Grounds Review and Staffing Analysis

for: Example District

Submitted to:

Director Maintenance, Operations, and Transportation

2/13/2025

Director Maintenance, Operations, and Transportation
Unified School District

Thank you for giving SMA the opportunity to review your Grounds Operations.

The focus of this support has been to give you management tools to improve your Grounds Program. The major undertakings are:

1. The refined plotting of Grounds Operations workload into an annual calendar.
2. Expanding the calendar review by incorporating pivot charts along with a dashboard.
3. Formation of a work verification database tool or verification using planned maintenance work orders.
4. Forming methods and tools for on-going quality monitoring, by use of Google Forms and Sheets.

We try to seek objective data about the real resources and issues of your Grounds Operations, however no matter how diligent we are the fact remains that we won't see all your needs with full clarity. Please realize that your grounds operations always require detailed ongoing refinement of these systems.

Our goal is to continue to be your support team in the improvement of facility services. We look forward to helping you accomplish excellence in this vital part of your district.

Sincerely,

Michael Stapleton
Service Management Assist, LLC.

Table of Contents for the Grounds Review and Staffing Analysis

The Grounds Program Analysis Process:

The steps to develop your analysis:

Meetings to interview your Grounds people

Mike Stapleton conducted patterned interviews via web meetings and Internet forms with your grounds supervisor and employees February 4th and 5th.

Your Grounds Supervisor provided necessary information such as: Grounds Position Summary, typical duties currently performed for grounds upkeep.

Patterned interviews were conducted to help determine the types of grounds tasks performed for each site and a sense of the amount of time the employees required to provide acceptable quality.

We began to populate the rough draft of an annual grounds calendar for each site including task descriptions & time estimates.

Interviews of grounds employees to for improvement suggestions & current levels of program support

Inventory of Sites

The site plots were measured by zones, then categorized by area type. This data is entered in the inventory section of our software.
The Grounds Position Summary was posted in the software.
The calendar section of the software was populated with the field interview data & enhanced by the inventory listings.

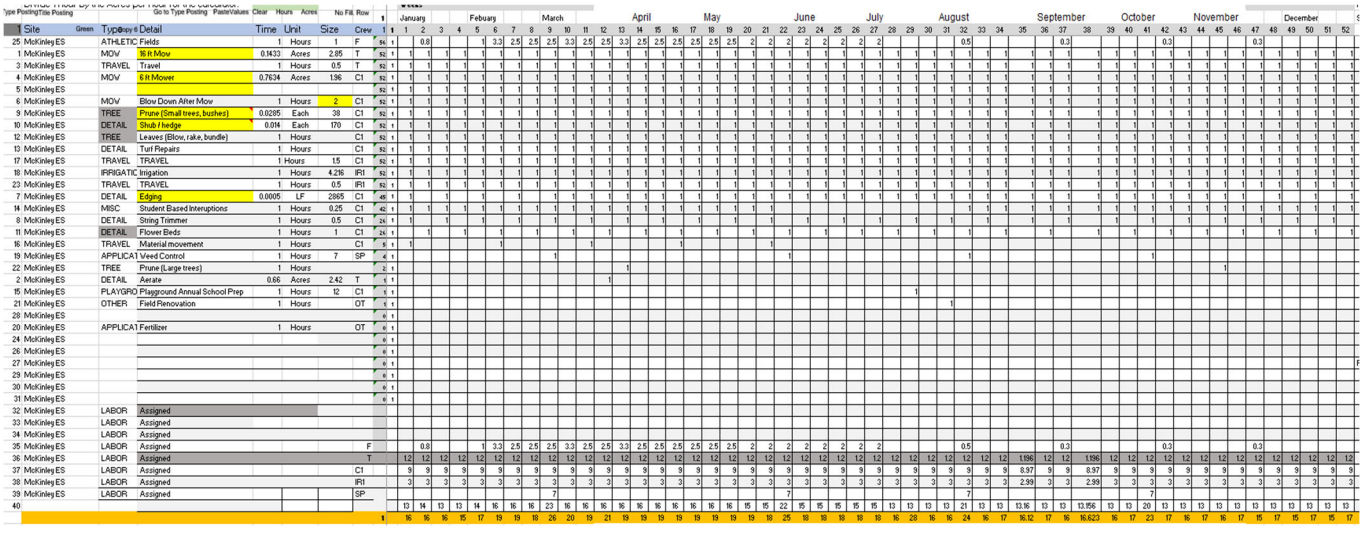
Example of the Madison inventory sheet:

Grounds Area Inventory				231.33	0	0.00%			
#	Site	Description	Square Ft	Acres	A-M	Restore	Edging	Trees	Shrubs
1	Madison ES	Normal	7,621	0.17	S	716	577	30	45
2	Madison ES	Normal	128	0.00	S	717	544		
3	Madison ES	Normal	20	0.00	S	718	151		
4	Madison ES	Normal	20	0.00	S	719	1002		
5	Madison ES	Normal	20	0.00	S	720	26		
6	Madison ES	Normal	20	0.00	S	721	29		
7	Madison ES	Normal	20	0.00	S	722	225		
8	Madison ES	Normal	20	0.00	S	723	491		
9	Madison ES	Normal	771	0.02	S	724	124		
10	Madison ES	Normal	2,999	0.07	S	725	191		
11	Madison ES	Normal	90	0.00	S	726	527		
12	Madison ES	Normal	90	0.00	S	727	426		
13	Madison ES	Normal	90	0.00	S	728	372		
14	Madison ES	Normal	90	0.00	S	729	518		
15	Madison ES	Normal	90	0.00	S	730			
16	Madison ES	Normal	90	0.00	S	731			
17	Madison ES	Normal	775	0.02	S	732			
18	Madison ES	Normal	1,548	0.04	S	733			
19	Madison ES	Normal	7,387	0.17	S	734			
20	Madison ES	Normal	10,745	0.25	S	735			
21	Madison ES	Normal	1,174	0.03	S	736			
22	Madison ES	Normal	1,174	0.03	S	737			
23	Madison ES	Normal	681	0.02	S	738			
24	Madison ES	Normal	3,500	0.08	S	739			
25	Madison ES	ATHLETIC	15,274	0.35	S	740			
26	Madison ES	ATHLETIC	242,734	5.57	L	741			
27	Madison ES	ATHLETIC	15,448	0.35	S	742			
28	Madison ES	ATHLETIC	173,217	3.98	L	743			
29	Madison ES	Normal	21,944	0.50	L	744			
30	Madison ES	Normal	2,947	0.07	S	745			
31	Madison ES	Normal	1,765	0.04	S	746			
32	Madison ES	Normal	430	0.01	S	747			
33	Madison ES	Normal	430	0.01	S	748			
34	Madison ES	Normal	3,340	0.08	S	749			
35	Madison ES	Normal	3,835	0.09	S	750			
36	Madison ES	Normal	3,013	0.07	S	751			
37	Madison ES	Normal	3,807	0.09	S	752			
38	Madison ES	Normal	2,242	0.05	S	753			
39	Madison ES	Normal	3,980	0.09	S	754			
40	Madison ES	Normal	17,556	0.40	S	755			
41	Madison ES	Normal	1,814	0.04	S	756			
42	Madison ES	Normal	3,456	0.08	S	757			
43	Madison ES	Normal	298	0.01	S	758			
44	Madison ES	Normal	1,326	0.03	S	759			
45	Madison ES	Normal	22	0.00	S	760			
46	Madison ES	Normal	15	0.00	S	761			
47	Madison ES	Normal	22	0.00	S	762			
48	Madison ES	Normal	7,374	0.17	S	763			
49	Madison ES	Normal	64	0.00	S	764			
50	Madison ES	Normal	13,506	0.31	S	765			
51	Madison ES	Normal	1,828	0.04	W	766			

USD facility leadership requested that we inventory beyond our typical process to include linier feet calculations of edging, along with counts of shrubs and trees to provide a more data-based set of calculations for performing these processes. Note the Madison example of the type of plot sheet provided by the district enabling the enhancement of the inventory.

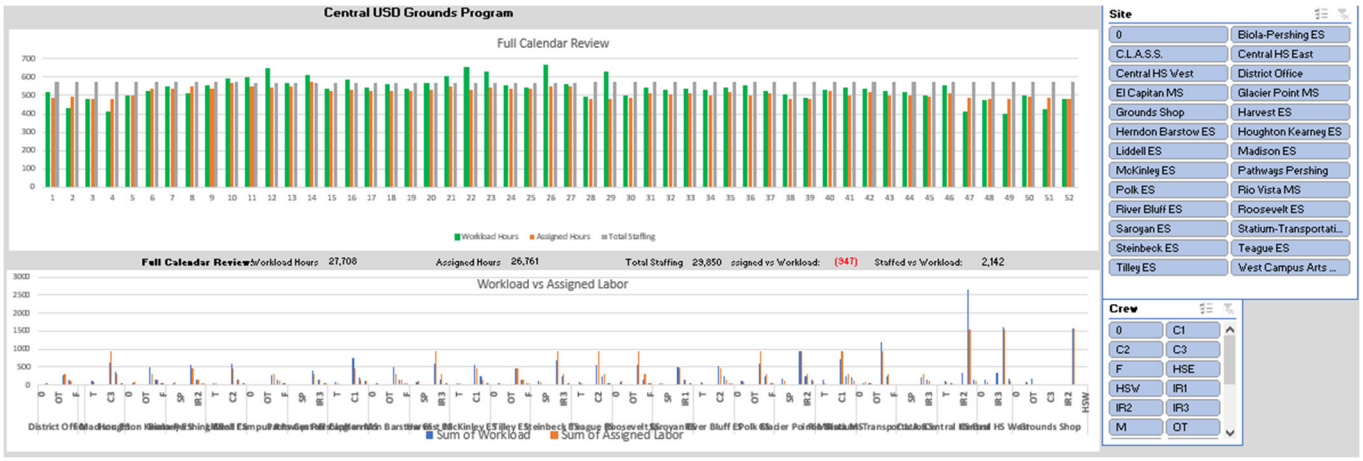
Calendar Development

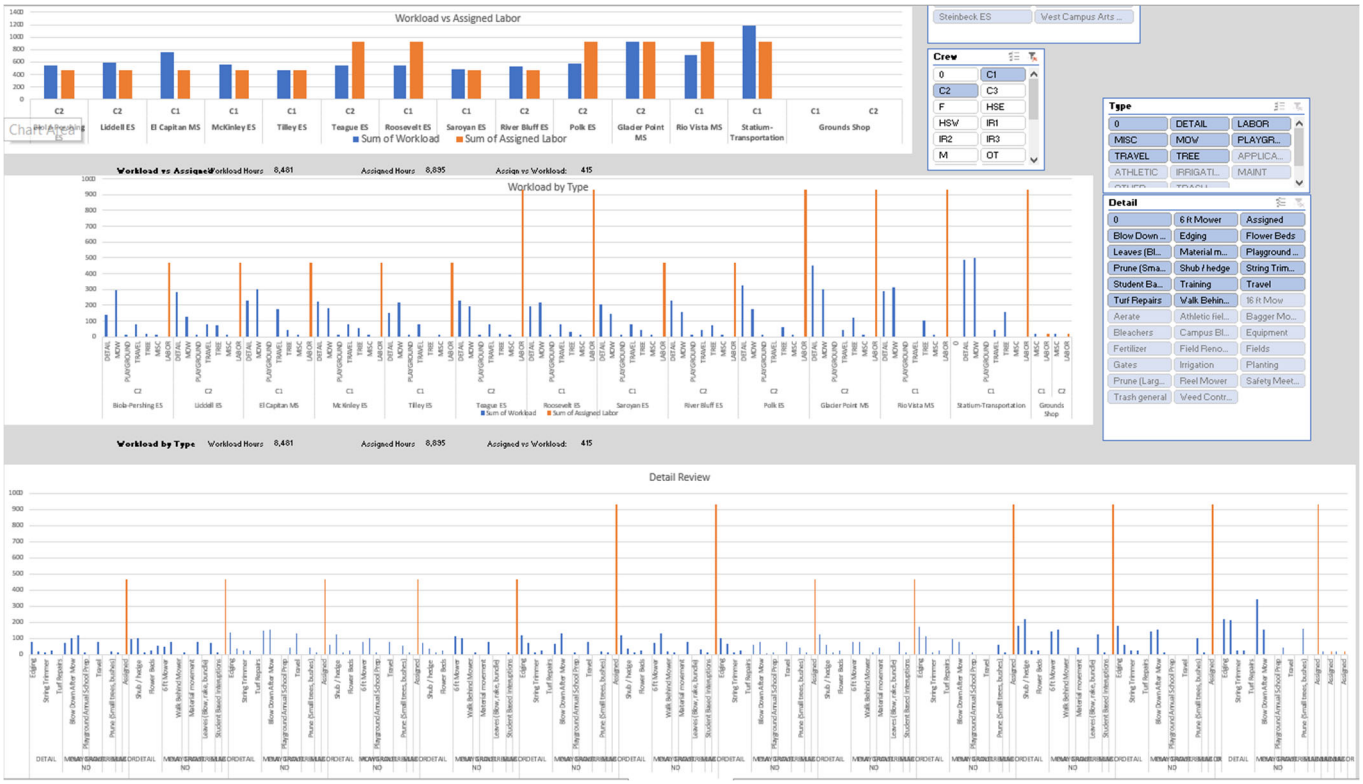
SMA and Grounds leadership meet to review the calendar entries in detail:
Work detail descriptions were refined.
Sequence of tasks were posted by week through the year.
This calendar process has been refined with a series of web editing meetings.



Dashboard features of the Grounds Calendar:

The Grounds Calendar Excel sheet now has a "Dashboard" tab to review your program many ways. The detailed postings of tasks in the calendar can be reviewed by Site, Crew, Work Type and Work Detail. Excel pivot charts with their easy to use Slices make mining for information easy.





Grounds Crew Reviews:

Considering the data in this review we support the proposed re-organization of the grounds department crews. The move to smaller three employee crews is a positive step to improve grounds services. Consider these factors:

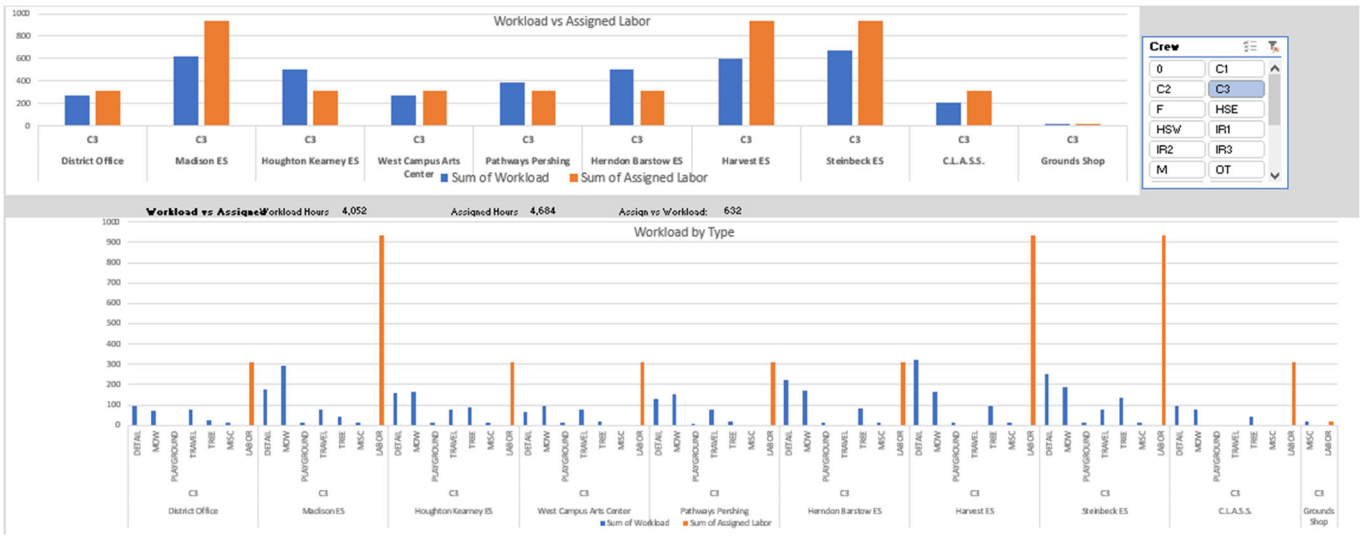
1. The three crews will have the ability to stay on sites much longer. Some days with adjacent schools or a large site only one destination will be serviced. This length of stay should reduce inefficiency from student interruptions, the smaller crew will shift the type of work to keep productive then still have time to get back to the interrupted mowing. With the larger crews the time pressure is always on to service three or four sites in a day, quickly moving from site to site. The student interruptions now often hurt the level of service provided to the sites.
2. There is not a designated team leader within the grounds department operations crews, this means small adjustments are made as a self-directed crew. Adjustments will be less complex with three people verses five. New employees should incorporate in more easily.
3. Three crews covering less sites will naturally create clearer ownership/accountability for the sites. All three employees own all the mowing and detail work of their sites.
4. There should be an advantage for improved supervision. Support and guidance provided to the crews as they spend more time on each site should be less complex with fewer people in the crew and less movement.
5. Our statistics show the need for help in the high school sites, this configuration may free up more help to the high schools.

We realize there typically is some cost associated with re-organization, but the vehicle updates and improved mowing equipment seem reasonable given the advantages.

Grounds Department Crew 1:

Grounds Department Crew 2:

Grounds Department Crew 3:



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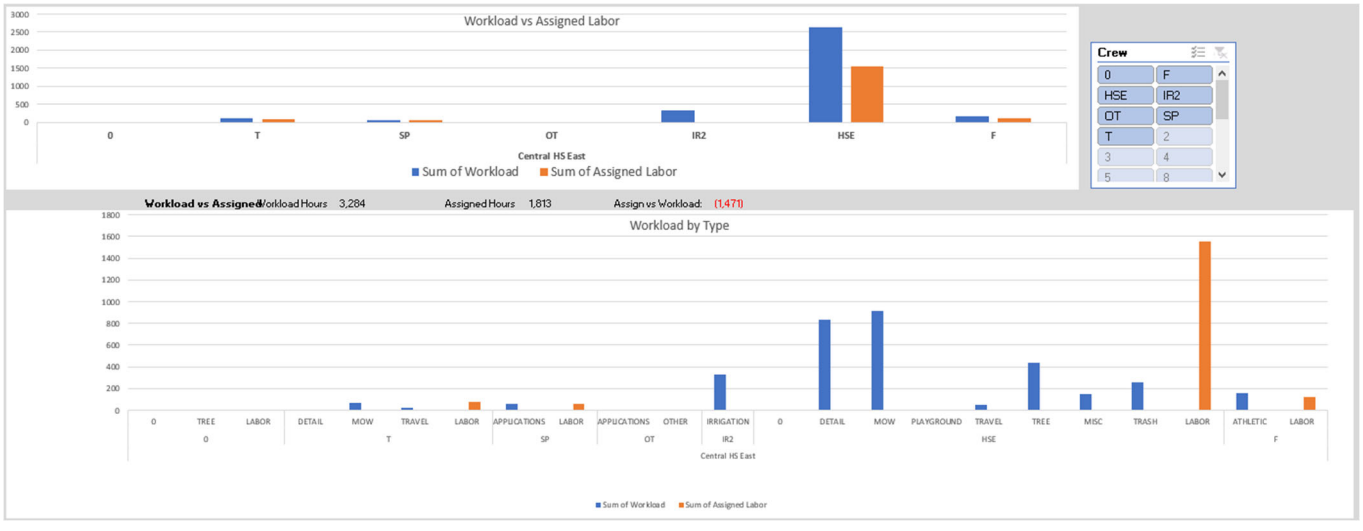
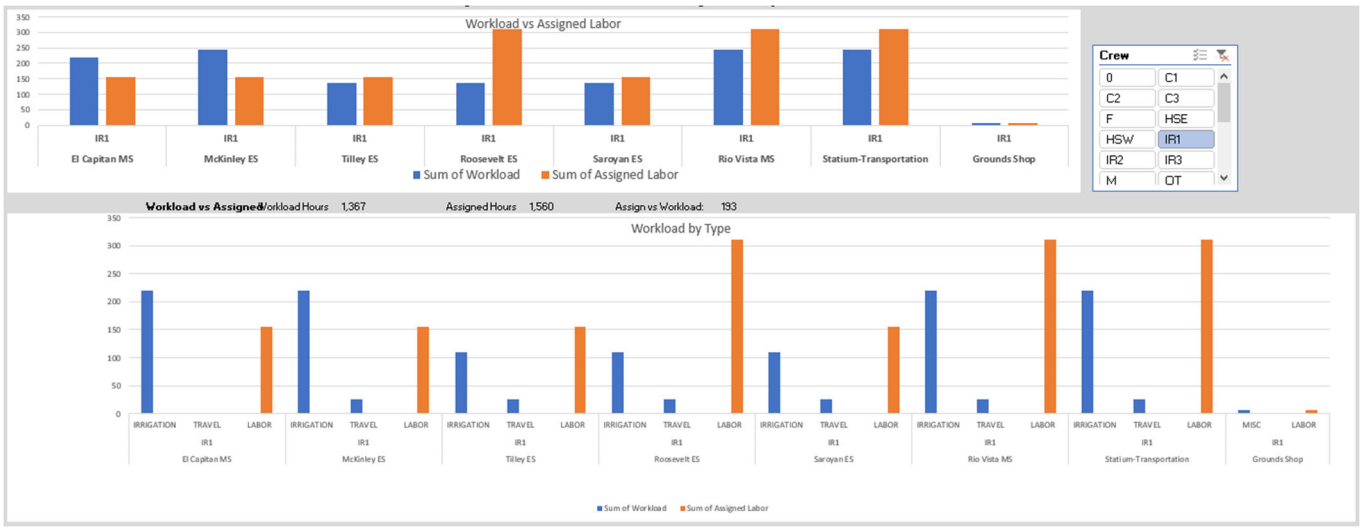
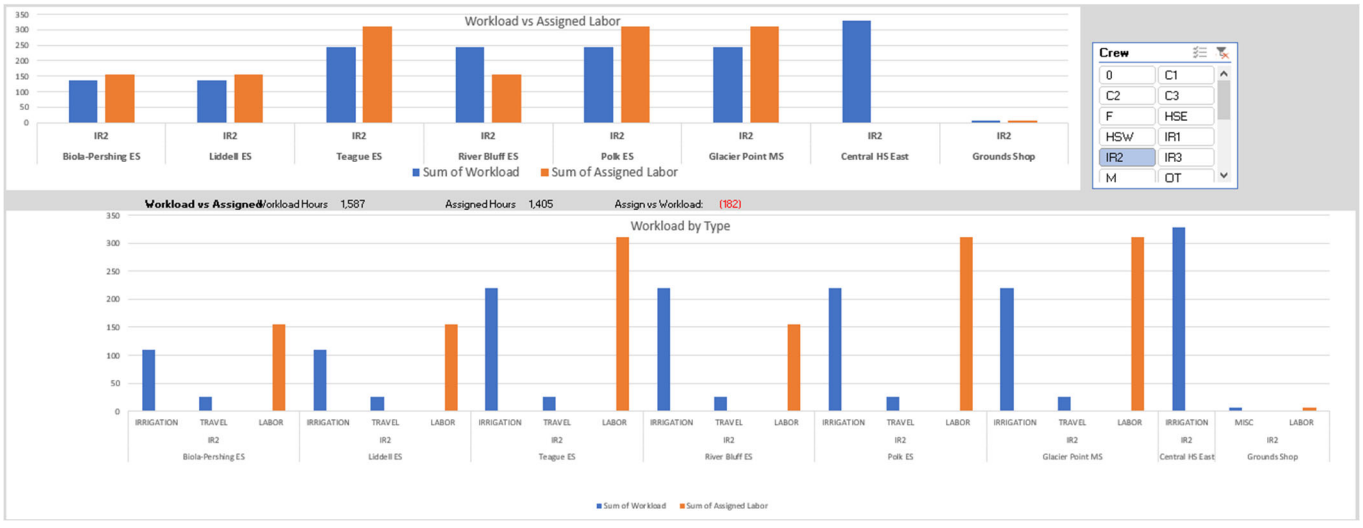


Central HS West:

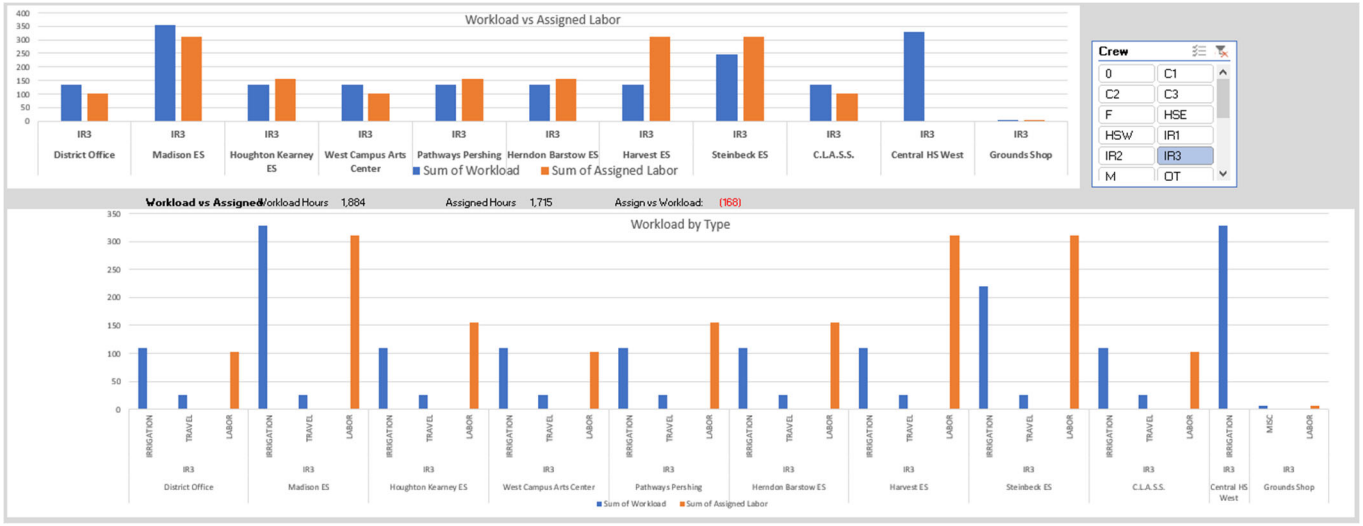
Irrigation 1:



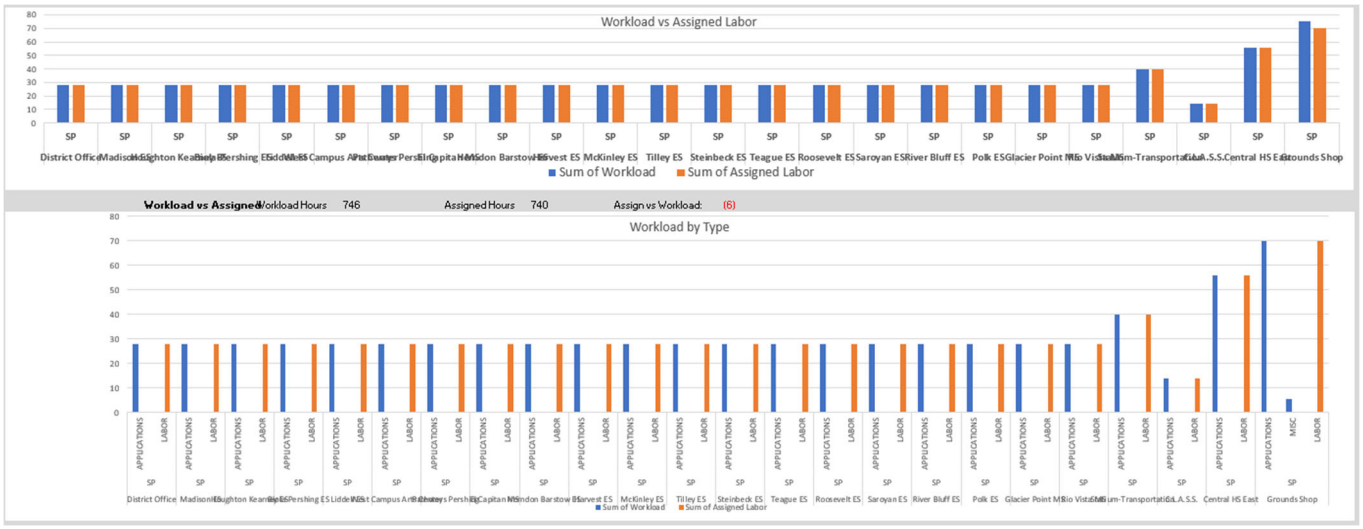
Irrigation 2:



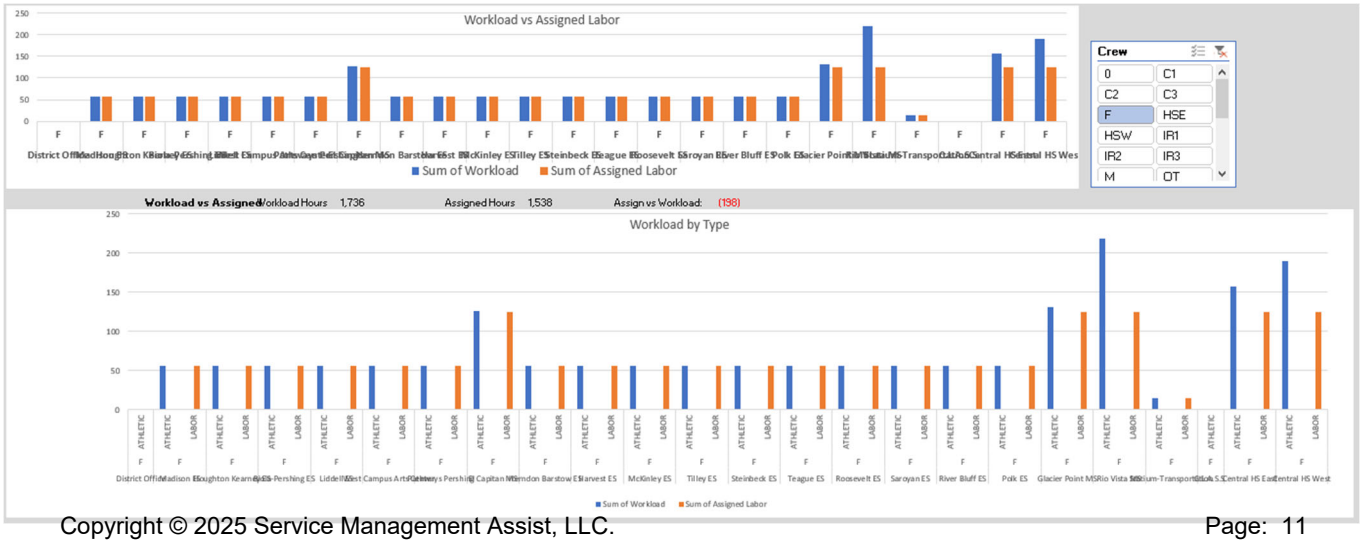
Irrigation 3:



Spray specialist:



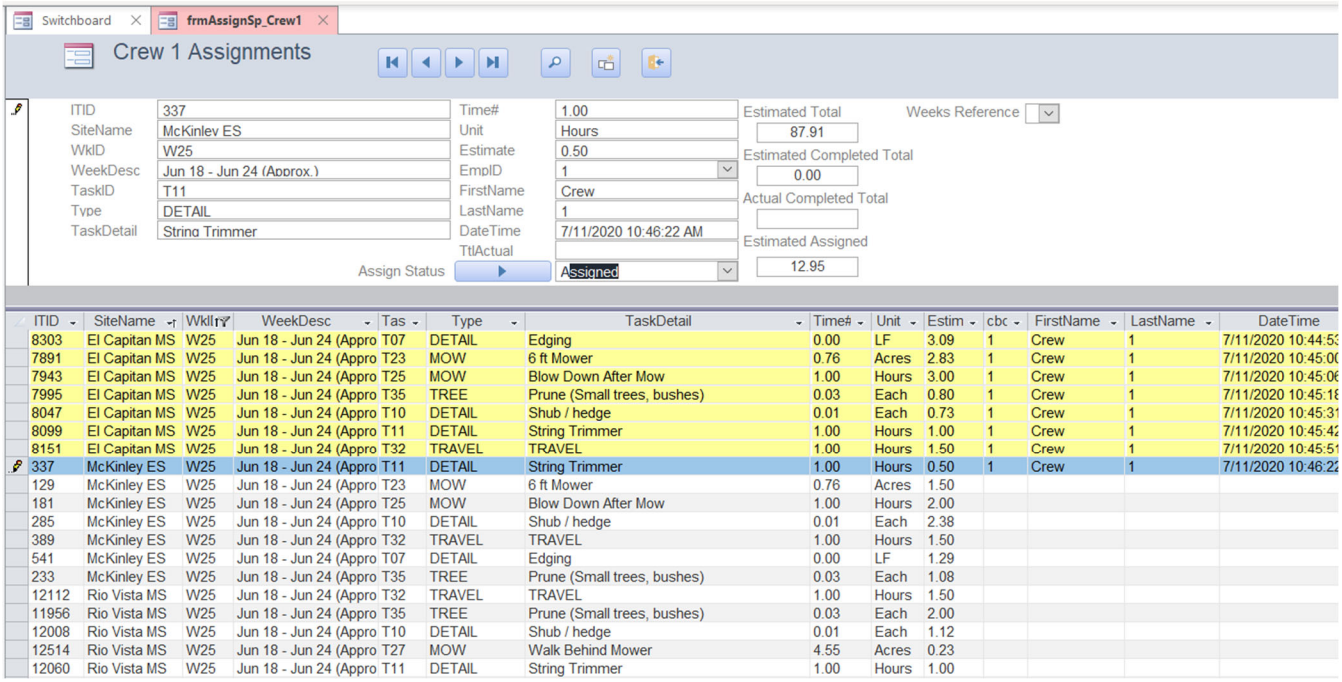
Fields Specialist:



Tractor Mowing:

Database tracking of crew assignments or use of grounds PMs in your maintenance database software (CMMS):

The database system is in place to provide weekly tickets for each site. The database verification of weekly site work by category of work should build a history of the actual work being done and form the bases for adjusting labor and workload requirements. Over 15,000 individual tasks are posted in the database calendar for your district. Note the El Capitan MS example for Week 25.



ITID	SiteName	WkID	WeekDesc	Tas	Type	TaskDetail	Time#	Unit	Estim	cbc	FirstName	LastName	DateTime
8303	El Capitan MS	W25	Jun 18 - Jun 24 (Appro	T07	DETAIL	Edging	0.00	LF	3.09	1	Crew	1	7/11/2020 10:44:53
7891	El Capitan MS	W25	Jun 18 - Jun 24 (Appro	T23	MOW	6 ft Mower	0.76	Acres	2.83	1	Crew	1	7/11/2020 10:45:00
7943	El Capitan MS	W25	Jun 18 - Jun 24 (Appro	T25	MOW	Blow Down After Mow	1.00	Hours	3.00	1	Crew	1	7/11/2020 10:45:06
7995	El Capitan MS	W25	Jun 18 - Jun 24 (Appro	T35	TREE	Prune (Small trees, bushes)	0.03	Each	0.80	1	Crew	1	7/11/2020 10:45:18
8047	El Capitan MS	W25	Jun 18 - Jun 24 (Appro	T10	DETAIL	Shub / hedge	0.01	Each	0.73	1	Crew	1	7/11/2020 10:45:31
8099	El Capitan MS	W25	Jun 18 - Jun 24 (Appro	T11	DETAIL	String Trimmer	1.00	Hours	1.00	1	Crew	1	7/11/2020 10:45:42
8151	El Capitan MS	W25	Jun 18 - Jun 24 (Appro	T32	TRAVEL	TRAVEL	1.00	Hours	1.50	1	Crew	1	7/11/2020 10:45:51
337	McKinley ES	W25	Jun 18 - Jun 24 (Appro	T11	DETAIL	String Trimmer	1.00	Hours	0.50	1	Crew	1	7/11/2020 10:46:22
129	McKinley ES	W25	Jun 18 - Jun 24 (Appro	T23	MOW	6 ft Mower	0.76	Acres	1.50				
181	McKinley ES	W25	Jun 18 - Jun 24 (Appro	T25	MOW	Blow Down After Mow	1.00	Hours	2.00				
285	McKinley ES	W25	Jun 18 - Jun 24 (Appro	T10	DETAIL	Shub / hedge	0.01	Each	2.38				
389	McKinley ES	W25	Jun 18 - Jun 24 (Appro	T32	TRAVEL	TRAVEL	1.00	Hours	1.50				
541	McKinley ES	W25	Jun 18 - Jun 24 (Appro	T07	DETAIL	Edging	0.00	LF	1.29				
233	McKinley ES	W25	Jun 18 - Jun 24 (Appro	T35	TREE	Prune (Small trees, bushes)	0.03	Each	1.08				
12112	Rio Vista MS	W25	Jun 18 - Jun 24 (Appro	T32	TRAVEL	TRAVEL	1.00	Hours	1.50				
11956	Rio Vista MS	W25	Jun 18 - Jun 24 (Appro	T35	TREE	Prune (Small trees, bushes)	0.03	Each	2.00				
12008	Rio Vista MS	W25	Jun 18 - Jun 24 (Appro	T10	DETAIL	Shub / hedge	0.01	Each	1.12				
12514	Rio Vista MS	W25	Jun 18 - Jun 24 (Appro	T27	MOW	Walk Behind Mower	4.55	Acres	0.23				
12060	Rio Vista MS	W25	Jun 18 - Jun 24 (Appro	T11	DETAIL	String Trimmer	1.00	Hours	1.00				

Grounds process coverage and refinement of times is accomplished with these easily generated tickets for each site each week. The crew upon leaving each site (perhaps in the truck traveling to the next site should post their time on the sheet by category). This is an example of an assignment sheet for a site:

El Capitan Current Assignments

Main

WkID	Site	Type	Task Detail	EmpID	First Name	Last Name	DateTime	TtlActual	Assign Status
W25	El Capitan MS	DETAIL	Edging	1	Crew	1	7/11/2020 10:44:53 AM		Assigned
W25	El Capitan MS	TRAVEL	TRAVEL	1	Crew	1	7/11/2020 10:45:51 AM		Assigned
W25	El Capitan MS	DETAIL	String Trimmer	1	Crew	1	7/11/2020 10:45:42 AM		Assigned
W25	El Capitan MS	DETAIL	Shub / hedge	1	Crew	1	7/11/2020 10:45:31 AM		Assigned
W25	El Capitan MS	TREE	Prune (Small trees, bushes)	1	Crew	1	7/11/2020 10:45:18 AM		Assigned
W25	El Capitan MS	MOW	Blow Down After Mow	1	Crew	1	7/11/2020 10:45:06 AM		Assigned
W25	El Capitan MS	MOW	6 ft Mower	1	Crew	1	7/11/2020 10:45:00 AM		Assigned

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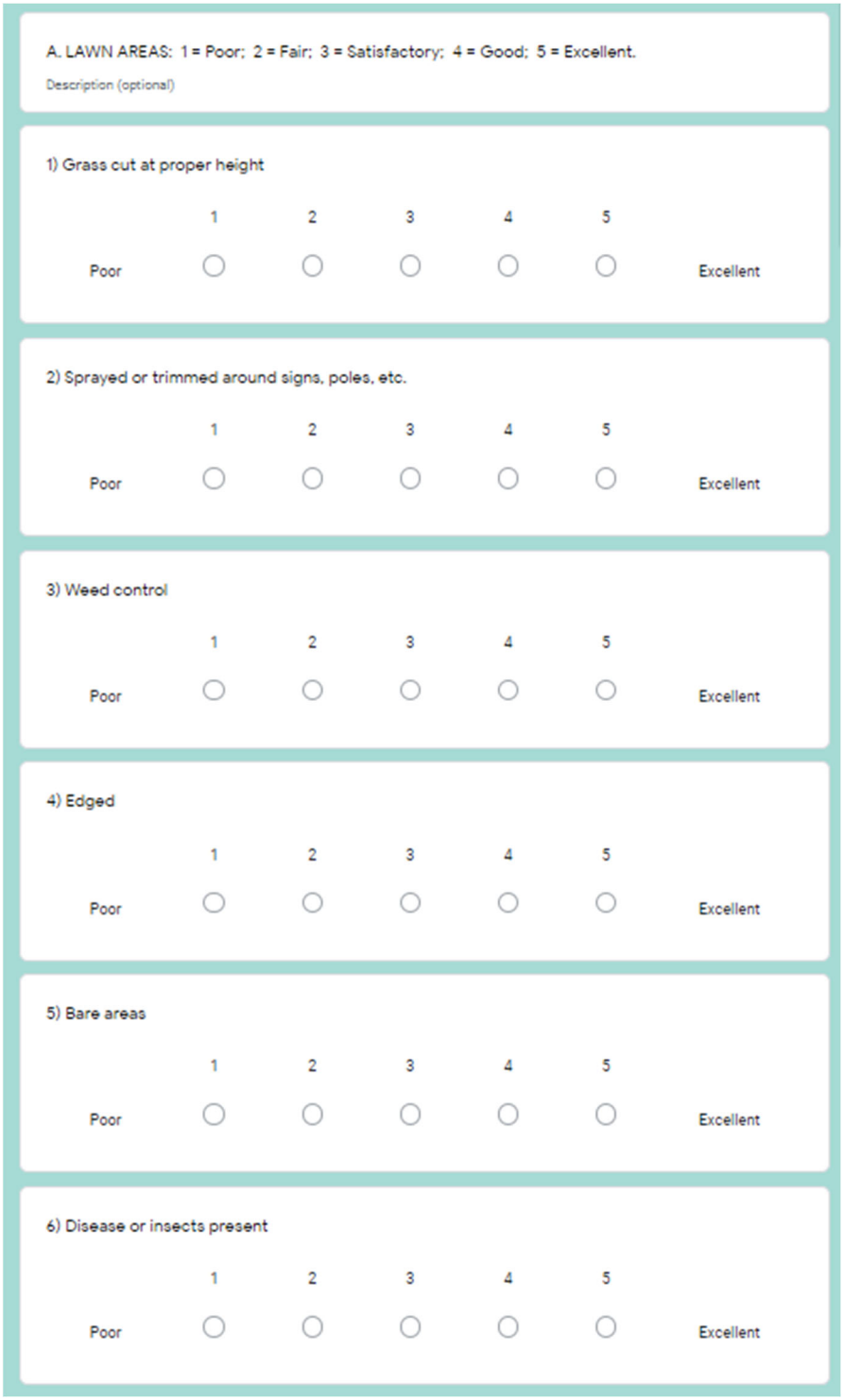
Quality Assurance:

All districts are in need of a regular sampling of quality … a set pattern of inspections of sites. Idealy giving each site a bi-weekly supervisory visit. These visits may very well be happening on an informal basis already, but quality is not measured systematically. Landscape inspections are a necessary next step to ensure that the department can tract the value of grounds services. The following inspection format can be posted into a smart phone with the automated result posting to a spreadsheet. This Google form can be posted in minutes using a smart phone, shown here is one page of the four page inspection:



Recommended Actions

Crew balancing recommendations:

The rational for using three crews is stated on page 8. Given that these crews are the most effective use of your labor they need support to function. The district should support the crews with the right tools. Reliable trucks and mowers for each team are essential. The cost of labor and benefits is by far the largest budget line for the department, it would be poor stewardship of district funds to have the employees sitting idle frequently due to vehicle or mower breakdowns. It would be unfortunate to return to the two-crew format for lack of proper equipment.

The current assignments of the three crews and high school staffing need to be adjusted based on calendar data. Crew 1 has more workload verses the other two crews and the East HS campus is dramatically under resourced based on these postings. The tractor mowing workload does not support the need for two full-time people.

Balancing of the crew assignments with this data is attainable as a follow-up to the study, SMA will help with the balancing. The grounds calendar with its dashboard should be used as the objective data foundation for making improvement decisions.

Tracking Tickets:

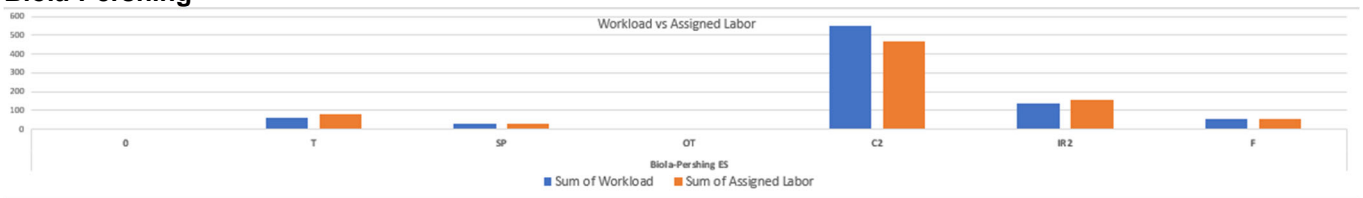
The Access database developed for assigning weekly tasks for each site should be used to verify and establish the process steps for each site. The same result may be gained from use of PM tracking work orders issued from your CMMS.

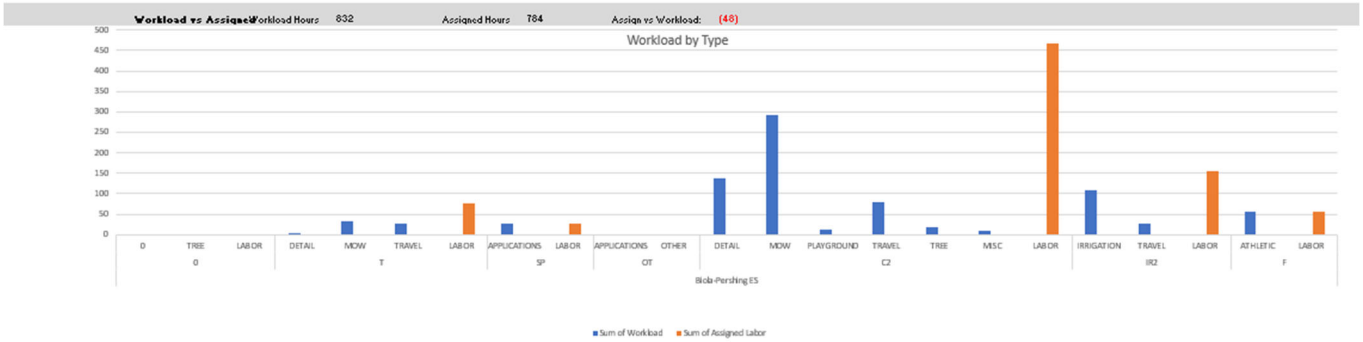
Irrigation grounds workers, field specialist, spray specialist and the mechanic should track their time with the database, but weekly work tickets will be more general in nature due to the corrective nature of these positions.

Quality Assurance:

A quality assurance program should be initiated using Google forms on cell phones. Each site should be graded at least every two weeks. The scoring of sites and tracking of their progress gives targets for refining the quality of your grounds program. SMA will provide the Google inspection forms.

Biola-Pershing





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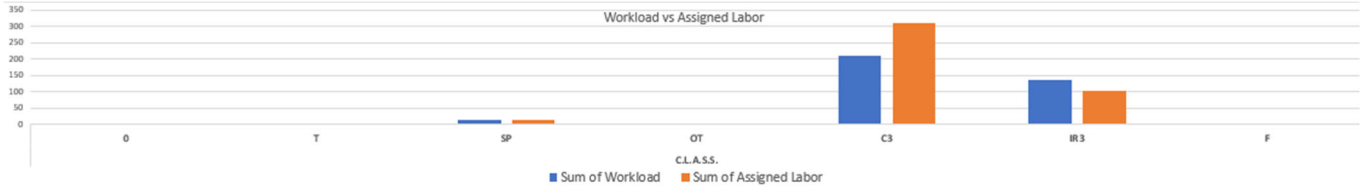

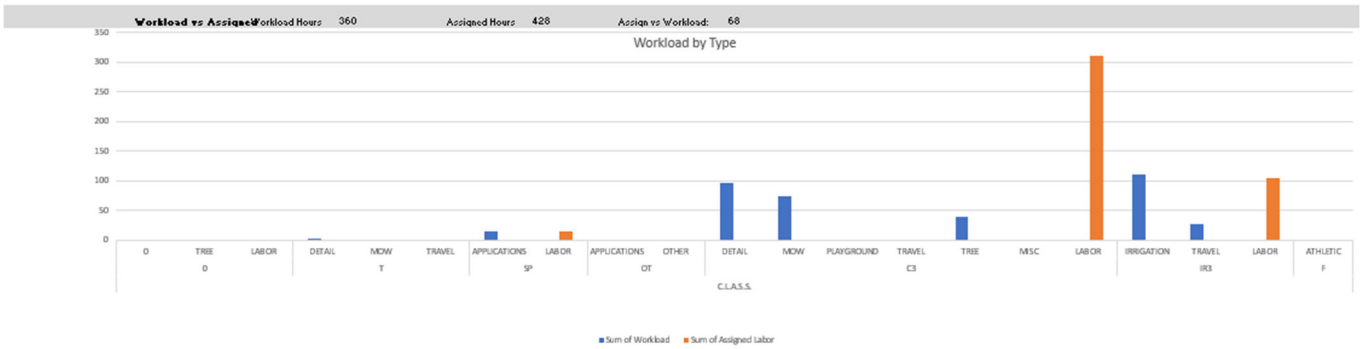

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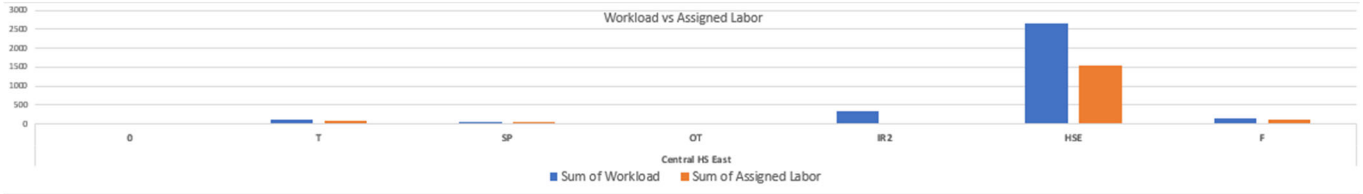

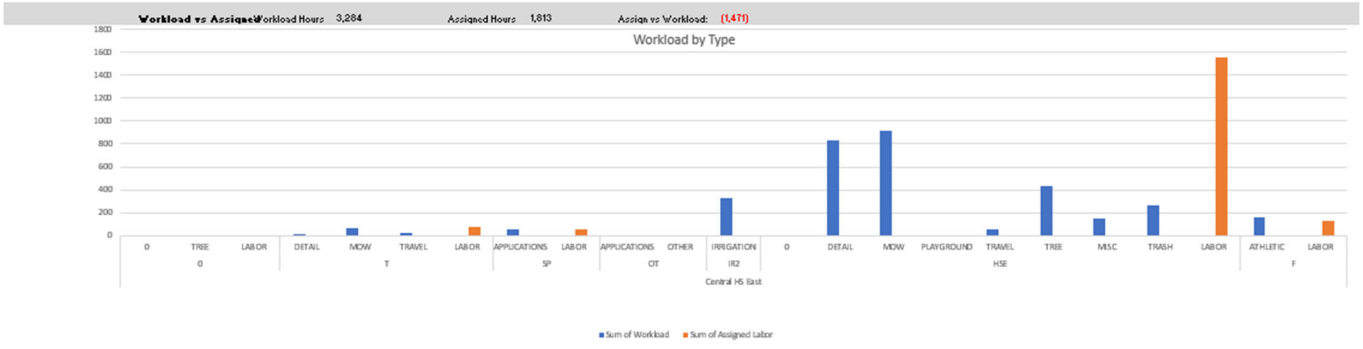

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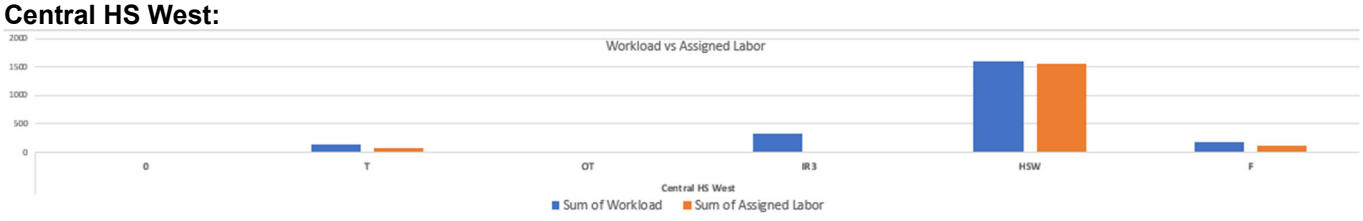
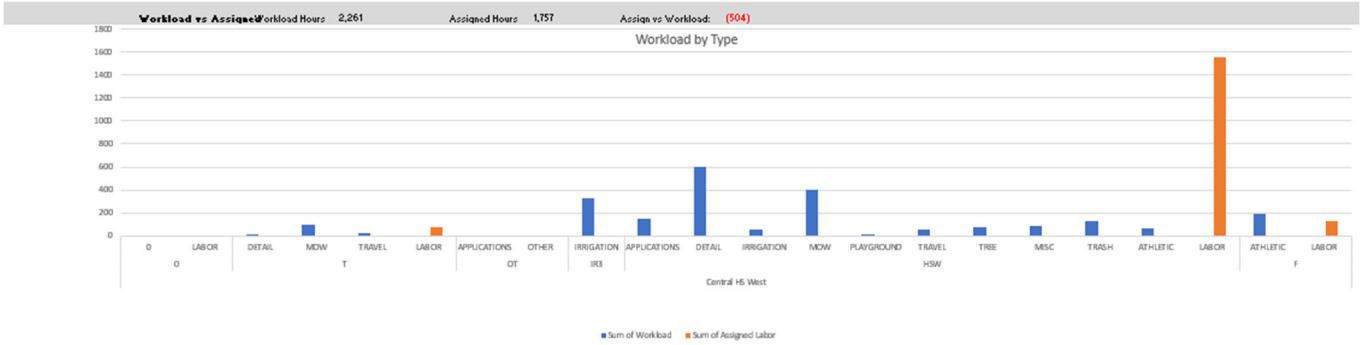
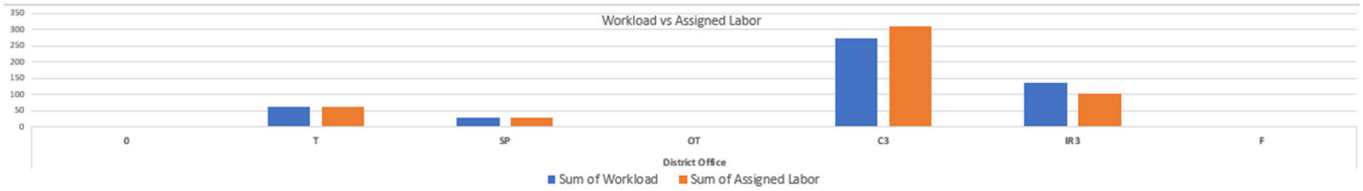
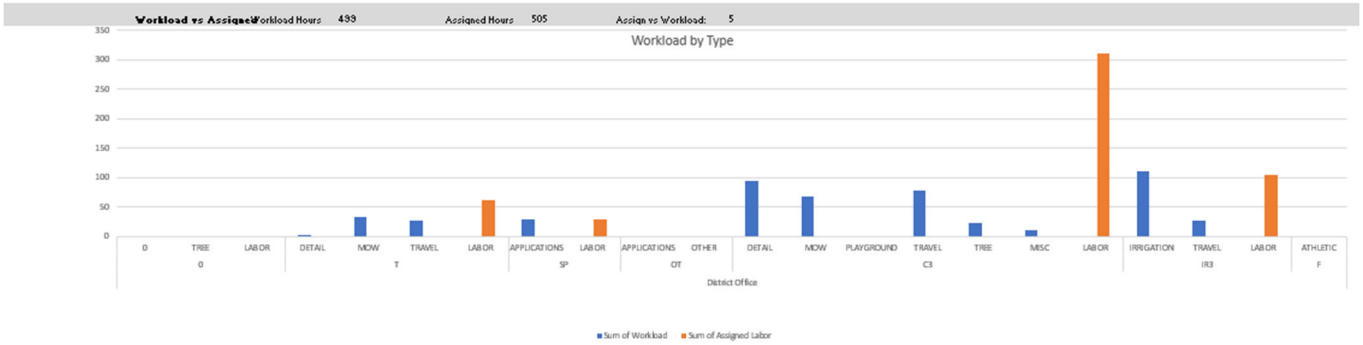


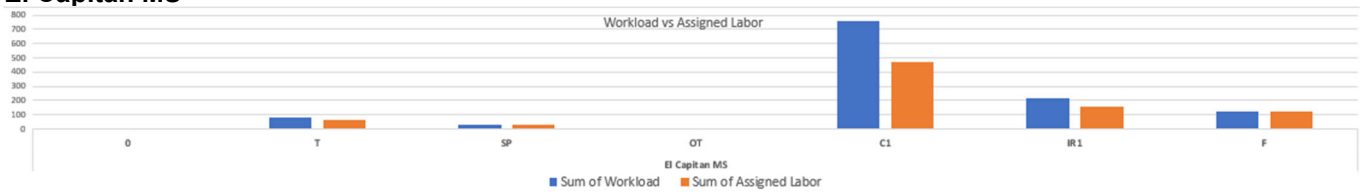


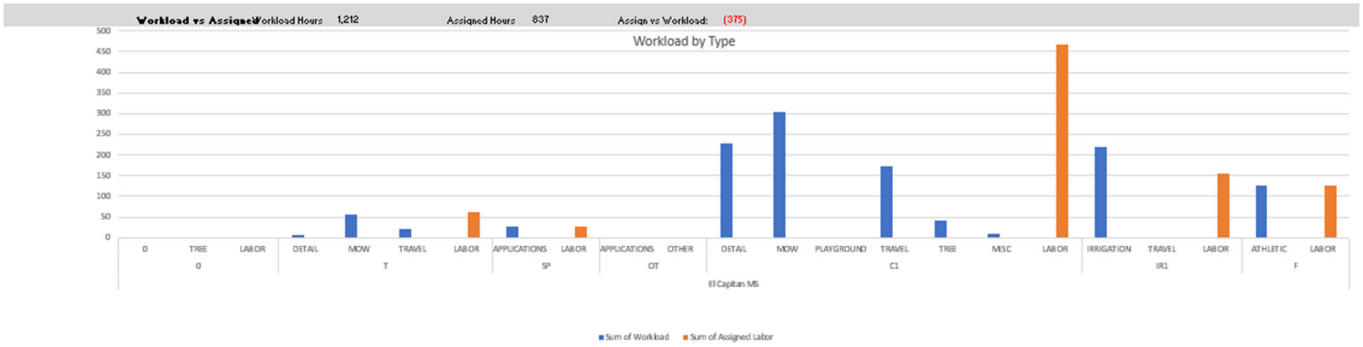
District Office





El Capitan MS





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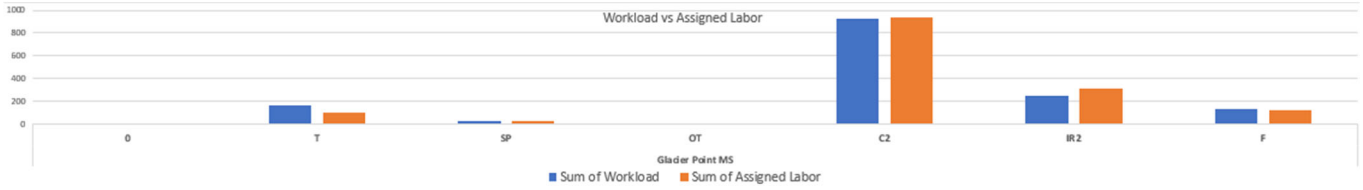
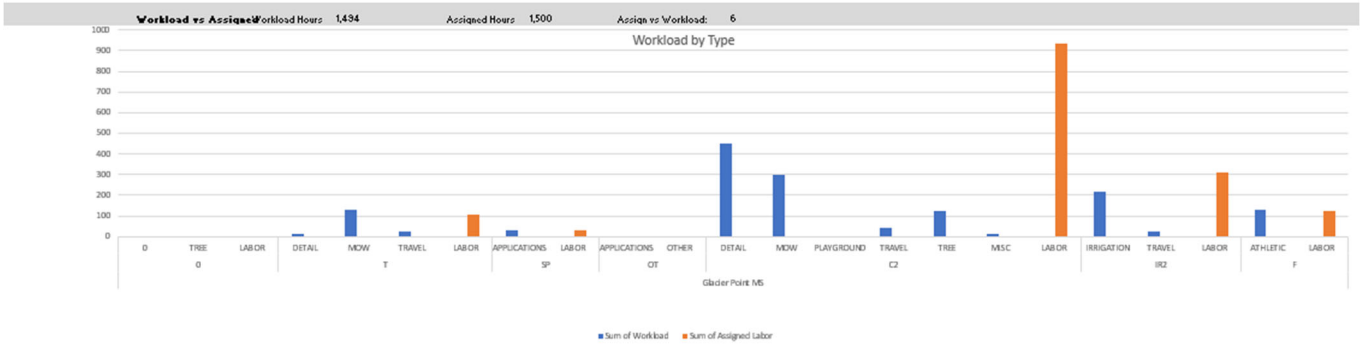
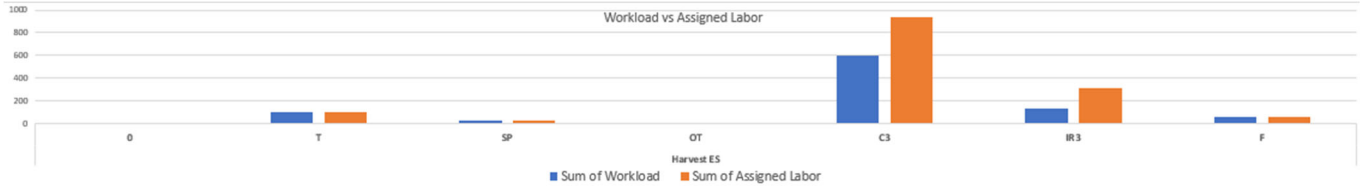
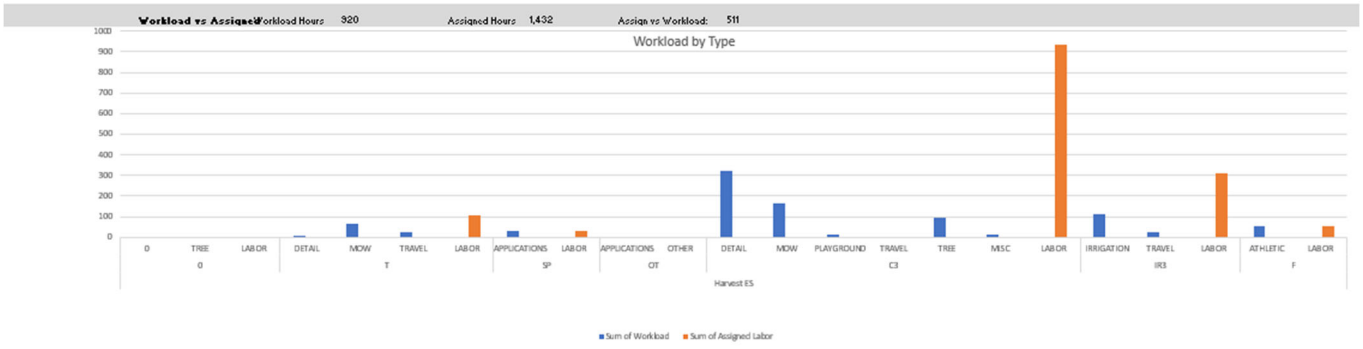


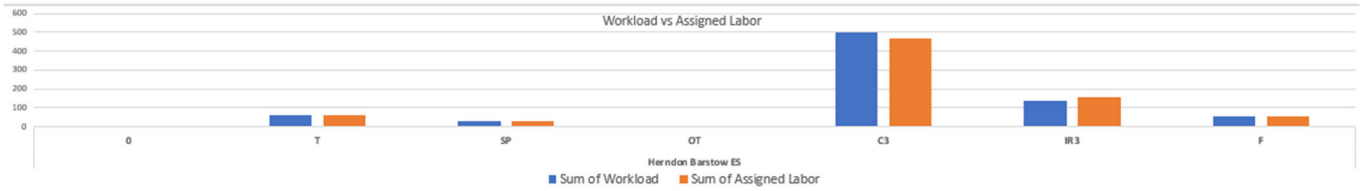


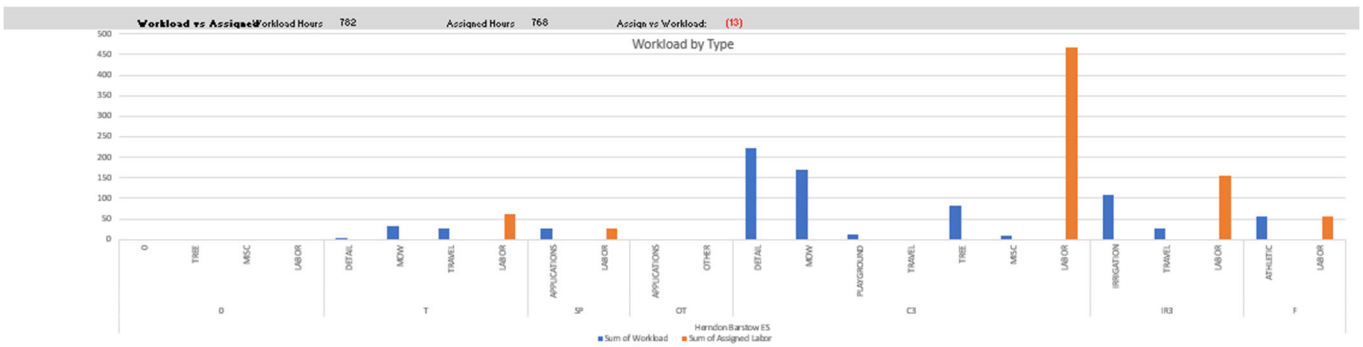
Harvest ES



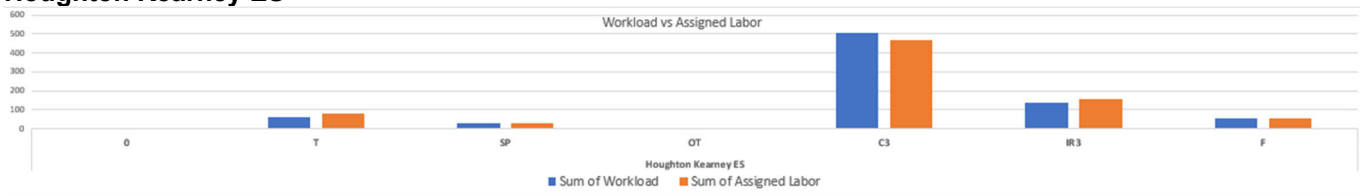


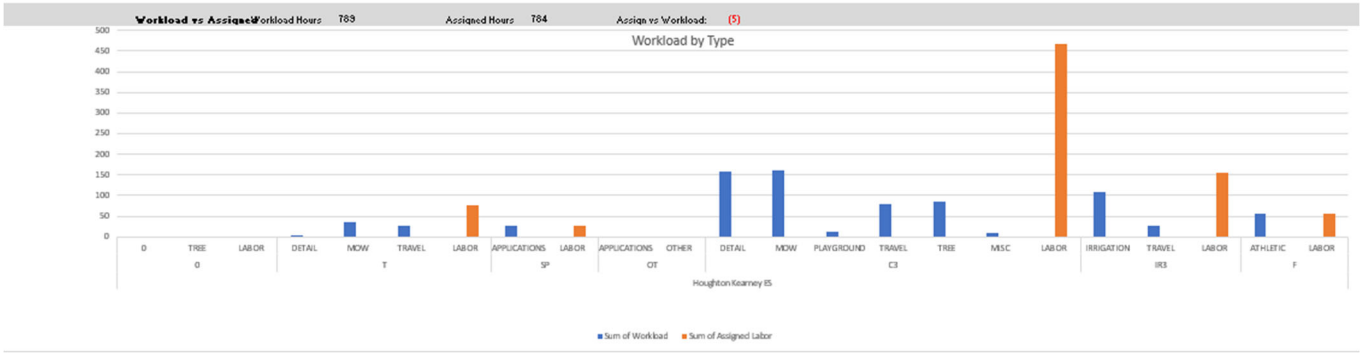
Herndon Barstow ES



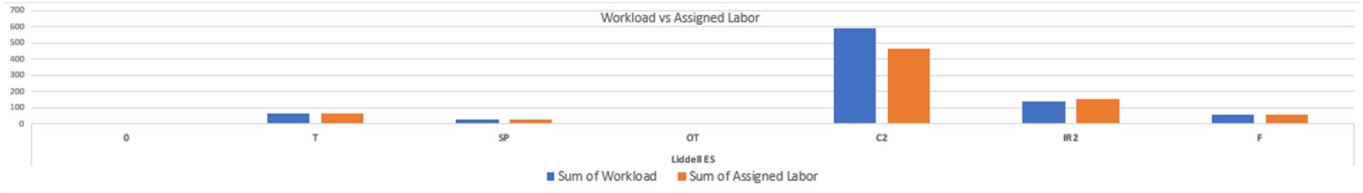


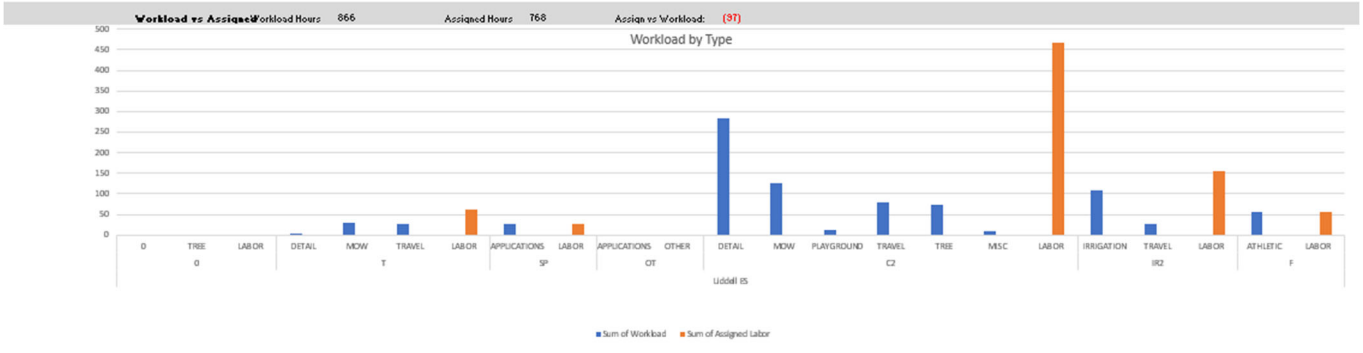
Houghton Kearney ES



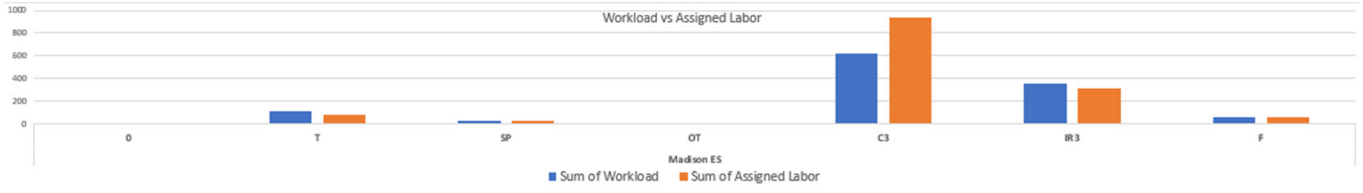


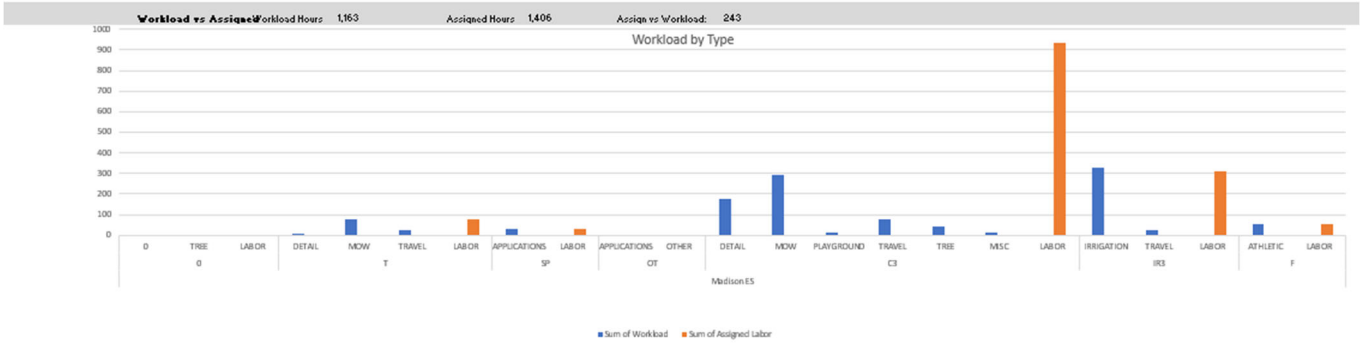
Liddell ES



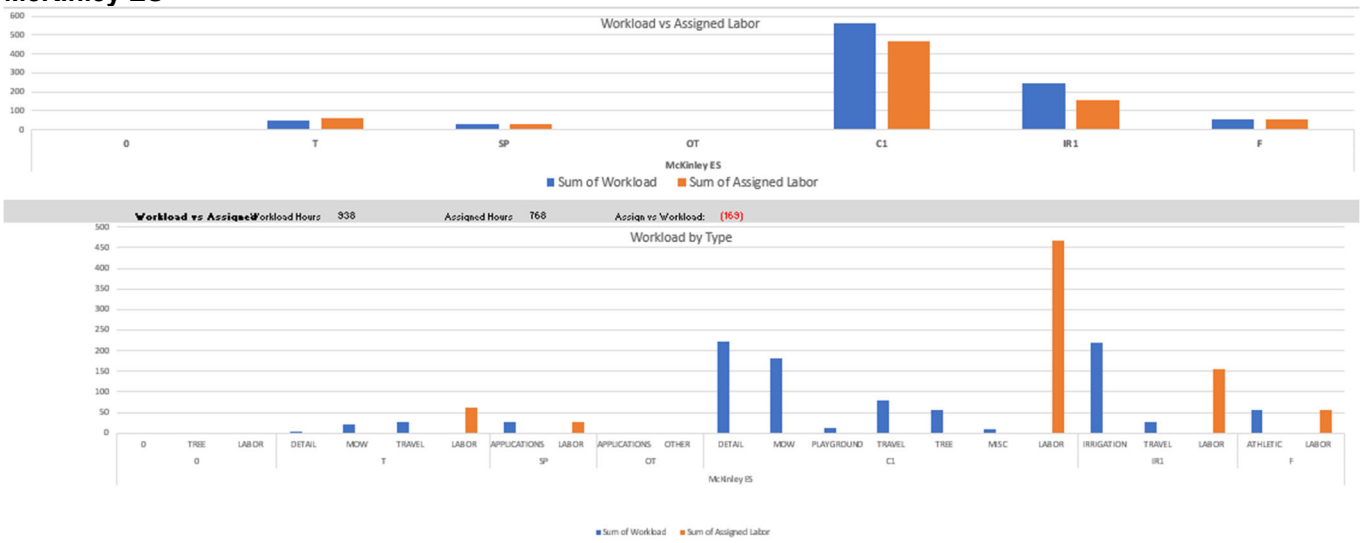


Madison ES





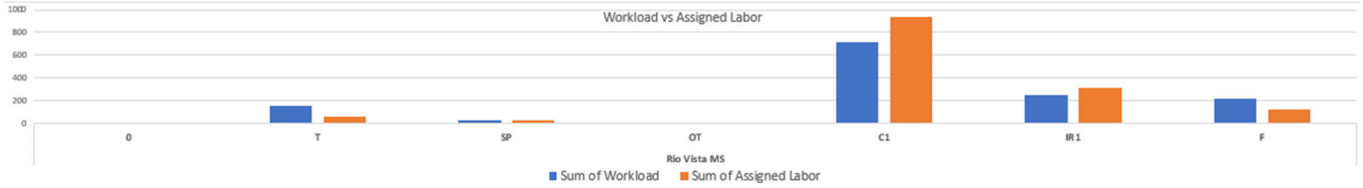
McKinley ES

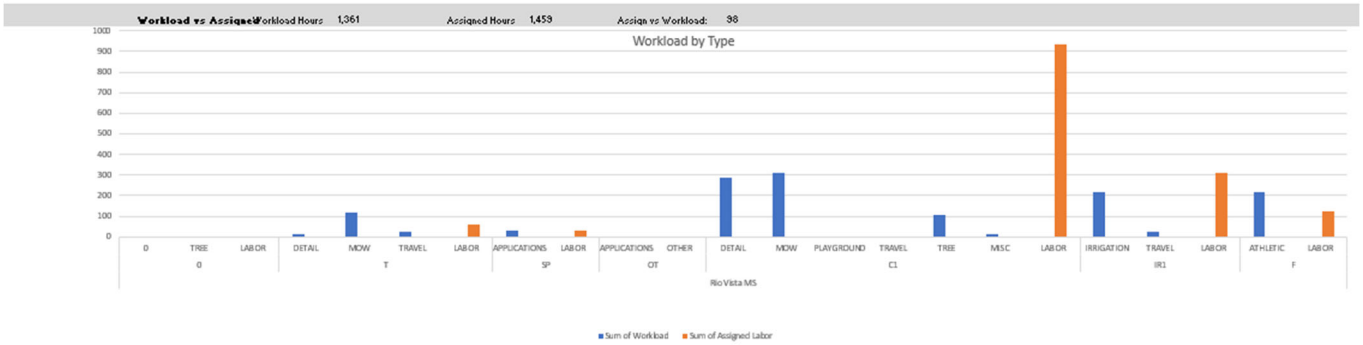


Pathways Pershing

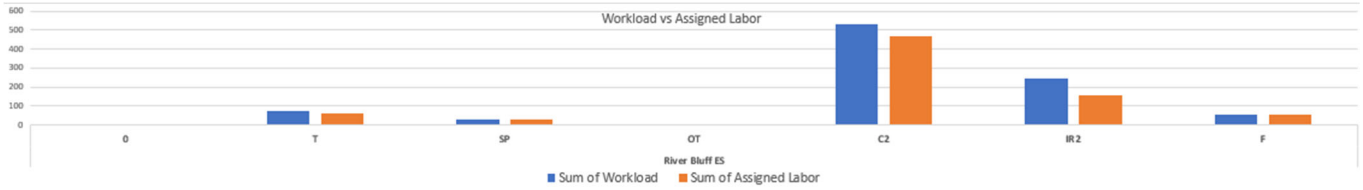
Polk ES

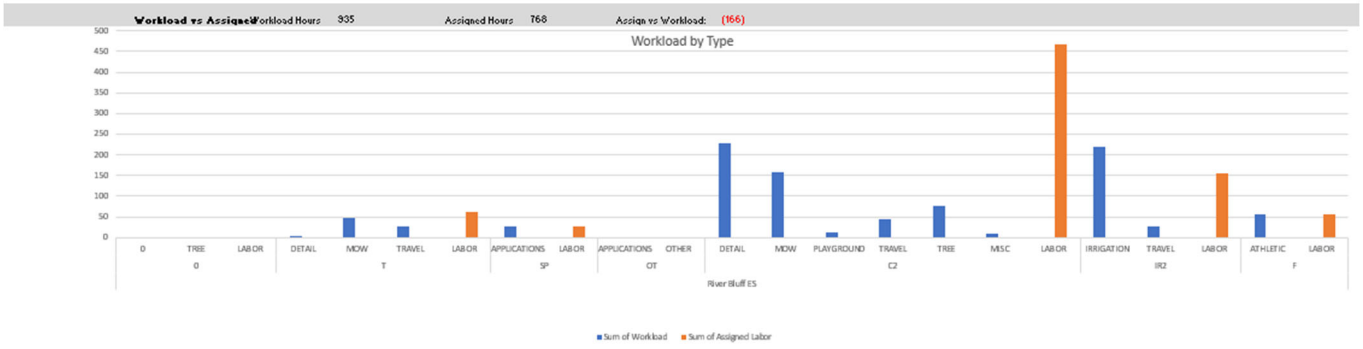
Rio Vista MS



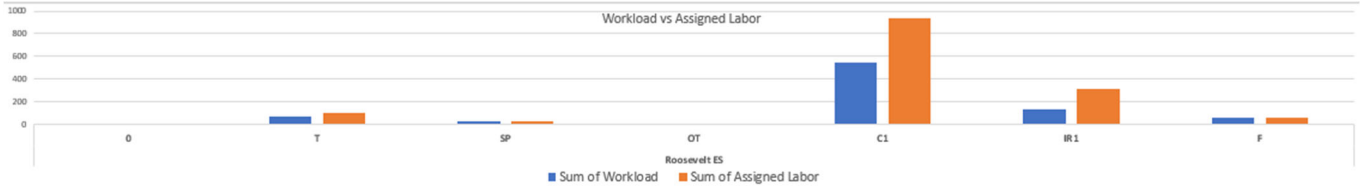


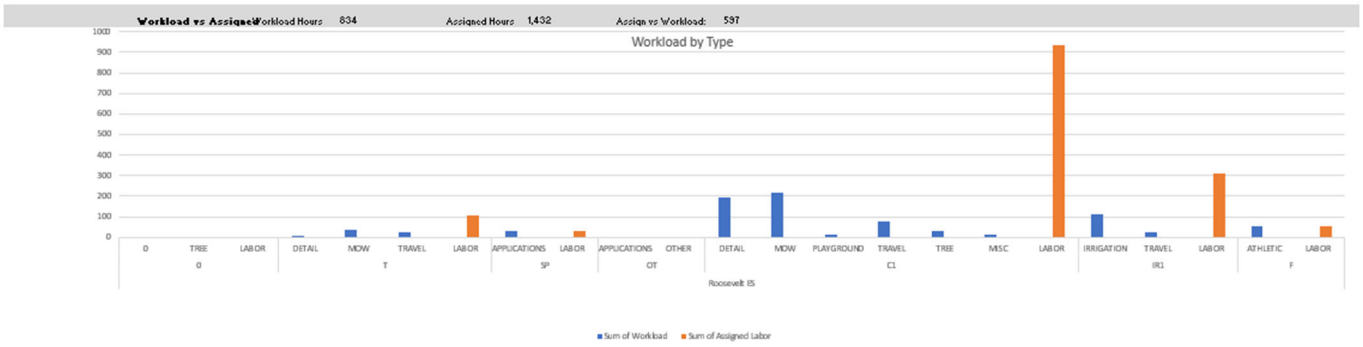
River Bluff ES





Roosevelt ES

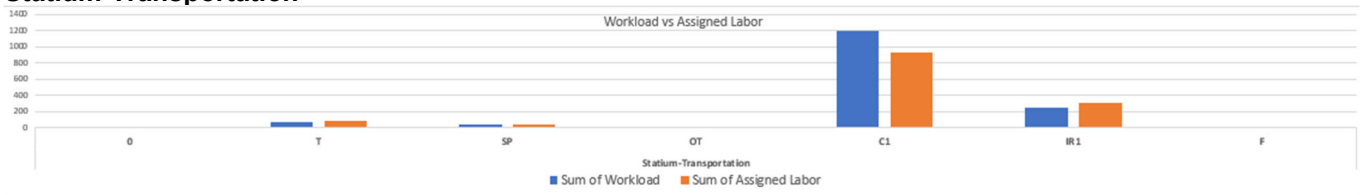




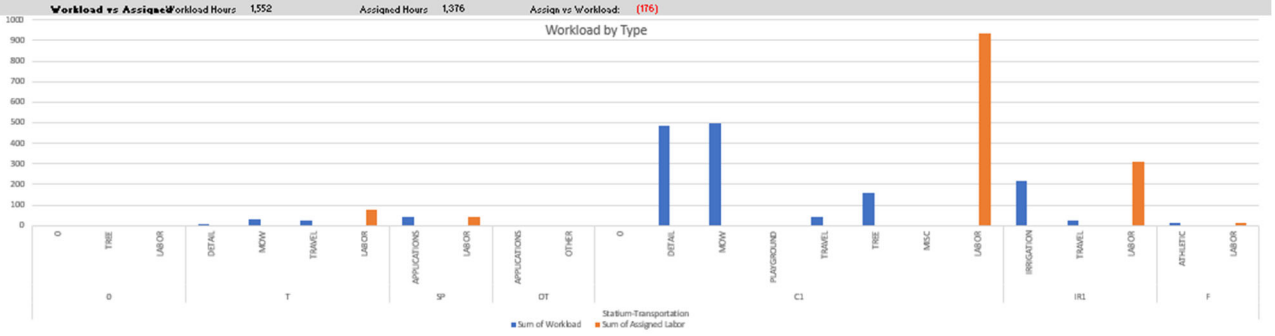
Saroyan ES

Workload vs Assigned	Workload Hours	767	Assigned Hours	768	Assign vs Workload:	1

Statium-Transportation

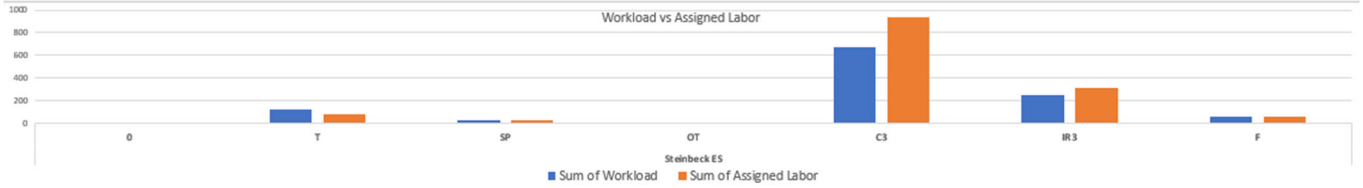


Workload vs Assigned	Workload Hours	1,552	Assigned Hours	1,376	Assign vs Workload:	(176)

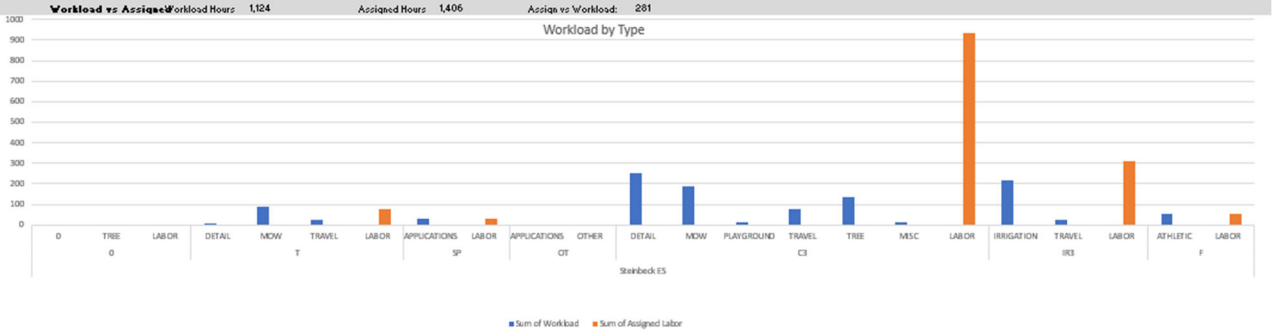


Workload by Type	Workload Hours	1,552	Assigned Hours	1,376	Assigned vs Workload:	(176)

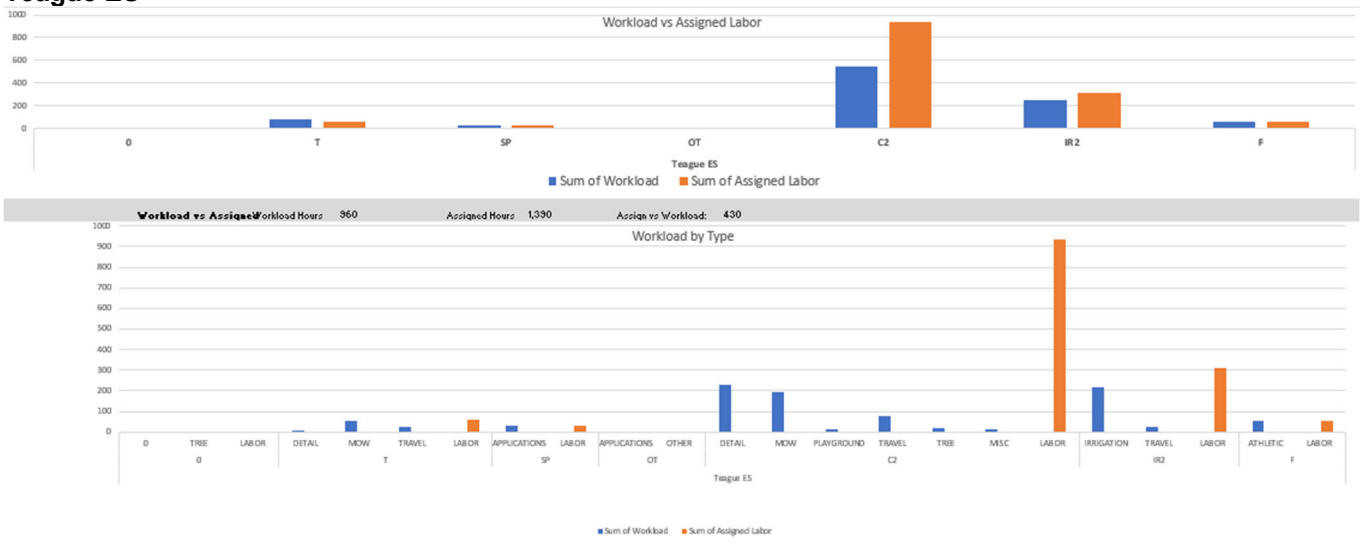
Steinbeck ES



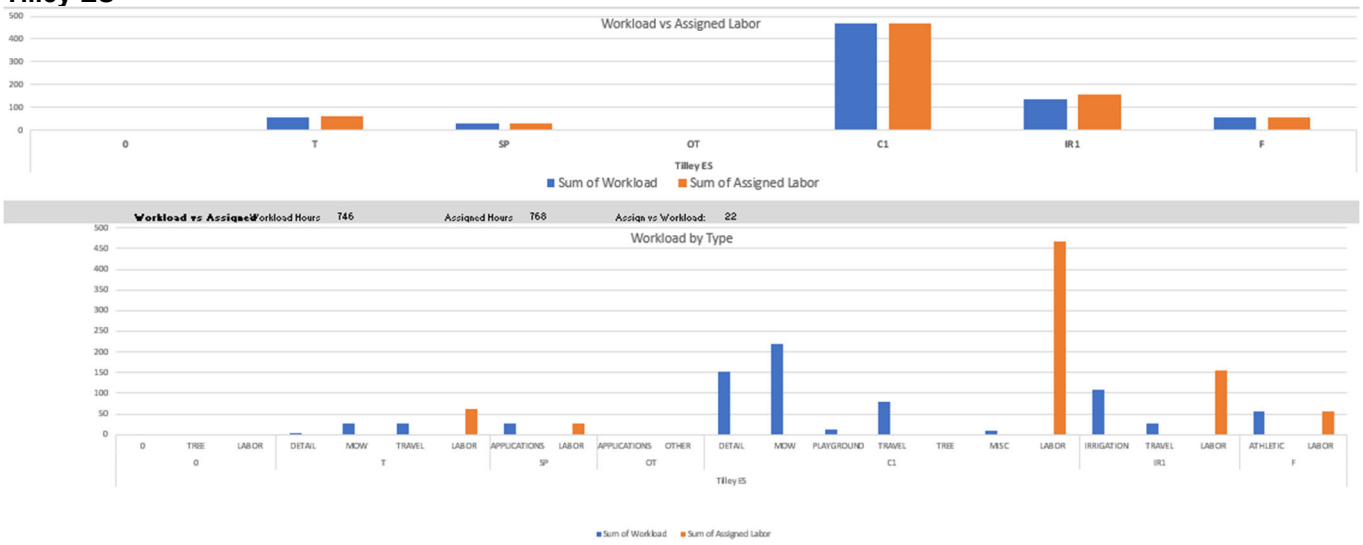
Workload vs Assigned	Workload Hours	1,124	Assigned Hours	1,406	Assign vs Workload:	281



Teague ES



Tilley ES



West Campus Arts Center