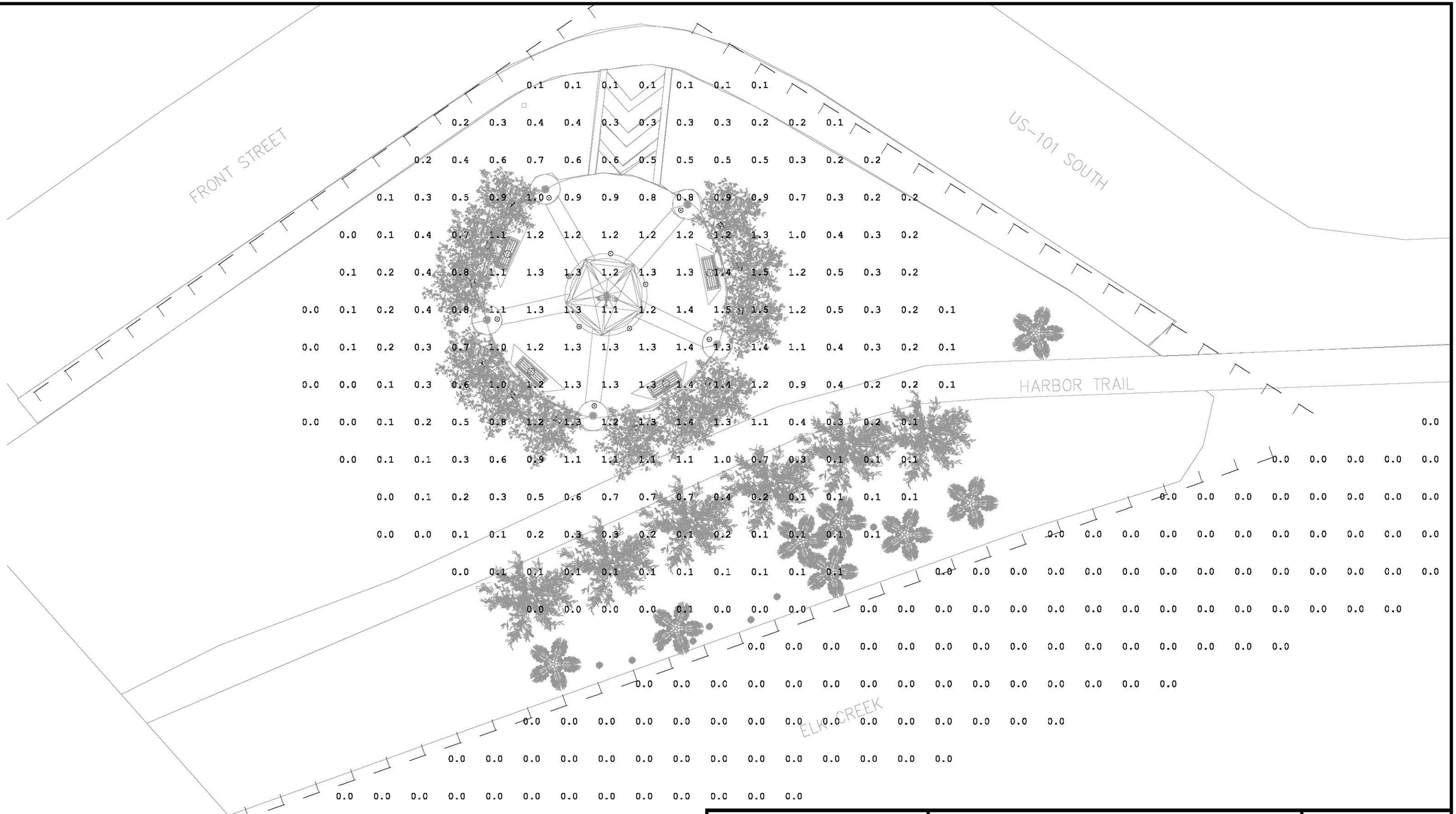
FIGURE 4

DATE: 02/06/14

JOB # 2389.01

Plot Date: February 06, 2014 - 3:45 pm Login Name: cbailey
File Name: M:\Jobs\2389.01\photometrics\REV2\Point of Honor REV2 Photometrics.dwg, Layout: Clear

FIGURE 5



PACE ENGINEERING
REDDING, CALIFORNIA

POINT OF HONOR MONUMENT
CRESCENT CITY, CA

PHOTOMETRIC STUDY – FOGGY

FIGURE 5

DATE: 02/06/14

JOB # 2389.01

Plot Date: February 05, 2014 - 4:45 pm Login Name: dbailey
File Name: M:\Jobs\2389.01\photometrics\REV2\Point of Honor REV2 Photometrics.dwg, Layout: Fog

EXHIBIT NO. **6**

APPLICATION NO.

1-10-002 – Del Norte Veterans Monument Committee

VISUAL RESOURCE IMPACT EVALUATION (1 of 4)

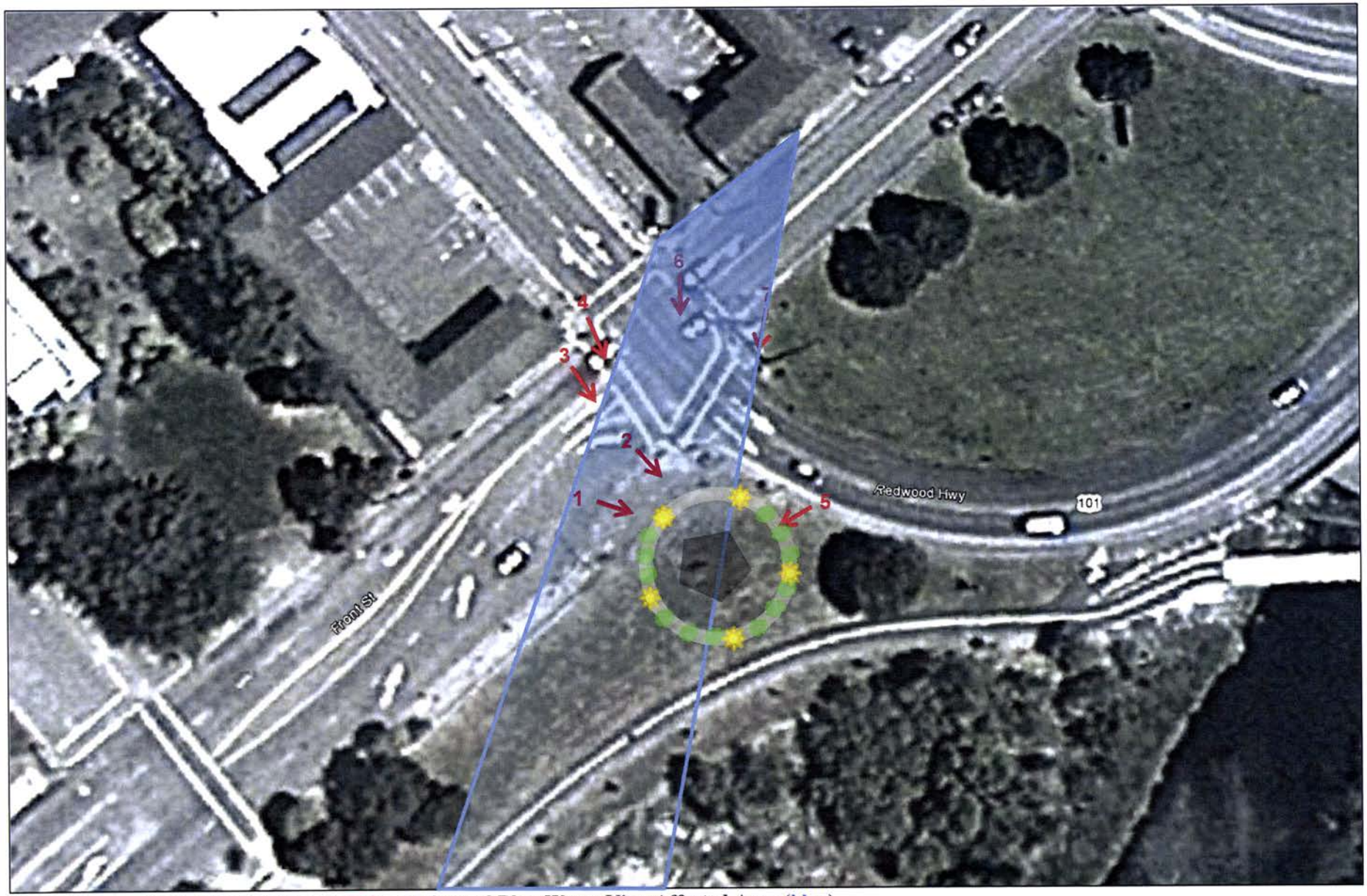


Figure 1: Photo Vantage Points (red) and Coastal Blue-Water View Affected Area (blue)

Photo 1: Looking East-Southeast from Along Eastbound Front Street

Photo 2: Looking Southeast from Eastbound Front Street at Hwy 101

3 of 4

Photo 3: Looking Southeast from Westbound Front Street at Hwy 101

Photo 4: Looking South from Westbound Front Street at Hwy 101

Photo 5: Looking West-Southwest from Along Southbound Hwy 101

Photo 6: Looking South from NEX Front Street at Southbound Hwy 101

Photo 7: Looking South-Southwest from Eastbound Front Street at Hwy 101